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Uneven spatial development at the end of the world.
Production of space and urban inequalities in Ushuaia and Río Grande

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Research problem

This thesis addresses the process of uneven spatial development (USD), resulting from territorial expansion of capitalist economic activities (Smith, 2020). As long as new territories are incorporated into the accumulation process, simultaneous dynamics of equalization (of productive forms) and differentiation (of spatial forms) are generated in them. As a result, specific patterns of spatial inequality emerge, acquiring particular characteristics in the different scales and geographies (Smith, 2012; Brenner, 2009). Considering a Latin American approach, urban inequalities remain particular interest, given the fact cities concentrate most of the resources and the population. The State is crucial in defining the precise patterns that USD acquires through its economic and urban-territorial policies.

This research frames the study problem in the context of national territory of Tierra del Fuego (TDF), Antarctica, and the South Atlantic Islands, constituted as a province of Argentine Republic in 1991. Due to geopolitical issues related to its strategic location in the South Atlantic Ocean, the Argentine government promoted specific policies in order to encourage its population. To accomplish this purpose, this territory was defined a Special Economic Zone (SEZ) in 1972, and tax advantages were given to any productive activity. This resulted in the establishment of industries, dedicated to consumer electronics-specific sectors, which demanded a significant number of new labor. The industries settled in the only two existing urban centers on the Isla Grande of TDF at that time, Ushuaia and Río Grande. Consequently, these cities grew rapidly and continuously as a result of significant internal migratory dynamics. However, economic impulse was not accompanied by urban planning regulations and housing accessibility policies.

As a result of urban sprawl under scarce state management, and the lack of available housing, informal production of the city began to grow. Informality is a characteristic modality of Latin American urbanization, in which the inhabitants generate their own living conditions, outside formal channels. Informal settlements expanded, within worse habitability conditions than the formal city (Clichevsky, 2000, Cravino, 2006). Numerous problematic issues can be mentioned, related to their irregular land tenure situation and their location in undeveloped areas. Among them, the following stand out: lack of access to essential services, localization in environmentally hazardous places, and more precarious housing. Moreover, symbolic distinctions and social stigmatization processes in addition to the mentioned physical problems.

Over the last fifty years, USD patterns within and between Ushuaia and Río Grande have been directly affected by linkages each city established with industry, by rising real estate speculation, and by new forms of space valorization related to international tourism. The emergence of new land and housing commercialization dynamics since 2003, as well as the role of urban housing policy, increased informality.

Given to the impact caused by productive extra-urban dynamics (industry and tourism), as well as the ones caused by internal dynamics of mercantilization and decommoditization (including state and informal urban-housing production), inequalities consolidated in the cities, particularly between the formal and informal areas. The State played a central role in defining the spatial patterns of inequality. On one hand, through the promotion of economic dynamics. On the other hand, through its direct urban actions in the cities: as a planner, as a producer of housing solutions, as a regulator/facilitator of the urban mercantilization process and through policies that addressed (or not) informality (Reese, 2006, Fernández Wagner, 2009).

Therefore, the research object focused on the causes and patterns urban inequality acquires in Tierra del Fuego cities under particular USD dynamics, from a multi-scale perspective. The **general objective** is to analyze the USD dynamics that have intervened in the production of cities and of urban inequalities in Tierra del Fuego, since its definition as a Special Economic Zone in 1972, until 2020. The **particular objectives** are: 1) to identify the territorial structuring, conditioning factors and occupation patterns of the fuegian urban space, prior to 1972; 2) to analyze the productive and socio-demographic dynamics fomented at the extra-urban level that influenced the transformation of the fuegian productive-territorial structure (1972- 2019); 3) to analyze the intra-urban dynamics of expansion, mercantilization and demercantilization of Ushuaia and Río Grande (1972- 2019); and 4) to identify the patterns of urban inequality in Ushuaia and Río Grande (2020).

In summary, the major differences between formal and informal cities in Ushuaia and Río Grande, respond to a specific form of USD, which exhibited typical characteristics of Latin American urbanization processes. Nevertheless, peculiarities of the considered cases might stand out, related to a double condition; even though being in a remote and periphery geography, they are simultaneously situated in a region of important geopolitical value. According to the argument, production of urban space in TDF is influenced by fragmented local and federal policies. This led to an economic and special decoupling at various scales with unequal, combined, and conflicting territorial and social effects. A comparative historical research using spatial analysis is proposed as a methodology, along with qualitative and quantitative approaches.

Relevant current research in the scientific field

Urban inequalities have increased in many cities since the beginning of neoliberalism (Secchi, 2015). While they are commonly associated with intra-urban dynamics (Harvey, 1977), it has been suggested by critical urban studies (Brenner, 2009 b) that they are also a component of larger dynamics of Uneven Spatial Development. The USD theory provides central elements for a multi-scale understanding of the economic, political and spatial forms that directly affect the territorial configuration of inequalities. According to Smith (1984, 1996/2012), Harvey (2007), and Brenner (2009 a), USD is an essential process in the creation of capitalist space, based on a fundamental contradiction: as capital expands, it homogenizes territorial aspects while also generates differences by favoring some locations over others for accumulation. Equalization and differentiation dynamics change throughout time, across different geographies, and at various spatial scales. USD finds its most concrete form in cities (Brenner and Schmid, 2015).

Among the dynamics of urban equalization, Smith (2012) highlights the central role cities play in broader processes of accumulation, together with intra-urban dynamics of valorization, such as commodification of land and housing. Besides, he emphasizes the role land rent plays as primary cause of socioeconomic and urban differentiation. Both dynamics generate conflicts among actors who conceive cities either as goods for use or goods for exchange (Pradilla Cobos, 1987). Urban housing policies are crucial in regulation or facilitation of the differentiation process (Pérez, 2016).

Particular urban growth dynamics and inequality configurations emerged in latin american cities, as a result of specific forms through which the continent was incorporated into the global accumulation process (Pradilla Cobos, 2014). The late and peripheral insertion into industrial capitalism stimulated accelerated processes of urban sprawl under scarce planning criteria. Deficiencies in planning and housing policies led to a large percentage of inhabitants having to solve their housing needs outside formal channels (Clichevsky, 2009). As a result, the informal city emerged, a distinctive method of producing urban space in Latin America, (Clichevsky, 2000; Cravino, 2016). According to Abramo (2012), Jaramillo (2008; 2009), and Fernandes (2011; 2016), neoliberalism has led to an increase in informality , due to the expansion of commercial practices over urbanization trends, such as gated communities, suburbanization, and renewal processes in central areas. Commoditization and the lack of affordable housing, led to informal settlements growing over undevelopable areas, defining increasingly precarious ways of inhabiting (Di Virgilio y Rodríguez, 2016). The strongest aspect of urban inequality in Latin America is the increasing segregation between formal and informal produced spaces (Pérez, 2014 a; 2016).

USD discussions acquire a special significance in Latin American territories that have been impacted by regional-economic promotion strategies, such as Tierra del Fuego (TDF). In this sense, it can be mentioned research works that address the inequalities produced in Manaus (Brazil) and Ciudad Juarez (Mexico), as a result of their insertion into global capitalism through industrial

promotion (Rodríguez Álvarez, 2002; Kanai, 2014). These studies, however, are scarce and do not provide comparative criteria for analyzing the phenomenon in other case studies. Regarding TDF, on one hand, there can be found antecedents that addressed transformations and economic implications of the industrialization process (Roitter 1987; Kosacoff and Azpiazu, 1989; Filadoro, 2007; Mastrocello, 2008; Schor and Procelli, 2014). On the other hand, researchers addressed certain aspects of the production of urban spaces. Among these last ones, it can be recognized research dedicated to the study of urban housing policies (Martínez and Finck 2017; Finck, 2019; Martínez, Finck, Lobato, 2019) as well as to the growth of urban informality in recent times (Alcaraz, 2015). However, there is still scarce knowledge on the relationships between economic and territorial dynamics that explain the USD process and address the spatial patterns of urban inequality. In this sense, this research aims to make theoretical and methodological contributions from a Latin American perspective, for the interpretation of the USD process and its patterns of urban inequality in peripheral territories of strategic geopolitical value.

Methodologies

With the aim of generating contributions to the USD theory (Chetty, 1996) a comparative case study was conducted to address the USD issue in the TDF cities. The cases concern the cities of Ushuaia and Río Grande, where the implementation of a policy of economic promotion (the definition of TDF as a ESZ) led to various spatial disparity configurations. The comparison served as a method for creating critical knowledge (Mac Farlane, 2010). Based on the theoretical articulation of USD and Latin American urban studies, this research required the creation of its own methodological approach. Four analytical components were identified from a multiscale and historical approach:

- Pre-existing territorial structure: the Fuegian territory prior to its definition as an EEZ was characterized. Both geographical characteristics and those related to the historical occupation process were taken into account.
- Extra-urban dynamics: the causes and evolution of the productive, socio-demographic and territorial transformations of TDF and its cities were analyzed (inter-urban comparison), since its definition as an ESZ (1972 to 2019).
- Intra-urban dynamics: a comparative analysis was made of the urban expansion of Ushuaia and Río Grande, the evolution of housing conditions and the identification of the dynamics of commoditization and decommoditization involved in their production (1972 to 2019).
- Urban inequalities: patterns of spatial inequality in Ushuaia and Río Grande were identified according to the dynamics of (de)commoditization, and conditions of affordability and urban vulnerability were recognized in the cities in 2020.

The methodology used a mixed-design approach, incorporating spatial, quantitative, and qualitative analysis techniques, considering the numerous benefits of their triangulation (Cantor,

2002). Spatial approach was central in this research. It materialized in the creation of cartographic products using two main techniques: interpretative spatial diagrams (ISD) made by self-created hand drawings, and maps created by geographic information systems (GIS). These resources served as both primary data sources and result synthesis analysis. Interviews, field trips, documentary and statistical analysis, were employed as complementary techniques.

Main results

The USD process initiated with the definition of TDF as an ESZ, originated the current patterns of urban inequality in Ushuaia and Río Grande. The analysis of the conditions of each city and the extra- and intra-urban dynamics allowed us to arrive at comparative results. The particular geographical conditions of TDF, as well as the stages of capitalist valorization that took place until 1970, influenced the processes of historical occupation of the cities. Ushuaia, located to the south and isolated by the Andes Mountains, grew by state initiatives and consolidated as administrative capital. Río Grande, with a better relative geographic position, consolidated as an economic center. Both were small towns until 1970. Land ownership, mostly public in Ushuaia and private in Río Grande, had a strong influence on subsequent urban growth patterns and inequality. The particular geographical conditions of TDF, as well as the stages of capitalist valorization until 1970, influenced the processes of historical occupation of the cities.

The industrialization process initiated in 1972 with the definition of TDF as an EEZ, transformed the productive-territorial structure and produced a great migration. The population grew by 940% between 1972 and 2019, with Ushuaia and Río Grande receiving 97% of the inhabitants. Its urbanization was directly impacted by this. Urban sprawl in Ushuaia grew by 1,000% while Río Grande grew by 500%. Urban informality increased in both cases, a result of the disconnection between policies that supported the economy and population growth, and policies that attended urban and housing growth. Spatial analysis shows informal settlements represented 41% and 37,5% of Ushuaia and Río Grande respectively urban sprawl, between 1972 and 2019.

The differences between formal and informal urban production, constitute the main form of inequality in both cities, although with differences and similarities in each case:

- The industry displayed both positive and negative cycles during the study period (1972-1991; 1992-2002; 2003-2015; 2016-2019) which had a varied effect on the rise of informality. Río Grande became a more established industrial hub, and with it, informality increased during periods of industrial boom.
- In Ushuaia, the growth of tourism brought to new dynamics of differentiation through the renovation and modernization of central areas.
- Along with industry and tourism, dynamics of commoditization of urban spaces emerged, reflected in the creation of exclusive residential areas (closed neighborhoods) and in the rise of real estate

speculation. In Ushuaia they began during the 1990 decade, while in Río Grande since 2003. In both cases they intensified during the last industrial boom and contributed to the growth of urban informality due to an overvaluation of urban land prices and rents.

- The role of urban housing policies applied in each case was central to the processes of internal differentiation. Housing planning and housing production policies were disjointed from economic dynamics, and thus could not meet the demands in a timely manner. In Ushuaia, policies mostly favored mercantile practices, while at the same time were more intolerant of the growth of informal settlements.

The USD process generated specific patterns of inequality through the formation of homogeneous landscapes, where three opposing city projects (mercantile, state and informal) coexist, physically segregated and with marked differences. In both cities the market generated exclusive urban environments in the periphery, while in Ushuaia it also provoked a process of renovation of the central area linked to tourism. Affordability conditions in the land market are worse in Ushuaia, while the rental market is difficult in both cities. In both cities, informality is geographically and socially disconnected and presents the worst urban vulnerability indexes.

Areas of potential additional research

This research incentives at least three possible lines of future work, linked to the study of territorial inequalities in comparative terms.

The first line would aim at deepening theoretical-methodological studies on USD. Given that the methodology was proposed for a case analysis, from the field of critical urban studies, other cases are of interest in order to observe the dynamics that operate in the production of urban inequalities in other contexts and to strengthen the theoretical contributions.

The second line would address studies dedicated to understanding the relationships between urban inequality patterns and the role of the State. It is of interest to verify in different cases how planning policies, housing production, regulation and/or facilitation of commercial practices affect the production and distribution of actors in the territory as well as the differentiation of inhabited spaces.

The third line would consider the production of urban inequalities caused by tourist activity. It is interesting to analyze in other cases the intra-urban valorization processes associated with this activity, which produce particular dynamics of internal differentiation.

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Prologue

The present thesis is the result of seven arduous years of work. However, and in certain ways, its construction began much earlier, influenced by my personal, academic, militant and professional experience.

I grew up in Ushuaia, the city of the end of the world. My parents, like so many of their generation, chose to make their home in Tierra del Fuego in search of a better future, in years when unemployment hit most of the provinces of Argentina. They migrated young, to the then popularly known as "the island of fantasy", an inhospitable land but attractive for its job possibilities associated with a special promotional regime, as well as for its great natural beauty.

To those of us who grew up there in the 1980s, we are called "the children of industrial development". We grew up together with the city, equally wild, in neighborhoods always under construction, without sidewalks, with dirt roads and endless yards of snow and forest. With houses that were moved in trucks from one lot to another, without fences or padlocks, listening in the center on Saturday afternoons to dozens of languages from tourists who came down from cruise ships for the day. We also grew up witnessing the closing of factories that had opened not so long before, with social protests in the streets and the first democratic death, Víctor Choque, a factory worker. All this seemed to me for years something "normal", the sea and the mountains were the only limits of the possible world, a chaotic and contradictory world, but our own.

When I moved to study architecture in Córdoba at the age of 17, I understood for the first time that this familiar world was very different from others, and the comparison awoke as something inevitable. In addition to the level of urban consolidation, what called my attention more than anything else were the differences within the city. The traditional neighborhoods of "nice" houses and squares, the new gated communities with large walls, and on the other side, large extensions of precarious settlements. The urban poverty I saw in that and other big cities was new, unknown and terrible.

I began to be politically active in my second year at university, motivated by the possibility of contributing to a more equitable society from the architecture workshops, convinced of the transformative potential of space and the responsibility we hold in it, those of us who specialize in its materialization. Once I graduated, I decided that my professional path would be dedicated in some way to propose solutions for the most vulnerable sectors of the cities. Along this path I completed my Master's Degree in Habitat and Urban Poverty in Latin America, working at the same time in different informal settlements in the city of Cordoba, as a technician in the Housing Service and Social Action.

During those years, on some trips to Ushuaia, I began to learn about the serious problems that had arisen in the Province regarding access to housing, after a new industrial boom in 2003. There

were also informal settlements in Tierra del Fuego. Situations of great housing uncertainty, social stigmatization processes, violent evictions and social struggles for the right of access to housing. At the same time, gated communities had also emerged, as well as a land and rent market impossible for a large part of the population to afford.

The characteristics of the settlements in Tierra del Fuego seemed different from those of large Latin American cities, often associated with situations of poverty. How was it possible for the population to live in such precarious conditions in such an extreme climate, in small cities, with the highest employment rates and salaries in the country?

This question prompted me to begin a new stage of education, which materialized in 2015, with the start of the PhD in Urban and Regional Studies (UNC – BAUHAUS). That same year, I joined the National Council for Scientific and Technical Research (Consejo Nacional de Investigaciones Científicas y Técnicas) as a doctoral research fellow, having as the main focus of work the characterization of urban informality in the cities of Tierra del Fuego and its connection with urban policies. However, my motivation was more linked to an interest in transforming concrete reality than to academic activity. The architecture career has limited training in research, so the forms and foundations of "doing science" were alien to me. But the precarious and contradictory ways of living in Tierra del Fuego existed concretely in space, and doing a thesis on the subject seemed, at least, a way to generate a contribution to its interpretation.

The process of this research began then with an empirical question, which was a first challenge for the author, given that it had to do with depersonalizing the home, turning into an object that had been apprehended as an emotional place. To "take distance", in my case, literally, was fundamental in this process of scientific construction.

As part of the binational doctoral program, I moved to Germany for a year, and then came another challenge, which was to "look beyond" the context of study. In some of the courses taken on urban inequality issues, I met doctoral students from diverse realities: Egypt, Jordan, Iran, Korea, India, among others. As different as our origins were, we all recognized the existence of informal settlements in our contexts, with similar characteristics, but also with great differences. The multiple exchanges, with peers and teachers, allowed us to recognize, on a new scale of comparison, the differences between the North and the global South, the particular ways of making a Latin American city, and also the specific issues of the cities of Tierra del Fuego. These had to do with their peripheral and geopolitically strategic location at the same time, as well as with the economic policies implemented to boost their population.

Upon my return, the research took a different course. The economic and political dynamics that directly influenced the production of cities and inequalities became part of the analysis, and not only a framework for it. In the construction of this new, interdisciplinary object, a key element were the theoretical discussions. These provided a broad interpretative framework that allowed me to

assume and incorporate the existing contradictions in the production of the space from where I come from. In addition, they enabled us to take the comparison to a place of reflective thinking, and not only intuitive-descriptive. One of the greatest lessons learned from this thesis was the "way of looking" at places. To make conscious and reflexive an approach that is always subjective and, at the same time, forceful when it is penetrated by broader theoretical discussions.

The last two years were fundamental in the development of a new approach to the thesis, to Tierra del Fuego and its cities. In 2020 I moved to Ushuaia, and worked for a few months within the national government, in the National Directorate of Strategic Planning, developing works of territorial reorganization in order to reverse regional inequalities, one of them in the province under study. Then, in 2021, I started working as an advisor on habitat and urban planning issues in the Municipality of Río Grande. The experience of working in the State, at its different levels and on the topics researched for so many years, was gratifying and at the same time represented a final challenge. On the one hand, it gave me the possibility to use all the acquired knowledge and to give a new meaning to the research. The meaning sought at the beginning, to influence reality, collaborating in the construction of more equitable spaces. On the other hand, it also meant recognizing and incorporating new complexities linked to the functioning of the State in the territory. When the thesis was revisited after these experiences, the analysis was undoubtedly no longer the same as at the beginning.

The process was then one of successive transformations. From one's own place, to an object of study, from the object to the broader context, from the context to the theory, and finally, back to the place of origin. Each of these moments added a new layer of analysis to the text presented here. This is not intended to be a closed product, much less a finished one. It is simply an attempt to critically understand the forms and processes under which territories are produced and the inequalities that develop in them.

Making these inequalities visible, recognizing their genesis, is an unavoidable step if we seek to bring some justice to our societies and territories. I hope that it will be a contribution, and that it will return at least a fraction of all that has been gained along the way.

Introduction

Research problem and objectives

Territorial inequalities have grown and transformed as global capitalism has advanced over different world geographies. It expands through a wide range of productive and economic activities, incorporating new spaces by ways of a double dynamic that homogenizes, while differentiating concrete territorial formations, privileging certain spaces (and moments) for accumulation over others (Smith, 1984; Harvey, 2007). This process is what we call, from critical studies, Uneven Spatial Development (USD), and it is inherent to the capitalist production of space. The uneven formations produced by the USD process acquire specific features and particularities at different times, places and scales of the territory (Brenner, 2009a). Economic actors, as well as political and social actors, bear a crucial role in this dynamic of transformation. Among these, the State, in particular, plays a central role in defining, diminishing or intensifying territorial patterns of inequality through its public policies (Brenner and Theodore, 2002).

Twenty-two years after the turn of the millennium, and in the midst of a neoliberal accumulation phase, it is clear that cities are the main exponents of inequality, acting as central spaces of concentration of capital and population (Harvey, 1977). The spatial patterns of urban inequality are the result of both USD processes that take place within cities, as well as broader dynamics of valuation and devaluation that occur at other scales and directly affect their production. They are crossed by both the previous socio-territorial formations, as well as by political, economic, and cultural processes characteristic of each context. In the case of the cities of the Isla Grande de Tierra del Fuego (TDF), urban inequalities have grown and have been transformed in a very particular way in the last 50 years along with the application of regional development policies that sought to boost their population.

It is important to highlight a series of particularities of the territory in question in order to understand the problem that summons us here. Bondel (1985) considers that the geographical identity of the Isla Grande de Tierra del Fuego (figure I) is based on three fundamental issues. In the first place, its geographical position: away from the main urban centers of the country and the world, and located just 1200 km from the Antarctic Continent, it has historically been a difficult territory for human installation, and for this very reason, also a strategic space of “conquest”. Secondly, the insular status shared by two countries (Argentina and Chile) and the fact that it is necessary to pass through Chile to enter the Argentine mainland make it peculiar. This issue has made connectivity within Argentine territory even more difficult and has also been the subject of almost constant concern about sovereignty. Finally, the fact that it is crossed in the west-east direction by the last stretch of the Andes

Mountains has generated great internal differences between the southern and northern sectors, both in geographical terms and in terms of the growth of urban centers.



Figure I Isla Grande de Tierra del Fuego, Argentine sector. Source: Modified from Province of Tierra del Fuego Atlas, Antarctica and South Atlantic Islands.

These issues, added to the rigorous subantarctic climate that it presents, were sufficient to define a socio demographic structure that, until 1970, could be considered, according to Cao and D'Eramo (2020), as underpopulated, and that held only two small urban centers: Ushuaia and Río Grande.

The relative isolation of Tierra del Fuego (TDF), on the one hand, and the great value it presents in terms of natural resources and strategic position in the South Atlantic, on the other, were factors that challenged, or at least were perceived in this way, the Argentine sovereignty over the territory (Ciccolella, 1989). Throughout the twentieth century, and in the face of the interest of different international actors in the region, the national State deployed a series of strategies that sought to promote its definitive settlement, such as the installation of a prison in Ushuaia, military bases, as well as through the promotion of certain economic activities of primary base (sheep farming and hydrocarbon exploitation). Consequently, different productive profiles were developed in the cities. However, until 1970 national attempts to generate new activities in the far south had not yet brought about the expected economic and population growth. At that time, on the Argentine side of TDF

resided only 13,000 inhabitants, distributed in the two urban centers and the rural territory, of which 50% were foreigners.

In 1972, and in a context of strong boundary disputes with Chile, the definition of TDF as a Special Economic Zone through the sanction of a Special, Fiscal and Customs Regime (National Law No. 19,640) would give impetus to an unusual transformation of the island and its cities. Thought of as a geopolitical strategy, the new regime proposed tax benefits for activities that would take place within the scope of TDF's jurisdiction. Although the development of local projects was initially expected, this did not happen. Towards the end of the seventies, the tax advantages would be combined with a national project of deindustrialization of the traditional industrial centers and a global context of productive restructuring, making it possible for the consumer electronics industry to grow in the extreme south of the world. This industry was transformed in a few years into the main economic activity of the island and, due to the characteristics of the specialized production process in the final manufacturing phase, a large amount of labor was required. Therefore, the TDF's cities of Ushuaia and Río Grande experienced the intense arrival of migrants. Ushuaia went from having 5,600 inhabitants in 1970 to 29,505 in 1991 and 73,500 in 2019, while Río Grande went from 7,754 to 38,137 in 1991, amounting to 93,500 inhabitants in 2019 (INDEC).

The modifications in the economic and socio demographic structure brought about great spatial transformations. Urban centers began to experiment with a process of expansion, where they went from being small towns to thriving intermediate cities. Although the national State was a promoter of the productive impulse and of the population, the spatial implications that the industrial promotion would bring were not initially taken into account. Anticipating a little on one of the central conclusions of this thesis, we share the testimony of a public sector worker: "industrial promotion was a territorial policy that forgot about space".

The abrupt population growth caused a great gap, both temporal and quantitative, between state housing production and housing needs, which far exceeded the installed capacity, both in institutional matters and in infrastructure. The lack of habitat access options that would respond to the new population meant that a considerable percentage of persons had to solve their housing needs outside the formal channels, initiating the process of informal city production. Informality is a characteristic modality of access to habitat in many Latin American cities, and is associated with urbanization processes that take place outside the formal channels in which it is usually the users of the city themselves who produce materially and immaterially the conditions for their inhabitation (Fernandes, 2016). In informality, the inhabitants produce their homes without owning the land, generally on non-urbanized land (and often not suitable for urbanization) and without access to basic services, which leaves them exposed to a state of greater vulnerability with respect to the formal production of the city (Jaramillo, 2008). This vulnerability increases when other commonly associated problems are considered, such as being located in areas of environmental risk, the housing

precariousness, the lack of means of transportation, and stigmatization processes, which arise from their “irregular” condition with respect to property.

This is why, during the eighties, Ushuaia and Río Grande, the two main cities of the TDF’s island, expanded under two great logics of space production: the formal one, promoted by the State at its different levels, and the informal one, driven by civil society. Although informality is commonly associated with poverty and unemployment, the striking element about the TDF case is that most of the inhabitants were formal industrial employees under a prosperous sub regional economy. This suggests that there are other variables beyond the economic capacity of the population that affect the growth of city informal production. Clichevsky (2009) associates the growth of informality with macroeconomic conditions, state policies (those that regulate, produce and market land and housing) and the functioning of the land and housing market, in the face of which certain actors are expelled from the formal logic in the production of the city.

Over the years and strongly linked to the ups and downs of industrial dynamics and new emerging accumulation dynamics, urban inequalities between the formal and informal cities grew and consolidated within the production processes of urban spaces. However, the specific patterns of inequality in Ushuaia and Río Grande show similarities and differences, both in intra- and interurban terms, and are crossed by particular dynamics of Uneven Spatial Development (USD). At least five different issues are involved in these patterns.

The first question has to do with the structuring of urban spaces prior to the beginning of the industrialization process, related both to the geographical conditions of each city, and to the historical patterns of occupation. Ushuaia, located on the Beagle Channel and isolated for many years by the Andes Mountains, initially showed greater difficulties for urban growth and the installation of economic projects due to the characteristics of its geography, and was consolidated as the administrative capital of TDF. Río Grande, founded as an agricultural-livestock colony in the steppe at the north of the island, grew according to livestock and hydrocarbon economic projects, although limited by the ownership of rural land. This would result in an initial differentiation linked to the natural constraints and possibilities of urban growth, and also with respect to the possibilities of formal and informal expansion, in relation to the structure of land ownership surrounding urban environments.

The second issue has to do with the fact that the industrialization dynamics that began in 1972 did not develop as a linear and continuous process over time, but have shown positive and negative cycles, crossed by industrial crises and by policies of the national State that had direct implications for the growth of cities. Throughout this 50 years period, we recognize four distinct phases of industrialization and deindustrialization that have had different impacts on both economic dynamics and demographic and urban dynamics. The first phase began with industrial promotion in 1972 and ended in 1991 with the establishment of strong neoliberal measures at the national level. This

prompted the second phase, in this case of deindustrialization, which lasted throughout the nineties and until the early years of 2000. The third phase, of industrialization, began in 2003, with a new series of policies that aimed at consolidating and strengthening the TDF's industrial productive scheme, and reached its end in 2015. Then, a new national scheme based on financial speculation would begin the last deindustrializing cycle (or fourth phase) of the island, until 2019.

Related to this, the third issue focuses on the relationship that each city established with the industry and its positive and negative phases. Río Grande was consolidated as the economic capital of this activity due to its better geographical location and relief conditions. Consequently, it was more sensitive to industrial crises, as well as to its rising moments. Ushuaia, on the other hand, was consolidated as an administrative capital, beyond the fact that it remained linked to industrial activity, since it is the only seaport on Isla Grande. The consequences of industrial dynamics had a differential impact in the production of urban space in each case.

The fourth issue concerns the emergence of tourism as a new productive activity. This particularly has affected Ushuaia since the early nineties, and continues to grow in economic importance. Tourism would bring new forms of differentiation, both between the productive and urban profiles of each city, and at the intra-urban level in Ushuaia.

The fifth issue has to do with the internal dynamics of urban space production in Ushuaia and Río Grande. In the processes of cities expansion, we recognize two central dynamics, typical of Latin American urbanization embodied by the different actors that with different logics have influenced urban growth (Pérez, 2014a; 2014 b; 2016): commodifying dynamics, and those non-mercantile, or decommodifying dynamics. In the case of commercial dynamics, we refer to the processes of valuation of urban environments, expressed in the land and rental market. In the case of non-mercantile dynamics, we refer to those that have not pursued the goal of capital accumulation, but the satisfaction of the need for use in relation to housing and habitat in general. Within this dynamic, we distinguish the state logic of city production from that of civil society, where the latter holds the informal production discussed above.

Although during the first industrialization boom, the non-mercantile dynamics would predominate in the urbanization processes of the TDF's cities, from that moment, and more intensely from 2003, the speculative logic regarding the land and the rental market would begin to grow, an issue that would translate into a newer stratum of differentiation within the cities. Pérez et al. (2015) argue that starting from 2003 and coinciding with the last industrial boom that attracted new population, informality grew considerably due to the lack of options for access to habitat in the formal market. This would bring with it new processes of differentiation well marked in both cases, between the mercantile production of the city, occupying areas of high landscape-environmental value, and informal production, occupying areas of risk.

As previously mentioned, the role of the State, at its different levels: national, subregional-provincial and local-urban, was central to the production of cities (and urban inequalities) in its double role, both as a promoter of industrial dynamics, and as an actor with direct impact on urbanization. Regarding urbanization, it impacted as we will see, at least in four ways: as a planner, as a producer of housing solutions, as a regulator / facilitator of commercial practices and, finally, repressing or tolerating the growth of informality. In each city, the orientation that policies acquired over time, both in terms of housing production and regulation or facilitation of the process of commercial production, and with respect to the attention of the informal city, would be decisive in the location of the different actors in the city and their possibilities of access to habitat.

It is then clear that different dynamics have influenced the production of urban inequalities. On the one hand, economic dynamics driven by actors external to urban spaces and that, in turn, exceeded the urban scale as an area of incidence and / or accumulation. These dynamics settled in territories with particularities, with a previous structure, and gave rise to internal dynamics of growth and differentiation, proper to the cities. On the other hand, within the latter (considering the internal dynamics), the role played by the State, as well as the dynamics of commodification of urban spaces, would play a fundamental role in the growth of urban informality and in the patterns of internal differentiation, in Ushuaia and Río Grande.

In 2020, the last year of analysis that comprises this thesis, urban inequalities were expressed in both cities, with similarities and differences, in the configuration of homogeneous and fragmented landscapes, according to the different logics of occupation of space. In turn, other issues such as the difficult conditions of access with respect to land and the rental market for the low -income population, as well as the high rates of urban vulnerability in informal settlements, ended up defining the current map of urban inequality patterns in Ushuaia and Río Grande.

Consequently, the object of study of this thesis is then the understanding of the dynamics of Uneven Spatial Development that influenced the production of urban inequalities in TDF, from its definition as a Special Economic Zone (SEZ). Although the focus of analysis is urban inequalities, a multi scale perspective is adopted for its approach. We thus consider that many of the “causes” that explain inequality are found outside the cities.

It follows, then, that this research seeks to build a bridge between studies of economic geography, particularly industrial geography, and comparative critical urban studies. The theory of USD, embodied by authors such as Smith (1984, 1996/2012), Harvey (2007) and Brenner (2009a), provided central elements that allowed to bridge the distances between economic forms, political forms and spatial forms that directly affect the production of territorial inequalities. A key conceptual piece in the articulation of these two great spheres of knowledge is the role of the State, as regulator or promoter of capitalist activities in the territory/related to territorial occupation. In addition, we highlight the fact that critical Latin American studies were central to the understanding of processes

of territorial structuring determined by particular forms of insertion into the process of global accumulation of this region, which gave rise to dynamics of urban growth common to different countries (Pradilla Cobos, 2014). Within Latin American urban studies, authors such as Abramo (2012), Pérez (2014 a; 2016), Cravino (2006), Clichevsky (2008); Jaramillo (2008; 2009), Fernandes (2011; 2016), provided important interpretative elements on the production processes of Latin American urban space and the configurations of inequality, typical of the last neoliberal phase of capitalism, coinciding with the time frame of analysis contemplated in this thesis.

Based on the empirical and theoretical delimitation of the study problem, the questions that guided the research were the following:

What were the dynamics of Uneven Spatial Development that intervened in the production of urban inequalities in the cities of TDF since its definition as a Special Economic Zone in 1972 and until 2019? What are the resulting patterns of urban inequality? What role did the different levels of the state play in the production and reproduction of urban inequalities?

We understand a priori that in the production of urban inequalities in TDF's cities, extra-urban dynamics intervened, fundamentally linked to productive and political dynamics that promoted urban transformations, and intra-urban dynamics, inherent to the processes and logics of production of urban spaces.

Therefore, the *general objective* of this thesis is:

To analyze the dynamics of Uneven Spatial Development involved in the production of urban inequalities in TDF's cities, from its definition as a Special Economic Zone between 1972 and 2019, and establish the specific patterns of inequality in each case.

Four *specific objectives* emerge from the general objective:

1. To identify the territorial structuring, the conditioning factors and patterns of occupation of TDF's urban-regional space prior to 1972.
2. To analyze the productive and socio demographic dynamics that arose at the extra-urban level and that affected the transformation of the productive-territorial structure of TDF between 1972 and 2019, from a multi scale analysis.

3. To comparatively analyze the intra-urban dynamics of expansion, commodification and decommodification of Ushuaia and Río Grande between 1972 and 2019, considering the evolution of housing conditions.
4. To comparatively identify the patterns of urban inequality in Ushuaia and Río Grande in 2020.

Previous research papers on TDF and its cities have addressed some aspects of the study problem presented here. Works that have characterized the transformations of productive dynamics, occurring since the definition of TDF as a Special Economic Zone, as well as the particular characteristics of industrial activity (Nochteff, 1984; Roitter 1987; Azpiazu and Nochteff, 1987; Azpiazu, 1988, Kosacoff and Azpiazu, 1989; Filadoro, 2007; Mastrocello, 2008; Aggio, Gatto and Romano, 2014; Schor and Procelli, 2014) and works that seek to understand their location (Sánchez, 2019). There are also other works from the 1980s that try to understand the links between the productive, demographic and spatial structuring of the TDF's territory (Bondel, 1985; Ciccolella, 1989), but which nevertheless have not been updated. Regarding the production process of urban space, there are works that have been carried out by research teams of the National University of Tierra del Fuego, created in 2010. These include research on urban housing policies applied by municipalities (Martínez and Finck 2017; Finck, 2019; Martínez, Finck, Lobato, 2019). Regarding the analysis of informal settlements, we highlight the Master's thesis of Alcaraz (2015) and Finck (2016), which make valuable contributions on the construction and growth of Río Grande and Ushuaia respectively, during the period 2005-2015. Within this last group, we could also mention the master's thesis carried out by the author of this research, in which an analysis of urban vulnerability in informal settlements from a multidimensional perspective was carried out (Fank, 2021). All these are valuable contributions to the understanding of the historical, economic construction and urban policies that accompanied the processes of space production in TDF and its cities. Nevertheless, there is a deficit in the study of the relationships that may exist between these dynamics from a spatial perspective and, also, in its temporary construction over the last 50 years.

Hypothesis

The definition of Tierra del Fuego as a Special Economic Zone in 1972 was a fundamental factor in the production of the urban inequalities of Ushuaia and Río Grande. This prompted a process of Uneven Spatial Development, in which economic, political and spatial dynamics intervened that took place at different scales, and that had a particular impact on the production of the urban space of each city. This gives rise to a number of initial hypotheses:

- The definition of a Special Fiscal and Customs Regime (Law 19,640) began an industrializing process that generated strong transformations in the productive, demographic and spatial structure of the Isla Grande de Tierra del Fuego and its cities.
- Although industrialization homogenized certain urban aspects between Ushuaia and Río Grande, such as accelerated urban expansion and the installation of industrial parks, it generated in turn strong dynamics of differentiation between one and the other, and within them.
- The relationship that each city established with industry and industrializing cycles influenced the dynamics of urban growth and, also, the production of urban inequalities.
- The preexisting geographical conditions, as well as the previous structuring of space occupation, determined great differences in the processes of urban growth, impacting also in the possibilities and limitations of industrial dynamics and in the emergence of new economic dynamics such as tourism.
- The dynamics involved in the production of urban space, of commodification and decommodification, defined specific patterns of inequality in Ushuaia and Río Grande. Initially, urban informality grew in both cities associated with the State's lack of responses to the growing habitat needs of the new migrant population. Over time, it adopted different characteristics in Ushuaia and Río Grande, depending on both the growth of the mercantile logic of city production, and the urban housing policies applied in each case.
- The role of the State was fundamental in the growth of urban inequalities. This can be verified, firstly, in the sectoral dearticulation of the economic-productive policies of the urban-housing policies applied in TDF and its cities. Secondly, within urban spaces, where local and provincial-subregional states played a central role in defining urban growth patterns.
- The urban spaces display the greatest inequalities, between the occupation patterns of formal and informal space. The constitution of homogeneous landscapes according to the state and informal mercantile logics of the city is observed, the informal one showing the worst conditions in terms of urban vulnerability. In temporal terms, inequalities intensified and consolidated gradually, and would seem to show worse characteristics in Ushuaia, associated with the new dynamics of urban valuation that tourism activity entailed.

Theoretical and methodological considerations

In order to address the process of Uneven Spatial Development and the production of urban inequalities in the cities of Tierra del Fuego, a comparative case study was carried out, which refers to the in- depth analysis of a certain issue (Chetty, 1996), in order to make a contribution to a broader general theoretical construction. The cases correspond to the cities of Ushuaia and Río Grande, within

which the Uneven Spatial Development (USD) process and the resulting specific USD patterns were analyzed. The comparison was a strategy of knowledge production. In the words of Farlane (2010), we refer to knowledge about “criticism” and “otherness”, against the categories of paradigmatic urbanism, seeking as an ultimate goal to make theoretical contributions to the enhancement of the singularity. In this thesis, we aim at contributing to the theoretical construction of the USD through a Latin American perspective.

The case study required the elaboration of an analytical approach of its own, which was built in relation to the general theory of Uneven Spatial Development, and the contributions extracted from Latin American urban studies, and is presented in an extended way in chapter 3. From this design, we recognize four major components of the USD that guided the analysis, considering a longitudinal and multi scalar approach. These components contain, in turn, dynamics and variables that make operational the theoretical approach to USD.

Pre Existing conditions: the study of the geographical conditions and the spatial occupation patterns of TDF’s cities, Ushuaia and Río Grande, prior to the beginning of the industrialization process.

Extra-urban dynamics: the study of the transformations at the levels of productive-economical, socio demographic and territorial, along with their causes, and arising from the definition of TDF as a Special Economic Zone. Their analysis allowed delimiting particular characteristics for the aforementioned cycles of industrialization and deindustrialization that gave rise to certain aspects of inequality between Ushuaia and Río Grande.

Intra-urban dynamics: includes the analysis of the urban spaces processes of expansion and production of Ushuaia and Río Grande. It implies the territorial identification of the different dynamics and logics of space production: state, informal and mercantile. The study of this is carried out for the different industrial cycles previously recognized, also analyzing the evolution of the housing conditions, seeking to establish relationships in each case.

Urban inequalities: involves the identification and characterization of spatial patterns of space occupation according to the different logics mentioned above. Affordability conditions are taken into account, as well as situations of urban vulnerability.

These four components of the USD respond to a chronological approach to the object of study. In this sense, they correspond to the major stages of research of this thesis and, also, to the specific objectives. The preexisting conditions resume the occupation of the TDF’s space, prior to the beginning of the industrializing process. The period of the intra- and extra-urban dynamics of the USD, ranges from the definition of TDF as a Special Economic Zone until 2019, while for the study of urban inequalities, the year 2020 is proposed as a synthesis of the process.

The application of this approach demanded a mixed design based on qualitative, quantitative and spatial strategies, and allowed for the multiple advantages of its triangulation. The spatial

approach is a central feature of this work. In fact, space was the central object of observation, as well as a primary source of data processing and results obtained. This was through the elaboration and interpretation of different types of cartographies.

The main techniques used were spatial analysis, interviews, documentary analysis and field visits. The different techniques are also expanded in chapter three.

Structure of the thesis

This thesis is composed of six chapters. The first three aim at constructing the object of analysis, both in theoretical and methodological terms, based on the analysis of previous empirical works. The next three chapters address the empirical problem, addressing different dynamics of the observed reality. Finally, the conclusions are presented, highlighting the main theoretical, methodological and empirical aspects worked on in a comparative perspective.

Chapter one presents the theoretical discussions concerning the process of Uneven Spatial Development and the resulting patterns of urban inequality. We define, in the first place, the importance of the study of inequality within critical urban studies. The USD theoretical framework provided an analytical approach that allowed us to understand the conjunction of political, economic and territorial processes that, in their linkage, affect the production of inequalities in the different territory scales, particularly, in urban spaces. Three analytical approaches are presented that guide the theoretical production of the USD: Smith, Harvey and Brenner, each who elaborated an analytical theoretical synthesis of his own. Below is the structuring of the USD in Latin America and then, an analysis of the main discussions that guide its characteristics in urban scales. In this last section, we present the contributions to the general theory of USD, considering the particularities of Latin American urban studies.

Chapter two discusses study background. Considering the breadth of the two major fields of work that guide this thesis, economic dynamics and spatial dynamics, the problematization is delimited, in the first place, to the type of space generated by the definition of Special Economic Zones. Previous work that has analyzed the economic, demographic and territorial transformations after its application is then resumed. Two cases from the Latin American region are presented: the impacts of the maquiladora industry in Ciudad Juárez (Mexico) and the urban-regional transformations of Manaus (Brazil) after its definition as a Special Economic Zone in 1965. Then, a national precedent is presented: the case of the province of San Luis, affected between 1978 and 1991 by a promotional regime. At the end of the chapter, the background of studies in TDF is resumed.

Chapter three presents the methodological design process that accompanied the thesis. The two main stages of construction of the object of study are presented, first: an exploratory one (anchored in an empirical question) and a second phase of design of an original methodological

scaffolding (anchored in a theoretical-empirical question). Next, the construction of the analytical theoretical approach is described in detail, as well as its specific construction for case studies, in which the dynamics and variables under study are presented. Finally, the techniques and sources used to address the different components, dynamics and variables are described.

Chapter four deals with the structuring of TDF's territory prior to its definition as a Special Economic Zone in 1972. This territory displays unique characteristics in the country and in the Latin American region linked to both its biophysical aspects and its particular settlement process. In this chapter, we first describe the most relevant physical characteristics of TDF that conditioned the current patterns of human settlement. In this regard, we analyze geographical and climatic aspects of the province and particularly of the Isla Grande, the only one with a stable Argentine population. Subsequently, a historical description of the process of occupation of the island and its cities is made. This was the result of the relationship between multiple geographical, political and economic aspects internal and external to the TDF's territory, and was decisive in the process of Uneven Spatial Development (USD). We also address the origin and growth of the main urban centers, Ushuaia and Río Grande, coming to characterize their urban configuration in 1972, prior to the beginning of the industrialization process.

Chapter five deals with the economic-spatial transformations that occurred in TDF's province, which then affected the reconfiguration of USD patterns and the production of urban inequalities. We identified its origin with the definition of the province as a Special Economic Zone (SEZ) in 1972, through the establishment of a special Tax and Customs System. First, we analyze some of the main processes developed on multiple scales that made possible the economic-spatial transformation in TDF. The fundamentals that led to the definition of TDF as a SEZ is studied, as well as economic dynamics at the national and global scales that were then influencing the patterns of industrial relocation. An historical analysis of the productive dynamics in TDF, from 1972 to 2019, is then carried out, recognizing the centrality of industrial activity, its cycles, its spatial distribution, and implications in the USD. The employment levels and demographic structure are also taken into account, as well as the relationship that each city (Ushuaia and Río Grande) established with industrial activity. This way, different periods related to the successive crises and the industry ups and downs are recognized, which, as we will see, were decisive in the production of territorial inequalities, both at the national and regional-provincial levels. The definition of periods of industrialization, deindustrialization, reindustrialization and new deindustrialization will be a fundamental issue to analyze in the following chapters, as well as the implications of the longest industrial promotional regime in Argentine history on the production of urban space.

Chapter six deals with the intra-urban dynamics of the Uneven Spatial Development in TDF's cities, in comparative perspective. As we will see, the demographic growth driven by industrializing dynamics was not timely articulated with policies of access to habitat and urban planning that would

give answers to the territorial dimension of the resulting productive economic transformation. Over time, the relationship that each city established with industry, as well as the different forms that the expansion processes acquired in each city, also coupled with the logics involved in the production of urban spaces, thus defined different forms of Uneven Spatial Development in each case, along with different specific patterns of urban inequality. At the beginning of the chapter, a classification of the main production logics of urban spaces is presented, considering that these respond to dynamics of commodification and decommodification characteristic of the Latin American USD. The main intra-urban dynamics generated in cities are then analyzed for both the positive and negative cycles of the productive dynamics previously identified. We especially take into account the modality of urban expansion, the impacts on housing conditions, and the logics with which urban spaces were produced.

Chapter seven is dedicated to the analysis of the configuration of current patterns of urban inequality in Ushuaia and Río Grande, in 2020. For its analysis, the spatial identification of the different logics involved in the space production are taken into account: state urbanization, commercial urbanization and finally, informal urbanization. Subsequently, an analysis of the affordability conditions in each case is presented. This condition is derived from the relationship between the prices of land and rents offered in the formal market in 2020, compared with the wage capacity of the population. The conditions of urban vulnerability in each city are then presented, particularly analyzing their characteristics in informal settlements.

Finally, the conclusions take up the main findings of each Chapter. Firstly, for each studied case, we synthesize the chronological comparison of the USD main aspects. Secondly, we present the main theoretical contributions that emerged from the work carried out, along with general considerations to be taken into account in the formulation of public policies that seek to reduce urban inequalities. To close, we propose some reflections about the new (and future) chapters of the Uneven Spatial Development in the cities of Tierra del Fuego.

Chapter 1:

Uneven Spatial Development and Production of Latin American Cities

'The blossoming of uneven development theory in its most academic version poses a political opportunity' (Neil Smith, 2005:3)

The aim of this chapter is to analyse the status of the discussions related to uneven spatial development (USD) and to specific patterns of inequality arising from their overlapping in the Latin American territory, particularly in the production of urban spaces. The theoretical challenge embraced stems from linking broad political and economic dynamics generally occurring under the prevailing hegemonic system with specific uneven formations observed and locally discussed in the Latin American cities. To address this matter, two main theoretical bodies shall inform the structure of this discussion.

On the one hand, critical urban geography and critical urban studies provide significant conceptual elements to approach the general aspects of the USD process by means of which capitalism expands incorporating new territories, “equalizing” and “differentiating” geographical formations. This expansion process has intensified in the last stage of the neoliberal phase coinciding with globalization (Smith, 1984,1996, 2005) and becomes the temporal analytical framework guiding this discussion. On the other hand, urban Latin American studies, also from a critical perspective, contribute with valuable interpretation tools to comprehend the specificity of the USD processes in the geographically and historically determined territories as is the case in Latin American cities. Space, economy and politics or policies therefore constitute an indissoluble triad, or trialectics, in Lefebvre’s words (2013 [1974]), in the production of intra and interurban inequalities. Multiscalarity is the lens through which they are articulated in this text, as it is understood that they are not separate dimensions but dynamics articulated within the same process.

Firstly, we will make an introduction of the general critical urban studies approach in order to understand inequality and the relevance that USD and Latin American studies acquire within it. Secondly, USD theory shall be presented and to do so a brief overview of the origins of the historic-conceptual framework shall be done so that we can later concentrate on its analyses on the basis of three main authors, namely, Smith (1984, 1996, 2005), Harvey (2007) and Brenner (2009^a, 2009^b). From all the above, the central tenets are derived that allow us to outline a common analytical-interpretative approach to address USD at different scales, primarily, the regional and the urban, which are the aim of this thesis.

As the theory is quite general and the authors develop it within the American and European context, we will proceed, in a third stage, to deal specifically with Latin American uneven spatial development. To that end, we will revisit the contributions from Pradilla Cobos (1995, 2014) on the historic and current formation of USD in the region, which comprises four different moments: colonial theft (XVI, XVII and XVIII centuries), merchant capitalism (XIX and early XX centuries), state interventionism (From 1940 to 1980) and neoliberalism (Since 1982 until reaching its current structure). The importance of Latin American USD productive dynamics and policies shall also be defined.

Fourthly, and in agreement with the study focus, these discussions shall be articulated with the ones regarding USD intraurban dynamics in Latin American cities which reveal some similarities and differences with regard to the North American cities. This will lead us, finally, to identify USD's own dynamics in Latin American cities which imply a reformulation of the analytical approach, one more suitable to comprehend USD patterns and urban inequality as will be discussed in the following chapters in relation to cities in Tierra del Fuego, Argentina (Fuegian cities).

1.1 Defining the relevance of uneven spatial development in critical urban studies.

Materially or symbolically cities have constituted for several centuries the prevailing social organization form in the territory. *Urban Society*¹ (Lefebvre, 2017), consolidated with industrialization at the end of the XIX century, has modified (and is still modifying) spatial organization patterns in concurrence with historic and geographical context changes. Since then, however, and even more since the consolidation of capitalism as a global hegemonic system, there is something which has not changed but rather deepened: cities are the main indicators of inequality (Smith, 1996; Secchi, 2015; Di Virgilio & Perelman, 2014).

The *urban issue* is restructured with every restructuring of society and the economy, that is, with processes that are produced in other spheres or scales different from urban space but which have an impact on it (Harvey, 1998). Urban space, in turn, is a product of spatial policies (among others, solidarity and intolerance), of conflicts, of the incidence of agents and of projects that accumulate and overlap over time (Secchi, 2015). In their articulation, the macro processes occurring under the capitalist system, and the dynamics taking place in the interior of the cities, produce specific urban forms, which are contradictory and unequal: they are territorial expressions of global and regional imbalances and asymmetries (Harvey, 1998; Pradilla, 1995; Di Virgilio, Rodríguez, 2016).

¹ 'Urban' in this sense refers to that "pertaining or relative to the city", according to the Spanish Royal Academy. It defines the space we inhabit and it can also define the way we live in that space, the forms in which the space is produced, the social relations, etc. It refers to a geographical delimitation, to a scale (Smith, 1984), as well as to a specific content within that delimitation.

Notwithstanding their long relationship, urbanism and inequality have not always been approached jointly. While inequality has been a recurring topic above all in economics and sociology, essentially grounded on the study of the relationships between capital and labor, and at most, *regarding* space, urbanism has adopted an instrumental, a critical stance regarding its task to conceive of space (Lefebvre, 2017; Secchi, 2015). Perhaps, to some extent, due to this role, “an insurmountable gap has been generated between the ‘urban narrative’ and the actual possibility of opposing the creation and increase of inequality” (Secchi, 2015:16).

Nonetheless, urbanism can be regarded as an instrument of political action and thus bears some responsibility for the worsening of inequality. In that sense, by following Secchi: “the city project must be one of the starting points of any policy aimed at its removal or opposition” (2015:15).

Urban studies had not, until a few decades ago, incorporated this matter into their analyses of cities. It was not until well into the 1970’s that inequality started to take shape *within* space or to be accounted for by *means* of it. The emergence of new approaches, particularly from the critical perspective, had a key role in this change of paradigm. The urban restructuring process began in the sixties and seventies, within the framework of broader processes of economic and political capitalist restructuring at world level, substantially transforming urbanization processes and with them the prevailing ways of analysis and interpretation up to that moment (Harvey, 1977; Soja, 2000).

In this manner, a severe epistemological crisis was produced, embodied in a rejection of the orthodox methods to understand cities emanating from positivist currents and quantitative urban geography, dominant during the first half of the XX century. The characterization of space as something objective, static, *separated from society* (Smith, 1984), was not sufficient to understand the transformations within the city and among the cities. The new forms of spatial organization of labor since the end of Fordism, the changes brought about by technological advances, mobility, spatial hierarchization and connection, the phenomenon of urban sprawl, and above all the increasing inequality in the configuration of the cities, evidenced that space was being produced and transformed dynamically, in the light of broader political and economic processes.

Debates in those times extended from the theory to the categories and methods that should be employed for territorial studies. Many of the radical geographers at the time (among them the renowned Manuel Castells), questioned the consensus previously established regarding issues proposed from a functionalist approach. However, this did not extend to questioning the ‘urban’ as a spatial unit or the role of urbanism as a discipline (Brenner y Schmid, 2015). In turn, the critical studies carried out by the Frankfurt School, forged as an epistemological alternative to the construction of positivist and ethnocentric knowledge, did not problematize the urban questions. In other words, “urban processes were regarded as a direct expression of other, more relevant, social forces such as industrialization, class struggle or state regulation” (Brenner, 2009b: 248).

It was Lefebvre who, in the late sixties, put forward the notion that ‘the urban’ had become the ‘episteme’ of the historical era. The problem of *space*² is a central concept to understand the era, to approach social reality within the framework of urban capitalist society (Lefebvre, 2017). Space is *social space*, support of social relations and at the same time it is part of them in comparison to geometric, ‘objective’, space that hides and makes existing power relations invisible. The urban is understood as a process and at the same time a product in which and from which complementary and opposing trends are identified. In the author’s words:

The world becomes urbanized as the populations and the territories are segregated. Space is colonized by measurable, quantifiable, saleable and plottable forms. We witness thus one of the major contradictions brought about by capitalism: the coexistence and the combination of space homogenization and fragmentation, its totalization and atomization. (Lefebvre, 2017:15).

This acknowledgement made by Lefebvre regarding the contradiction inherent to the production of capitalist space will later become the basis for the theory of uneven space development (USD) in the thinking of the following decades, i.e. to the extent to which capital advances upon space, the differences inevitably increase. (Smith, 1984; Brenner, 2009a).

The new forms the urbanization processes acquired during the eighties and the nineties at the height of neoliberalism deepened urban changes and also the contradictions. Within this framework, hegemonic discourses adopted a totalizing vision of cities. Among the main narratives about contemporary urban conditions, the ones that stand out are those which tend to homogenize the urbanization process at a global level³ (Brenner and Schmid, 2015). Nevertheless, the global nature of this process does not imply that there exists a uniform character in the socio-spatial landscapes it generates. Although global capitalism has been inclined to unify aspects in pursuit of accumulation, it has generated profound differences among countries, regions and cities and within the latter as well.

It is recognized in the field of critical urban studies⁴, on the other hand, “the politically and ideologically mediated character of urban spaces which are open to social dispute”, emphasizing

² It is because of that a product which, unlike other products, intervenes in production to the extent that it organizes and simultaneously territorially determines labor, property, networks and flows.

³ Among them the following stand out: urban triumphalism (cities as innovation machines), techno-scientific urbanism (new approaches from the natural sciences and mathematics characterized by depoliticization and purely quantitative data analysis), the debate regarding urban sustainability and the debates on mega-cities.

⁴ From this theoretical standpoint, epistemological reflexivity also implies acknowledgement of the situationality of the forms of knowledge, questioning not only the observed ‘reality’ but also all the forms to approach it and the capacity of political action upon it. Post-colonial studies, for instance, attempt to generate alternative forms of knowledge to the ones deriving from the Euro-American experience of capitalist urbanization as a way of interpreting the urbanization process in the “Global South” Pradilla (2014) in turn, argues that globalization in as much as it is a ‘neoliberal ideological myth’ tries to explain the Latin American urban processes from a standpoint that the author defines as ‘ideological colonialism’

“continuous (re)construction as location, means and result of historic specific power relations” (Brenner, 2009a: 234).

Brenner and Schmid (2015) propose, in this sense, a new epistemological framework, reflexive and flexible, for urban studies characterized by a series of theses to which this paper adheres. These are six statements that define the urban, global urbanization and capitalist urbanization. We enumerate them as follows:

- Urbanization and the urban are theoretical categories and not empirical objects. Their definition is closely linked to historic and geographical contexts in their origins and they must contemplate political and practical implications.
- In connection with that, the urban is understood as a process and not a universally defined form. It does not refer to a spatial entity but to a historic and diverse dynamic process resulting from socio-spatial transformations at multiple scales in a permanent state of destruction and reconstruction.
- Urban configurations cannot be categorized; they respond to evolving relational dynamics and contain historically inherited configurations.
- The urban fabric is multidimensional and historically specific urbanization and human inequality patterns arise out of its analysis.
- Urbanization is planetary, that is, a product of both previous urbanization cycles and also of its most recent iteration starting in 1980 during the latest neoliberal phase of global capitalism. Planetary urbanization has deconstructed classical urban-rural distinctions and it has not homogenized but on the contrary accentuated the differences between regions.
 - Capitalist urbanization develops through varied USD patterns and routes, mediated by a specific history and geography as well as by institutions, representations, struggles and strategies articulated with the cyclical rhythms of capitalism at global scale.

Urban configurations are, from this standpoint, the result of a process of space production at multiple scales, and they are also concrete manifestations of an unequal specific historic-geographic context. (Smith, 1984; Brenner, 2009b). Their study involves a search to encompass and understand multidimensional processes that influence their production and the inequalities appearing in them. In that regard, in a text devoted to urban critical theory, Brenner (2009b) argues that:

...urbanization geographies are profoundly unequal [...] Consequently, under contemporary conditions, the urban can no longer be seen as a differentiated space relatively narrowed down; on the contrary, it has become a generalized planetary condition in which and through which

by means of conceptualization and models that render invisible the structural inequalities between one context and another.

capital accumulation, regulations of socio-political life, reproduction of daily social relations and the debate of possible futures for humanity and the Earth are organized and contested simultaneously... (Brenner, 2009b: 250)

USD's approach posits, within geography and critical urban studies, a framework of political, economic and spatial analyses to understand the contradictory dynamics that generate inequality specific configurations in the space produced within capitalism. It is found within the articulation of the geographical and the political (Marxist) theory. While the first one deals with spatial perspective, the second one incorporates the Lefebvrian notion of space as a social product in which unequal power relations are expressed (Smith, 1984, 2005). The specificity of the urban is permeated, in all the cases, by broader USD configurations, typical of the capitalist hegemonic model, which is necessary to include in the analysis of specific processes.

This research is interested in finding out the causes, the characteristics that inequality adopts in the urban space production processes, and the specific USD's patterns. We might state in that sense that inequality is understood as both cause and consequence in the production of cities.

At urban scale, the most concrete expression of inequality at global level, according to Secchi (2015), is spatial segregation, or what the author considers the same, the big differences existing between the 'cities of the wealthy', protected by means of security devices, some visible and others invisible, and the 'cities of the poor', which are marginal, and on the periphery. The latter are characterized by Secchi as 'the city of the excluded, the anonymous, those subjected to the logics of the dominance of the urban space imposed by the rich'⁵ (Secchi, 2015:6).

USD patterns, however, can only be understood within their context. The vast field of Latin-American urban studies attempts to account for, even though not systematically, different aspects of USD in the cities of this region. Although there are differences among the countries and within them, the formation of Latin-American USD historical patterns (Pradilla, 1995, 2014), has given rise to related problems in the growth and production of their cities. Since the onset of neoliberalism, processes of growing and deep social inequality occur which might be identified as *spatial injustice*. In the majority of the cities, the daily coexistence of financial economic centres and gated communities with vast areas of poverty and precariousness of habitat constitute the paradigmatic expression of the trends and tensions of the new urban processes mentioned above (Jordan y Simioni, 2003; Abramo, 2012).

Among the most relevant topics of study regarding inequality in Latin American spaces, are those referring to the role occupied by the different actors in the production of urban space ⁶ (Herzer,

⁵ Rich and poor are not defined on the basis of economic indicators but rather in a pluridimensional sense and, in this approach, from the spatialities they inhabit and they are able to access.

⁶ According to Di Virgilio and Perelman, with regard to Latin American cities, "the construction of an uneven urban social order implies the differential capacity of developing (instead of imposing)life projects" (2021, 12)

Pirez, 1995), particularly since the accelerated expansion of the cities within global capitalism. Prior to neoliberalism, Lefebvre (2017) distinguished three types of production of urbanism, namely, that of good-willed men (architects working at human scale in a nostalgic and idealistic manner); that of the administrators connected to the state public sector (whom through a scientific approach fragmented reality and provided systematic answers by means of an operational rationalism); and finally that of the developers, who act according to the market “for profit and without dissimulation” (2017 [1968]: 43).

As a result of the growing domination of the government machinery by neoliberal movements since the 1970’s, urban planning by administrators has been limited in its regulatory role. In the face of the advance of the commodification of Latin American urban spaces, (Abramo, 2012; Pirez, 2016) and the lack of political responses that might provide alternatives for inhabiting, informality has grown as the only alternative that decommercializes access to habitat of wide sectors (Clichevsky, 2000, 2008; Cravino, 2006; Pírez, 2016; Jaramillo, 2010). This is, therefore, a fourth type of production of urbanism which complements (or perhaps confronts) the three types of urbanism distinguished by Lefebvre.

Therefore, and as will be developed later in this chapter, it is understood that informality in habitat access is a specific form of USD demarcated by an urban frontier, as Smith (1996) would argue, which is delineated within many Latin American urban agglomerations generating two cities in one; a formal and an informal one. The differences existing in multiple dimensions between the formal and the informal city represent one of the most important forms of inequality within the urban spaces in this continent.

In view of the foregoing, the theoretical discussion presented herein aims to address the urbanism-inequality relation from an articulation of USD theory with Latin American urban studies. While USD enables us to understand the structural and emerging dynamics that account for the inequalities in the production of capitalist space, Latin American studies provide a framework for their concrete analysis in the region where the case studies are located.

The manner in which inequality is manifested in the urban space varies according to the principle of place (Brenner, 2009a), that is to say, both the pre-existing conditions as well as the connections with the capitalist system, mediated by state regulation forms, have an impact on the particular and individual forms that USD adopts in each case. In this sense, the generalizations made in this chapter regarding Latin American cities only aim at guiding the theoretical discussion. This thesis recognizes the singularity of the processes in each place, and they shall be incorporated into the empirical study that is conducted in the following chapters.

1.2 The historical path of uneven development

Uneven development traces its origins to the early XX century in the Marxist discussions accompanying the Russian revolutions of 1905 and 1917. It was Trotsky the first to use the term while referring to the political development of socialism within the framework of the theory of Permanent Revolution⁷. Subsequently, the concept was reintroduced in the 60s by political economy⁸ and later by the concepts developed by the geographers and the critical urban theorists in order to explain the way in which the dominant capitalist system relates to space.

Within general Marxist theory, space had not possessed until then a dominant analytical role. The main capitalist dynamics were addressed at conceptual level first and subsequently through the time variable. Despite the fact that some Marxist theorists such as Rosa Luxemburg and Lenin recognized a certain spatial dimension in their explanation for capitalism, which consolidated the premise that the system in itself gave rise to inequalities, that concept did not become theoretically strong. As it is explained by Smith (2005): “the loss of geographical sensibility was simultaneous with a loss of political sensibility; de-spatialization facilitated a certain de-politization both in the local and global sources of power ...” (Smith, 2005: 5).

Uneven spatial development was introduced to the field of geographical studies by Neil Smith (1984) in his book *Uneven Development: Nature, Capital and the Production of Space*, in which he incorporates the geographical dimension into the analysis of the main contradictory dynamics of capitalism, integrating Marxist and geographical theory⁹. To begin with, the author understands that

⁷ His idea that socialism was uneven was opposed to the historic stagism of capitalism. The latter involved a socialist transition process instead of an abrupt change, but Trotsky held the opposite view: the development of socialism was uneven (it does not always go through the same stages) and combined (no nation could reach it individually) Revolution would constitute an event of complete transformation.

⁸ There are several views, an in many instances opposing ones, regarding the term development and it becomes important to explicitly state the paradigms underlying the views on USD. Development arises as the geopolitical project of international organizations in the late 40s at the height of ‘capitalism’s golden age’. Within that context, it was conceived – “in terms of conditions- as relative progress in economic growth per capita, and- in structural terms- as industrialization and modernization” (Parpart and Veltmeyer, 2011: 25, 26). The crises of capitalism in the 1970s led to questioning the development project, especially from Marxism and Latin American structuralism, giving rise to the Dependency Theory. Within it, and under the understanding of a center-periphery model, both development and underdevelopment “are two sides of the same coin” (2011:26); the position occupied by the countries in the world system determines their economy. This is the theory upon which Neil Smith (1984, 1996, 2012) and then David Harvey, build on and further develop this theory by incorporating spatial dynamics. Regarded as counter-hegemonic, it had no adherence in political circles, but it did lead to liberal reforms of the hegemonic current. Two clearly defined paradigms were positioned at the center of the debate on the inequality generated by development centered on economic growth. Definitions would not be so clear in later decades.

⁹ Smith (1984, 2005) argues that the academic geographic tradition, which conceives space as an absolute, abstract entity, does not explain the processes of spatial restructuring, but only in objective physical terms, which are far from unraveling the complex relationships that shape space understood in terms of social production. It therefore incorporates the “political analysis of capitalist society”, which from Marxist theory explains political, economic and social structural issues that are the results of historically and geographically determined processes. From Marxist theory it also incorporates the relational perspective, as opposed to a

both nature and spatial scales are produced within the framework of capitalism. Given that capitalist accumulation is a spatial issue, to the extent that capital moves and expands towards places where it obtains and reproduces advantages, the contradictions inherent to the system are expressed in space and, when combined, they produce USD¹⁰. The combination of tendencies of competitive equalization with regard to production conditions (which lead to the permanent expansion of the system), and the tendencies of differentiation (insofar as capital seeks to obtain comparative advantages) engenders inequalities in the development of the system. USD is, from this perspective, a specific process of capitalist societies, a constituent part of the system per se, and is a geographical, political and historical process (Smith, 1984).

In his book *The New Urban Frontier* (1996/2012), Smith delves into his analytical scheme of USD at the urban scale. By means of the USD theory, he links the capitalist dynamics of its latest neoliberal phase with the urban renewal processes that started to take shape in the developed countries. By this time, cities have already become global capitalism accumulation strategic spaces, which is manifested in the advance of real estate speculation and in new forms of urban inequality such as the gentrification processes on which the author focuses his analysis. In order to account for that, he proposes an analytical scheme based on three aspects, which, sequentially understood, contribute to understanding USD's dynamics: equalization and differentiation trends; capital valuation and devaluation in the constructed surroundings; and the reinvestment and the pace of inequality. Urban frontiers appear in urban spaces generated by USD with the advance of capital over devalued areas of future revaluation.

The theory is later taken up by Harvey (2007), who agrees with Smith that “uneven development is a systematic geographical manifestation inherent in the very constitution and structure of capital” and that “it is structural rather than statistical” (Smith, 1984:19). Building on Smith's early conceptualizations, Harvey seeks to develop a unifying theory of USD by acknowledging four general dynamics occurring in the development of capitalism, namely: the material integration of capital accumulation processes in the socio-environmental weave of life; accumulation by dispossession; the quasi-legal aspect of accumulation through space and time; and the political and social class struggles in an array of geographical scales. When these are combined, geographical development becomes uneven development.

Brenner (2009a), who had already addressed the topic together with Theodore within the political economy of neoliberalism, (Brenner and Theodore, 2002), develops in his work an updated

reading by fragments. Historically, Marxism has treated society as something separate from the space that contains it, the latter not being the object of analysis.

¹⁰ The basic contradiction is anchored in the theory of value, which simultaneously generates tendencies of equalization in the rate of profit, and tendencies of differentiation anchored in the division of labor.

conceptualization of USD¹¹. He takes up the main contributions made up so far and then proposes an analytical structure in which he distinguishes between four geographical dimensions of USD: the principle of place, the principle of territoriality, the principle of scaling and network operation, and the distinction between center and periphery, all of which shall be discussed below.

Despite the diverse analytical approaches to USD, there is consensus that it is inherent to capitalism insofar as the accumulation process has its correspondence in historically and geographically specific forms of articulation with the territories. (Smith, 1984; Harvey, 1989; Brenner and Theodore, 2002).

In the next section, there follows a review of the analytical structures put forward by the different authors selected.

1.2.1- Uneven Spatial Development in Neil Smith's Theory (1984, 1996, 2005)

Smith (1984) was the first to develop a systematic theory of USD. First, he carried out a historization of the contributions to the subject of uneven development in which he substantiates the decades in which the theory lost relevance as it was deemed too broad¹². He then suggested taking it up again, as an analytical approach for the cycles of capitalist crisis and recovery on a temporal scale, in order to apply it to the analysis of the 'geographical scale'. Here follow his main theoretical categories and the analytical structure of USD.

a- The production of nature, space and scales

Historically, nature and society have been approached as separate issues. Space is commonly understood as a reflection of society, as a container of social activities and relations. In that regard, Smith (1984) argues that capitalism has defied that separation through *the production of nature*. In that sense, he draws inspiration from two Marxist authors, namely, Lefebvre and Trotsky. From the former, Smith incorporates the idea of socially produced space within the framework of capitalist development in three dimensions, material, ideological and imaginative. From Trotsky, in turn, he adopts the idea of uneven and combined development, to which he adds differentiation on the spatial plane. Smith integrates, then, the production of nature, of space and of uneven development:

¹¹ Although other authors deal with the subject, such as Massey (1985) in "Spatial Divisions of Labour" and Soja (1985), their aim was not to delve into a conceptual and/ or analytical structure of USD but they rather observed it as supplementary feature of other dynamics under observation.

¹² While Trotsky develops the theory as part of his Permanent Revolution theory, Stalin resorts to it in the opposite sense. It falls into several years of "darkness" to arise later in debates in which it acquires a highly universalist profile. Its explanatory power weakened as it became more general. Towards the late 60s it was reestablished within the framework of economic politics which is reflected in Latin America in the Theory of Dependence.

Due to the constant tendency to accumulate even larger amounts of social wealth, capital modifies the shape of the whole world. No stone is left unturned, no original relationship with nature remains unaltered and no living thing remains untouched. [...] Uneven development is the tangible process and production pattern of capitalist nature. (Smith, 1984: 22).

Capital produces space and also, according to Smith (1984), spatial scales, which give it coherence. While pre-capitalist space is defined as a mosaic, which is not a reflection of an organized process but rather of exchange networks between different places, it is the importance of the production of space in capitalism that turns it into a systematic process. The inherited world, differentiated in complex spatial patterns, is regrouped by capital in a systematic scale hierarchy. Scale is therefore a means for the integration and organization of labor, productive processes and capital accumulation. Within a scale structure, absolute space acquires a stationary (though dynamic) position in the relative space of capital circulation. Scale is consequently conceived of in its close relationship with politics in the processes of space production (Ramírez Velázquez, 2013).

Three primary scales emerge with space production under capitalism. Although they existed previously, they were substantially transformed with capital expansion and are in a state of constant reconfiguration, re-shaping, in turn, the patterns of USD.

These scales are constituted by: first, the *Urban scale* which is the most final and complete manifestation of capital centralization. Urban space constitutes the ‘absolute production space’ and is where USD patterns can be observed more clearly. Its geographical boundaries are determined by the local labor market and the displacements associated with it. Secondly, there is the *Global Scale* whose definition is basically economic and political, a product of capitalism and the class relationships existing within it. Its geographical boundaries are not defined and the frontier is represented by ‘the absolute space of private property’. Finally, there is the *Nation State Scale*. While the urban and global scales are produced by the accumulation of capital, the Nation State scale is not, insofar as its configuration responds more to a political logic (social agreements) than to an economic logic. In this sense, its boundaries can be more rigid for the free circulation of capital. However, the global structuring into states is very useful for organizing capital accumulation and expansion and also for containing social conflicts. Internally, states are divided into regions and there are also supranational regions (motivated by the economic impulse of accumulation rather than the political motivation).

b- USD Analytical Approach according to Smith (1996).

For Smith (1996), three central aspects account for uneven spatial development, and they have a correlation in urban space. The first and more widespread is the tendency towards *differentiation and equalization inherent to capitalism*, which was previously explored.

Equalization has to do with the need for economic expansion that the system requires, governed by competition, where production levels and conditions become equal to the extent to which they expand. At world level, this need is expressed in the incorporation of more people to salaried work, to consumption, in the growing need for raw materials, and with that, in the incorporation of new territories. This universalist tendency of capital is what distinguishes it from other forms of production, in a dynamic which is denominated by Smith (1996), quoting Marx, as of the ‘annihilation of space by time’, given that while it knocks down spatial barriers, it reduces the time of circulation of capital from one place to another. Within geographical space, land becomes a universal means of production, to the extent that the tendency towards the equalization of “levels of development” advances. This is a key component of the equalization tendency and by means of which, according to Smith, it is explained the existence of the same automotive plant in Tokyo or in Sao Paulo, among other things.

In the parallel trend of differentiation, it is possible to distinguish two central concepts. The first one emanates from the natural differences existing between the territories. However, this difference is not the most important one within the capitalist system, as it was indeed in other ancient societies. There exists in capitalism a certain “emancipation” from nature according to Smith (1984), to the extent that the most significant inequalities are generated by the uneven growth of the forces of production and not necessarily by the characteristics of the concrete natural space. Contemporary geographical differentiations, although based on previous differentiation models more firmly rooted in natural conditions, are explained by the system’s own social dynamics.

The differentiation dynamics comprises “...the progressive division of labor into different scales, the spatial centralization of capital in certain places at the expense of others, [...], the development of some land rent patterns that are markedly unequal across space... (Smith 1996/ 2012: 144). These processes evidence a different relevance with regard to the differentiation within the different scales in the territory. The main issue to understand USD patterns is to make visible which tendencies operate in opposition to equalization in the capitalist economy, their contradictions and concrete historical manifestations.

On the global scale, production becomes universalized and expands in response to the tendency towards equalization. Differentiation is mainly due to difference in the value of the labor force and, therefore, to the patterns of geographical distribution of wages, which in turn becomes evident in the emergence of development and underdevelopment poles.

At national scale, the trends of differentiation and equalization are not as marked as those of differentiation between regions. In these regions, the division of labor acquires a spatial dimension, to the extent that certain national and international economic sectors are centralized and concentrated around them.

The constitution of regions reveals a certain USD pattern, similar to what takes place on a global scale, with the presence of development and underdevelopment poles, based on the territorial division of labor. Differentiation is dynamic and depends, among others, on the means of transport, the technological changes, labor specialization and production activities. Regions receive more forcefully the impacts of accumulation and devaluation processes than the nation states.

Conversely, within the urban scale, the equalization dynamics is observed in the geographic unit of the labor market as geographic expansion and the expansion of value in accumulation are synchronized. Equalization is also produced by the expansion of accumulation *in situ*, through consumption, production and a restructuring of existing space. While wage level constitutes a determining factor for differentiation at the international and regional scales, at urban scale it does not possess the same significance. The urban area represents a single geographical labor market; therefore, it could be considered as a tendency towards equalization¹³.

Differentiation at the urban scale¹⁴ is given by, in the first place, production and reproduction spaces and also by land uses. The main differentiation dynamics in this scale occurs in relation to the land rent system¹⁵, as it is integrated into the system of accumulation and production of value. Land rent itself generates dynamics of equalization and differentiation and gives rise to geographical criteria that drive competition among the different uses, functions and social classes. In this sense, it ‘determines the concrete conditions upon which urban expansion is built’¹⁶ (Smith, 1984:186).

According to Smith (1996), based on his studies of U.S. cities, the main USD pattern in the urban scale can be observed in the relationship between the suburbs and deprived urban areas. To the extent that the levels of difference in land rent between central areas and certain suburbs are reduced, deprived areas also emerge, reconfiguring the potential uses of the land.

The author also acknowledges other factors having an incidence of inequality such as access to communication infrastructure. The State plays an important role as it has the capacity to intervene in (or elude) the land market, guaranteeing certain order in urban development and generally it does so

¹³ In this sense, the spatialization patterns of industrial activity, for instance, do not result from wage differences (as is the case at other scales) but they help to produce them.

¹⁴ Given the complexity and scope evidenced by the general dynamic of differentiation, Smith (1996/2012) restricts it in “The New Urban Frontier” to the urban scale within which his analysis can be concrete.

¹⁵ The origin of Land Rent differentiation can be explained by two sources, a functional one and a social one. While the former has to do with land uses, the latter is related to a differentiation within residential use, according to class and race. Both translate into a geographic type of differentiation.

¹⁶ In order to explain the urban scale in both tendencies, Smith (1996) discusses the work by Melvin Webber and David Harvey. During the post-war, Webber developed the concept of “Non-place Urban Realm” according to which the new technologies and the advances in terms of transport and communication would dilute the old forms of social differentiation and inequality. This directly captures the tendency of equalization. In contrast, Harvey (1973) analyzed urban space differentiation, emphasizing the importance of social classes “Beneath the apparent theoretical contradiction between the “Non-place Urban Realm” and the re-differentiation of urban space, lies a real contradiction in the spatial construction of capitalism” (Harvey 1973: 145).

through the “logical policy of urban planning” and the provision of infrastructure. Productive capital also has a significant part in the concrete localization of industrial activity and in the production of other types of uses.

Differentiation and equalization tendencies constitute the basis of the contradiction inherent to capitalism and the foundation of USD. Spatial balance is impossible within the system. As profit rates are equalized in certain backgrounds, the competition to modify that equalization shall be higher, and that is translated into this tendency capital has towards continuous geographical imbalance. The way in which spatial arrangements are produced tends to be through accumulation crises, which involves capital devaluation and its reinvestment in another accumulation space. However, there is no long-term spatial solution. On the landscape this translates into USD patterns which acquire different configurations on the different spatial scales. Figure 1.1 illustrates the equalization and differentiation dynamics.

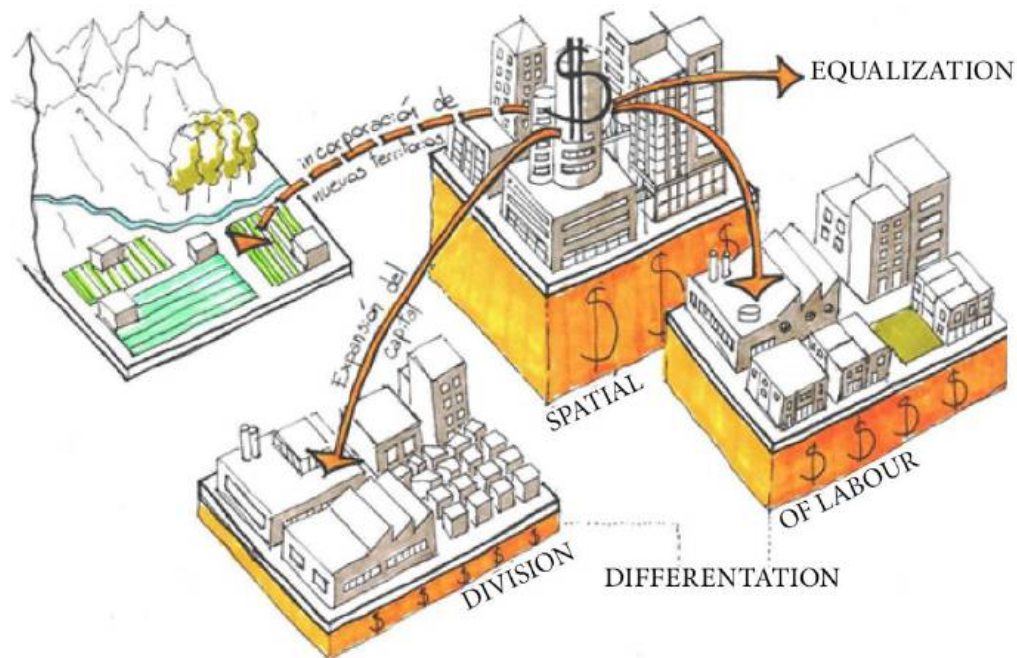


Figure 1.1: Equalization and differentiation dynamics. Source: Developed by author

The second aspect is related to capital valuation and devaluation in the constructed surroundings. Capital invested in the constructed environment, whether stationary in the production means or circulation means, becomes immobilized for a prolonged period in a material way. The valuation of this capital, that is, the generation of profit or surplus value after an investment, is inevitably linked to devaluation.

During the period of use, capital gradually recovers its value, and devaluation has to do with this gradual accumulation of profit. The physical structure cannot cease to be used or be demolished

without involving a loss of profit, as long as the value of the capital invested has not been recovered. In this sense, plots of land are destined to a specific use for prolonged periods which creates barriers to capital mobility, and therefore new developments must take place so that accumulation is materialized. While capital is continuously invested in the built environment to expand its base, it is at the same time withdrawn from the space and carried to another place where it might obtain higher rates of profit. This generates a constant dynamic of valuation of new areas for expansion and devaluation of the already built environment which turns into a deprived urban area. Over time, this tendency may alternate, as shown on Figure 1.2.

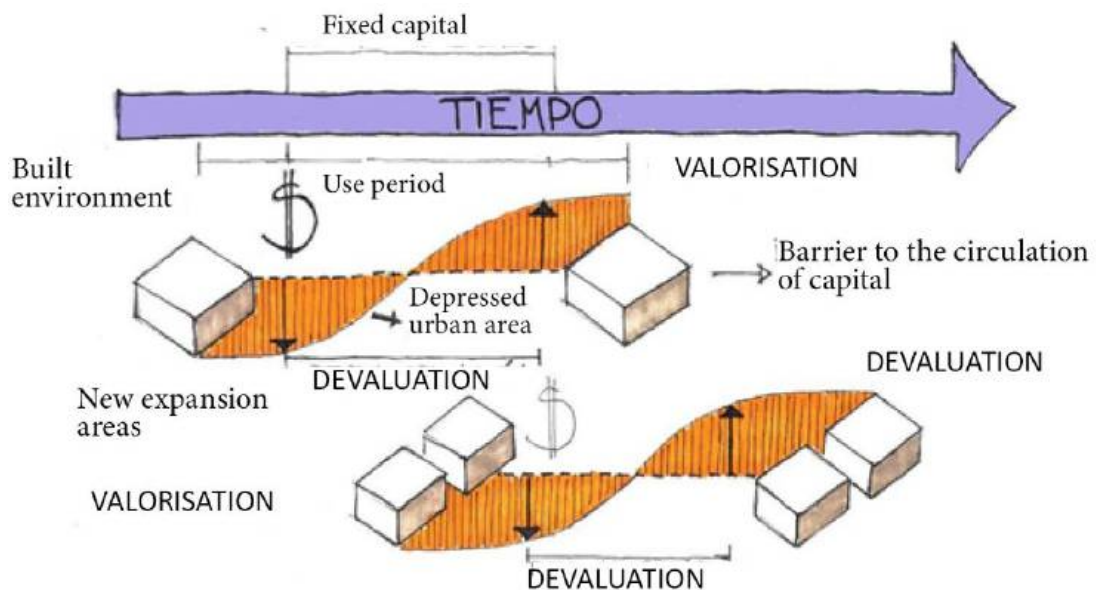


Figure 1.2: Valuation and devaluation of capital in the built environment. Source: Developed by author

Capital centralization, together with agglomeration economies, have produced the tendency towards the localization of expanding production activities in urban areas. Social centralization of capital can be translated into a spatial centralization of capital, an issue which clearly illustrates the “explosive urban expansion” of the XIX and XX centuries. In the author’s words,

Fundamentally, it represents a significant historic emancipation of the urban social form with regard to space [...] An area of expanding non-urban periphery is drawn to the sphere of urban space. In its spatial aspect, this explosive expansion of urban space has been driven by the process of suburbanization (Smith, 1984:150)

Now then, in cities, the differentiation between the suburbs and deprived urban areas is, according to Smith, (1996/2012), on the one hand, the result of sprawl (and of the land rent structure) and, on the other hand, the means by which this expansion was developed (Figure 1.3).

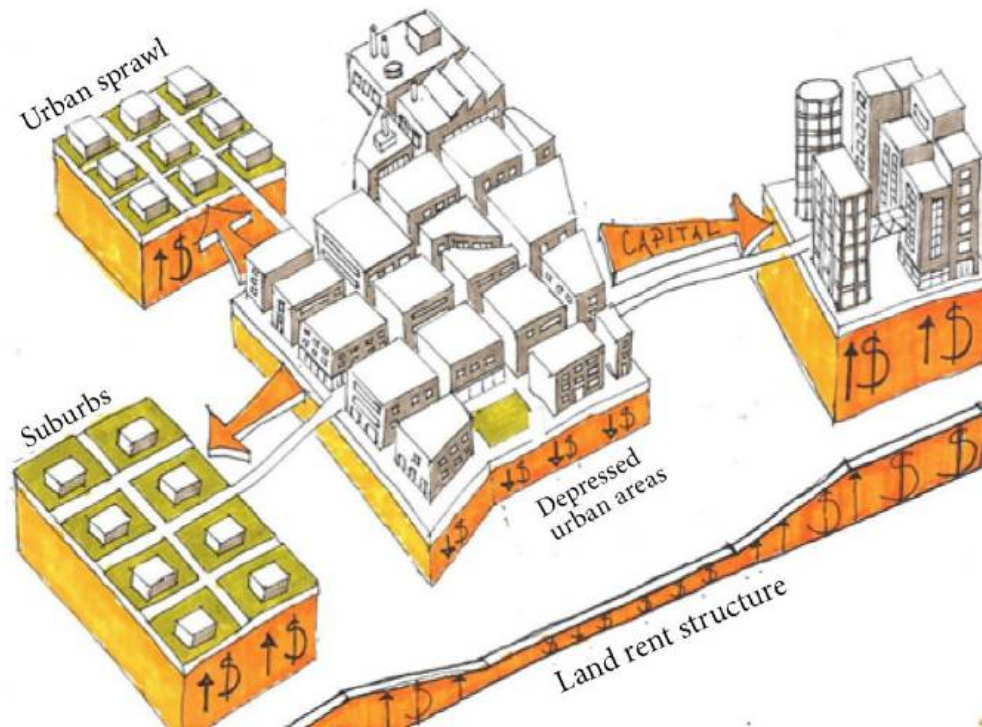


Figure 1.3: Capital valuation and devaluation in cities. Source: Developed by author

The suburbanization process ¹⁷ occurs therefore as a product of the interaction between equalization and differentiations processes and at the same time, it constitutes a supplementary factor of deterioration in deprived urban areas.

The third aspect has to do with reinvestment and the pace of inequality. The periods and rhythms of urban economy are intimately related to the pace and periodicity of broader economic dynamics. According to Smith (1996), Whitehand (1972) demonstrated, based on the analysis of the Glasgow case, the relationship between urban expansion and suburbanization which took place in the form of successive waves, associated with specific moments of peaks and declines in the economic cycles (instances of accumulation and devaluation). From this viewpoint, crises are not accidental interruptions of the system¹⁸. Harvey (1977) points out in this sense that capital periodically goes through changes that are relatively systematic and fast in their localization as well as in the amount of

¹⁷ The development of upper-class suburbs is explained as the spatial manifestation of two labor divisions, namely, that of gender/ home and that of classes to the extent that the upper classes managed to separate themselves from the urban lower and middle classes. Afterwards, the working class became suburbanized in conjunction with industry and the division of labor. In that sense, “The development of suburbs is to be considered, [...] as a continuation of the vigorous centralization of capital in the urban areas. And yet, at the same time, suburbanization fosters the internal differentiation of the urban space” (Smith, 1996/2012: 152).

¹⁸ According to Smith, crises constitute “situations of integral instability that disrupt an economic system. [...]. The need to accumulate leads towards a decreasing tendency in rate of return, an overproduction of goods and in this way to a crisis” (Marx, 1967 in Smith, 1996:153)

investment in the material-built environment, which are linked to the pace of the crises in the economy. (Figure 1.4).

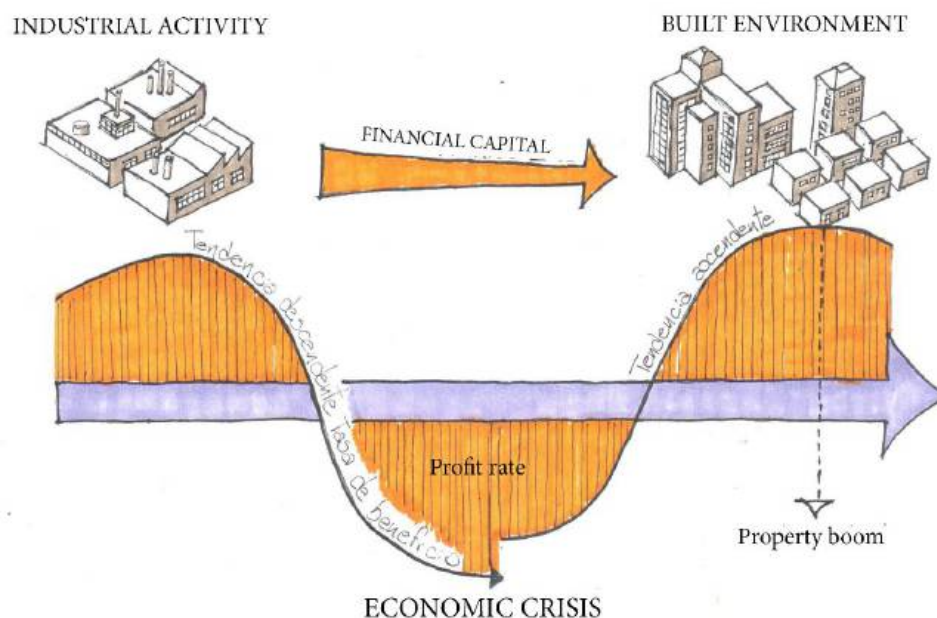


Figure 1.4: Capital reinvestment in the built environment. Source: Developed by author

This brings into play what he calls the decreasing trend in the return on revenue:

When the return on revenue in the main industrial sectors starts to decline, financial capital looks for an alternative investment scenario, a scenario where the return on revenue remains comparatively high and where risk is low. It is precisely at this point that the flow of capital towards the built environment tends to occur. The result is the well-known real estate boom. (Smith, 1996/2012:153).

Thus, Smith (1996) links gentrification, the specific pattern of USD that he studies, with the more general processes of the economy.

With regard to the localization of capital in space, this depends, according to Smith (1996) on the geographic patterns arising from the preceding economic boom

c- The concept of urban frontier in Smith's thinking

Smith (1996/2012) resorts to the idea of the frontier to refer to the gentrification process which occurs, on the basis of what has been discussed regarding the revaluation of deprived urban areas on the part of capital, due to the combination of the dynamics of equalization/ differentiation as well as of valuation/ devaluation and the pace of inequality

This process entails in its superficial/ aesthetic dimension, urban renewal. In its social dimension, it involves, plainly and simply, the replacement of a social group, that of the poor and

working-class population living in the central areas, by a high-income group, at the service of capital accumulation in the urban environment. The displacement of low-income social groups substantively engenders ideological, “class” issues, in which said groups are linked to criminal activity and unlawfulness, and violent practices are used to exclude them from certain areas in pursuit of the commodification processes of urban spaces.

With discourses that delegitimize these groups from the standpoint of otherness, the ‘urban frontier’ is thus built (and at the same time pushed back) fragmenting cities not only physically but also socially in pursuit of a greater economic benefit. After gentrification occurs, the central areas are revalued and added in conjunction with the suburbs to the spaces of capital accumulation, while the lower-income groups are pushed to the other side of the frontier, to areas of lower value, as it is shown in Figure 1.5

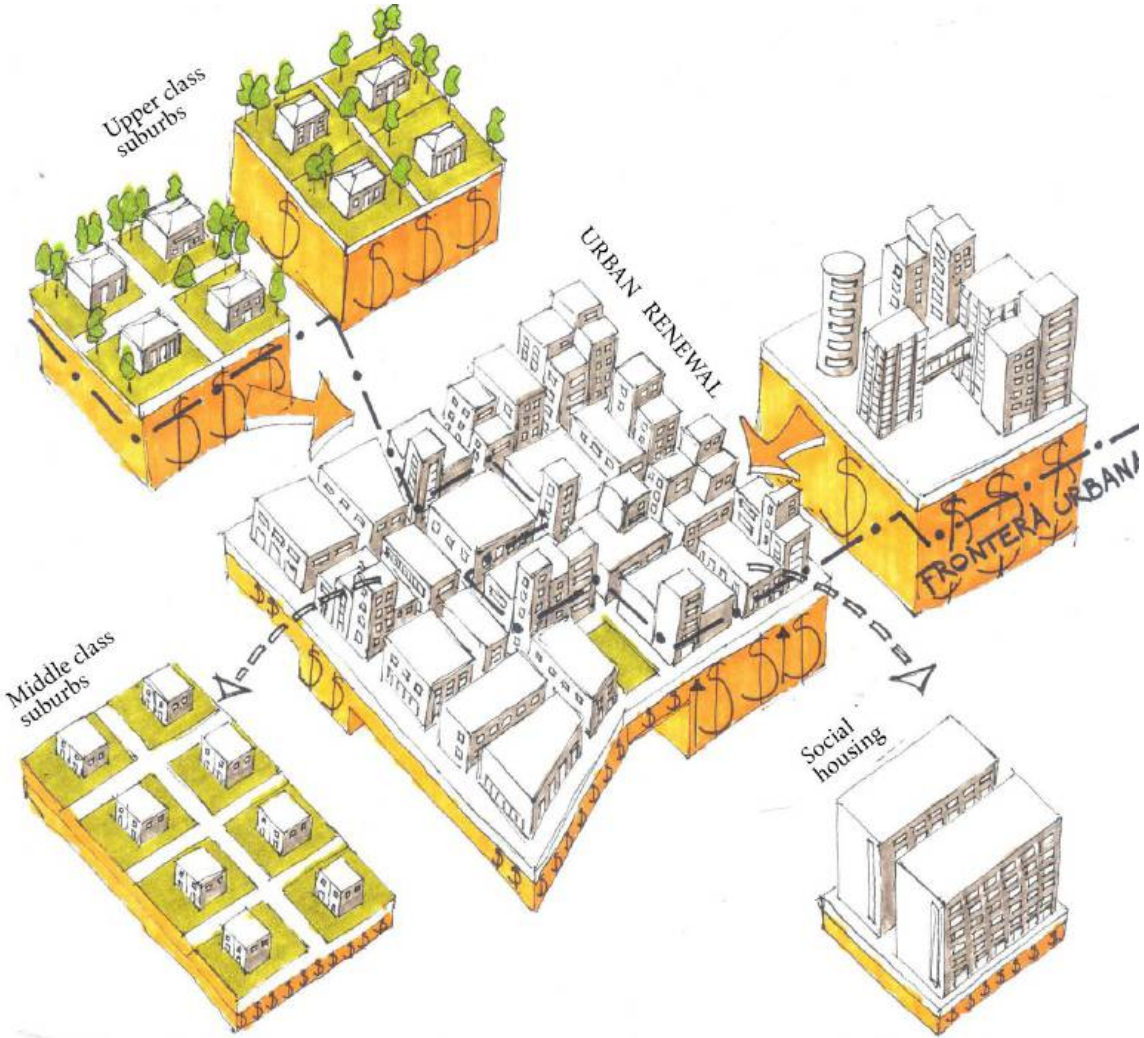


Figure 1.5: Interpretive synthesis of the urban frontier from Smith’s theory. Source: Developed by author

The concept shall be revisited later in the analysis of Latin American USD in an attempt to comprehend the urban frontiers arising from the processes of inequality within urban spaces, particularly between formal and informal cities.

1.2.2- Towards Harvey's unified theory of uneven geographical development¹⁹

Harvey (2007 a) addresses uneven geographical development (UGD) from four epistemological conditioning factors, which when combined would approach a unified field theory.

a- The material roots of the processes of capital accumulation in the socio-ecological fabric of life

UGD constitutes a reflection of the ways in which the different social groups materially define their modes to inhabit and socially interact in a given socio-ecological system. Although several disciplines address the distinctive features that daily life acquires in different geographical and cultural contexts, the challenge, according to Harvey, is to understand the relationships existing between daily life and broader processes of accumulation, environmental transformation and social dispute.

Capitalist activity has a material foundation to the extent to which it takes root in a place and appropriates physical, social and ecological processes in the pursuit of the accumulation of capital. The fabric of life is therefore continuously modified by the transformations that capitalism provokes in space.

In turn, capital accumulation adapts itself and even transforms itself depending on the material conditions. In that sense Harvey agrees with Smith (1984) that UGD is dependent, to begin with, on the *production of nature* by capitalist activities. Nature is understood in its heterogeneous sense, different depending on context, and thus also appropriated in several ways during the geographical circulation of capital. Influence from other factors such as organization structures, technology, spatial divisions of labor and culture, also determine the material rootedness of the accumulation process and with that, the UGD.

b- Accumulation by dispossession

This concept refers to the appropriation of a surplus²⁰, or to the appropriation or mastery of the natural conditions that allow its production. In Harvey's view (2007 a), the capitalist class did not

¹⁹ Although uneven spatial development and uneven geographical development do not precisely imply the same point of view, for the purpose of this work and taking into consideration their conceptual similarity, it is understood that they refer to the same process. The author favors USD given the approach of space as a social product/social producer.

²⁰ Defined by Harvey as "commodities of higher use than those required for immediate consumption for survival" (2007 a:33).

depend on its origins on its abilities to generate surplus but for its appropriation. In other words, surplus was turned into their private property and made to circulate to augment it. Capitalist accumulation is dependent, in that sense, on accumulation by dispossession for survival.

Surplus has different forms. Its appropriation can be based on the appropriation of natural resources, on land, on the labor forces and their degrees of qualification, on cultural histories, and so on. All of these factors are geographically distributed. Their uneven distribution influences a type of UGD based on conditions of production, availability, profitability etc., as the case may be. Dispossession occurs in different ways, by means of different spatial strategies and it always implies the advantage of a higher power (states, markets, multinationals) on the pre-existing entities in a given geographical space.

Another aspect of accumulation by dispossession is a process which Harvey describes as the “cannibalization of goods” where actions within the system (financial capital) appropriate goods or territories. Goods can be acquired, assimilated into new configurations of use or even destroyed. Amidst the crisis in which capital devalues, the value of surplus diminishes (or is annihilated) and this provides opportunities to access good at ‘bargain’ prices. Crises in turn generate geo-political rivalries among the territories regarding who will be the affected. In the author’s words:

The interest in appropriating and controlling the surplus produced by others is not in this case intended to assimilate them into the circulation of capital but to have the power to devalue them, and even to destroy them (militarily if necessary) in order to restrict the impact of devaluation to the places of others. Financial control through indebtedness is today the main tool for imposing capital devaluation elsewhere. (Harvey 2007 a:37)

UGD is also dependent on accumulation and devaluation by dispossession as a fundamental dynamic in the accumulation of capital.

c- The quasi-legal characteristic of accumulation in space and time

The theory of capital accumulation in space and time presupposes that both the original accumulation and also the social classes have been already formed. It implies, moreover, the existence of a facilitating State which structures formal arrangements such as private property and individual rights and of a material world that sustains the accumulation processes. Besides these essential aspects, Harvey develops other theoretical issues that shape UGD dynamics within this theory:

Commodity Exchange: Goods move within a space range that depends on costs, the necessary time and the capabilities and transportation available. The spatial-temporal structure determines the spatial range of capital accumulation, forms new areas of value accumulation and with that it has an impact on UGD.

The Coercive Laws of Spatial Competition: Capitalist producers seek to generate advantages and higher profits. Competition among them takes place in innovations (in organization and technology) as well as with the incorporation of new spaces to the production system. This contributes to the instability of the geographical landscape and UGD.

Geographical Divisions of Labor: Capitalist geographical expansion (driven by competition) implies relocation in more advantageous places and territorial specialization based on productive specialization. Prior differences become more pronounced: wealthier regions become wealthier and impoverished regions become even poorer.

Monopolistic Competition: With neoliberalism, the reduction of spatial barriers and transport costs brought about the disappearance of monopolies rooted in the territory to give way to monopolies rooted in the centralization of capital and technological advantages (e.g. multinational companies). Accumulation is focused on key locations such as global cities while other spaces and activities become “subservient”.

Acceleration and Annihilation of Space by Time: From the Marxist perspective, space is “compressed” as capital rotation times are reduced thanks to technological advances. This strengthens UGD as technological advances are unequal and therefore not all the times are reduced in the same way.

Physical Infrastructure (Fixed Capital attached to the land) for Production and Consumption: Inequality in infrastructure investments (generally developed in production and/or financial centers) boosts UGD and produces disputes among different capital factions regarding the land, its uses and profitability.

Production of Regionality: Regional spaces are produced by the accumulation of capital, are defined by investments in the built space and reveal geographically differentiated consumption modes as well as cultural differences. There are class alliances within the regions based on government patterns that guarantee regional economic well-being even though this might not involve social well-being. These alliances vary over time joining different capitals and they may be discriminatory, developmentalist and hegemonic depending on their leadership and the project undertaken.

Scale Production: Within capitalism, the dominant geographical scale for accumulation has evolved over time. The hierarchical organization of scales in social organization does not necessarily correspond to the hierarchy produced by capitalism and this impacts UGD.

Territorial Systems of Political Administration (the Interventionist State): Territorial administration structures are necessary for capitalist development as they possess an active role in the accumulation of capital. They are also structures upon which capital is established by means of legal, monetary, military and ideological apparatuses. The State Nation role in the regulation of capitalism is fundamental in UGD.

The Geopolitics of Capitalism: There is an internal contradiction within capitalism between what Harvey refers to as territorial and capitalist logics of power. While territorial logics alludes to the strategies utilized by the State to achieve its own interests, capitalist logics has to do with the ways in which capital influences economic power in a 'continuous' space which transcends territorial entities. Even though they pursue different interests, they are interconnected and, in their convergence, or divergence, they have an impact on UGD.

d- Class and political struggles in a diversity of geographical scales

Class struggles and other socio-political struggles play an active role in UGD and have a defining impact on it. They will vary as they combine with other theoretical elements, namely:

Social Movements and Accumulation by Dispossession: This refers to those social struggles that appear as resistance to the process of accumulation by dispossessions. Among the hardest are the fights for the habitat and the natural resources.

Conflicts over the Expanded Reproduction of Capital: The most obvious one arises between capital and labor regarding the production of capital gain. Struggles for working conditions, wages, etc. emerge out of this relationship. There are other associated ones such as tensions between class alliances and state apparatuses, disputes over geopolitical advantages, the infrastructure, etc. All of them have to do with the status of UGD as an active agent.

Conflicts over the material rootedness of social processes in the "fabric of life": They result from the commodification process that capitalism produces on the elements which are not commodities such as natural resources, culture, human aspects, etc.

As a conceptual synthesis, Figure 6 illustrates some of the main dynamics of UGD according to Harvey (2007 a).



Figure 1.6: Conceptual synthesis of USD main dynamics according to Harvey. Source: Developed by author

1.2.3- Neil Brenner and “the thousand layers” of Uneven Spatial Development

Brenner, on the basis of his work entitled “A Thousand Layers: Notes on the Geographies of Uneven Development” (2009a), becomes the third author to continue with USD theoretical production. There he conducted, as a first instance, a review of the theory developed up to that moment²¹, where he distinguished four main propositions. Firstly, and very much in line with Smith’s thinking (1984; 1996/2012), he states that the geographical difference within the capitalist framework does not refer to the territorial characteristics of the places but instead it emerges as a consequence of the movements of equalization and differentiation explained above. His second proposition acknowledges the space differentiation in terms of center and peripheries occurring in successive USD historic stages. This matter implies that geographical localization is not only absolute but also relative in as much as it represents a position within an asymmetric power organization as it was proposed by Smith (1984, 1996/2012). USD embodies the polarization and the different positions spaces assume within global capitalism. Thirdly, he differentiates in the USD pattern the presence of institutional

²¹ Alongside Theodore (2002), they had previously stated regarding USD and UGD that during the different stages of capitalist accumulation certain places, scales and territories are privileged in relation to others which are privileged accumulation scenarios. As a result, this generates Dynamic patterns of “core-periphery polarization and socio-spatial inequality which can be verified in the multiple scales of the territory” (24).

forms (the State and its multiple scales) and social forms (companies, social organizations, trade unions, etc.), which is very similar to what Harvey suggests. Therefore, it is necessary to incorporate “space politics” into the research (Brenner 2009a, citing Lefebvre) as it influences the structuring of historic specific polarization forms. The fourth point mentioned by the author is that USD has deep structures within the history of capitalism and that, in turn, it has amalgamated with specific geographical and historical forms. While some characteristics are long-lasting, others have changed as they evolved such as urbanization patterns. USD patterns constitute, therefore, a result of both socio-spatial configurations acquired from previous stages as well as of emerging spatial strategies.

On the basis of that synthesis, Brenner (2009a) proposes an analytical structure dependent on four geographical principles or dimensions of UGD by following Lefebvre’s concept of space which views social space as imbued of a polymorphic nature. He resorts to the metaphor of “mille-feuille” (a flaky French pastry consisting of “a thousand layers”) (which had been previously used by Lefebvre to explain the multidimensionality of social space) to conceptualize USD geographies as a “multi-layered fusion of different socio-spatial dimensions” (Brenner, 2009a: 197).

The *space principle* refers to concrete localization. Since capitalist industrialization space divisions of labor started to emerge typical of capitalism, based on economic assets (economies of agglomeration). This resulted in the differentiation of places according to their position within global accumulation as well to their specializations and functions. Places are integrated into USD in five different ways: as intra-urban decisions; by means of a widening of the rural-urban gap; through the transformation of global peripheries into enclaves associated with raw materials extraction²²; due to unequal technological advances and to subsequent creative destruction processes; and finally, because of locally based social struggles.

The territoriality principle alludes to social relations, to their “demarcation, closure and division” (Brenner, 2009a: 208). From the XVII century onwards, States occupy a central role in political organization; they are regarded as “sovereign territorial spaces, adjacent, mutually exclusive and without overlaps and they started to be run as such” (Giddens, 1984, in Brenner, 2009a: 209). With capitalism, they reinforced their central role, and even though they have changed their role over time, and also their geographical demarcations and borders, they are still dominant in socio-economic and socio-political formations.²³ State territoriality has modified USD patterns, according to Brenner,

²² An USD pattern based on labor spatial divisions was articulated at global scale where the global North positions itself as industrialized central area, and wealthy in terms of capital, while the global South became a peripheral, underdeveloped and poor area.

²³ Earlier, alongside Theodore (2002), Brenner had awarded an important place to the capitalist State as a regulator of the USD processes by means of spatial policies, which can be: “territorial development strategies; territorial redistribution strategies and compensatory regional policies to balance the distribution of industry and population on a concrete territory” (123-124)

in at least five different ways: due to their dominant place in USD analysis, it leaves out other dimensions of analysis that should be taken into consideration; because of the disconnection (and contradiction) between the rigidity of the state structure and borders in contrast to the fluidity of capital in space; a product of the implications of borders, both international and intranational in the regulation of the spatial divisions of labour and the USD processes; because of the territorial centralization of state institutions in their capacity to mobilize political strategies that impact production and circulation geographies and those in USD (e.g, industrial policies, urban policies or certain initiatives for economic development). State strategies are dynamic in time and also the dominant scales of state influence. Finally, due to the overlap of institutional environments through which social struggles attempt to modify USD patterns.

The *scaling principle* refers to the ‘vertical differentiation of social relationships’ (2009a: 202). This vertical socio-spatial differentiation leads to a hierarchical articulation of spatial units (at global, supranational, national, regional scale, etc.). Scales exist and become relevant in the understanding of socio-political processes and the environments in which these occur. Brenner (2009a) points out three central aspects of scale in USD. The first one refers to the urban-regional scaling of USD. Urban and regional scales are constituted in essential spaces of capital accumulation; they have interwoven with intra- and inter- local inequalities and have repositioned themselves strategically within the scalar hierarchical structure. Secondly, the global scale “has consolidated as the definitive geographical horizon for capitalist expansion as the world market reveals” (Brenner, 2009a: 217). After that, places that up to then had not been integrated into the capitalist Dynamic were incorporated and new forms of center- periphery polarizations emerged²⁴. Thirdly, the national scale “consolidated as an institutionalized territory to mediate between the inter-capitalist competition processes” (2009a: 217), and it contributed to shape new forms of territorial inequality. USD processes assumed other geographical scales such as the neighborhood scale (intra-urban differentiation) and the supranational scale.

Scale hierarchies are (re)defined in each historic specific formation of capitalism within the framework of USD processes of which they are a product and which they constitute. According to Brenner (2009a), the national scale was predominant in modern capitalism until the end of national developmentalist capitalism (in the late seventies) and also in the management of socio-spatial inequality. Post-1970 global restructuring (which was manifested in: the emergence of transnational companies; new international labor divisions; information technologies to the service of the world economy as well as in the emergence of post-Fordian forms of industrial agglomeration) has

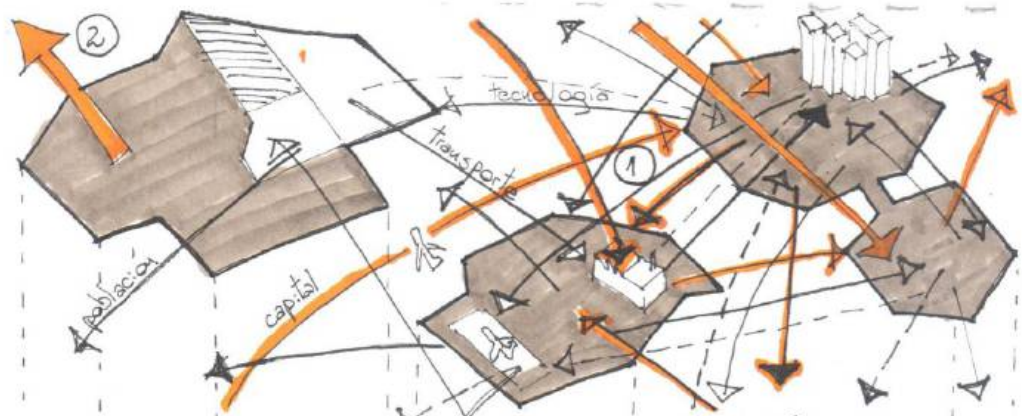
²⁴ A similar argument can be found in Smith’s work (1984).

consolidated a new scalar hierarchy, where the national is no longer the dominant scale. Brenner (2009a) suggests five ways through which scale processes influence USD: capitalist scale differentiation generates the hierarchical structure upon which it organizes itself; the differences existing between scale configurations per se and in labor scale divisions; scale arrangements arise out of provisional scale stabilizations of labor division and they can accentuate USD forms; out of the destabilization of these arrangements rescaling processes emerge which give way to new USD forms; scale in USD patterns constitutes support for socio-political struggles.

The *network operation principle* identifies the transversality of the interconnections between dispersed localizations in geographical terms. The network, as a socio-spatial form, stretches between geographically dispersed points by means of horizontal links. The net spatiality is unstable and it depends on the connectivity among the geographical points, on the patterns of membership to the net and on the superimpositions among multiple networks. Networks link to USD to the extent that network geographies accompanied the history of capitalism in an articulated manner with the geographies of places, territories and scales. There are commercial networks of relationships between different agents, and of infrastructure, between cities and regions. Networks have an impact on USD in two main ways: on the one hand, in relation to the places, territories and scales, by means of which they foster or diminish the existing inequalities in any of these dimensions. On the other hand, through their own hierarchical nature they can have stratifications and be decisively exclusive.

Figure 1.7 below summarizes USD main points in Brenner's view.

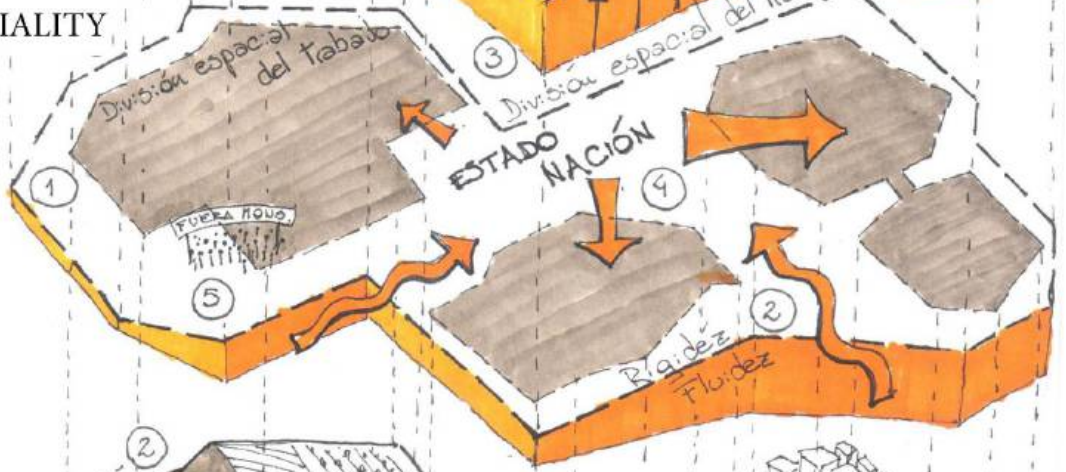
NETWORKS



SCALING



TERRITORIALITY



PLACE

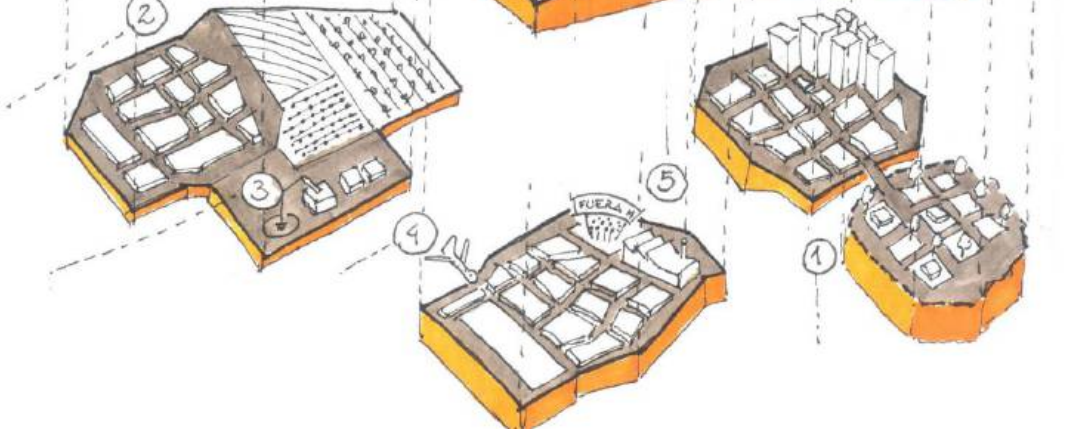


Figure 1.7: Graphic synthesis of uneven spatial development in Brenner's theory. Source: Developed by author

1.2.4- Differences between uneven spatial development and urban economy in the space-economy relationship

As it has been discussed in this chapter, economic and political dynamics together with territorial ones are closely linked to the production of urban space and its inequalities. However, Polese (1998) distinguishes a knowledge gap in relation to the urban and regional economic dynamics²⁵ that have a direct impact on the structuring of the territory, for instance in urban development schemes. The author attempts to fill that gap from the field of urban and regional economy, that is, “the field of study whose purpose is to understand the relationship between occupied space and economic life” (Polese, 1998:17, 18). It attempts to understand, in that sense, the territorial causes and effects of the productive activities on the territory, assigning a central place to policies, not only the ones orientated towards economic growth but also those orientated to urban-regional growth.

Although the interest in comprehending the links between economy, policy and space is shared with Polese (1998), there is a major difference with the way in which this relationship is stated from the perspective of urban critical theory and, in particular, from USD theory. To Polese, “urbanization constitutes an unavoidable consequence of economic development” (1998:35), with economic development understood as “a sustained and irreversible increase in actual income per inhabitant”, which “means a long-term evolution that is not reduced to circumstantial movements”. (30, 31). However, from the critical perspective adopted in this paper, the development referred to in USD is the historical process (Smith, 1984) resulting from the capitalist dynamic, which by equalization and differentiation mechanisms invariably generates structural inequalities. The USD theoretical approaches analyzed so far, deal mainly with the causes, that is, the process that explain its constituent dynamic within capitalism as global economic system and how this influences the production of space and its scales. They account for the spatial dimension of economic and political processes and, at the same time, for the politico-economic dimension of space.

In the analysis of development from critical theory, three types of factors and their articulation are taken into consideration: structural ones, related to the operation of the system: strategic ones, understood as actions aimed at achieving a certain type of development and contextual ones, which have to do with circumstantial issues of the other two (Vletmeyer, 2011). From this perspective, inequalities generated in spatial development incorporate the economic variable within the structural issues of the capital system as well as the political issues within the strategic factors (and also circumstantial ones). Space production, in this viewpoint, is a constituent part of capital expansion; it is the disputed product made up of social relationships and not solely a receptor of economic dynamics. In this way, although the knowledge gaps are shared with urban economy, the manner in which it deals with the relationship space-economy-politics, and the paradigms of development, differs.

²⁵ For this author, region refers to the sub-national scale.

Whereas the urban economy approach suggests a causal, unidirectional relationship, economy-space, mediated by politics, the USD approach proposes a “symmetrical” relationship among these concepts, to the extent that they are complementary parts of the same process of accumulation. In the case of development, while for the urban economy it refers to an economic growth dynamic that appears to be equitable to all the inhabitants, for USD it refers to a historical process in pursuit of greater accumulation in sectors that are increasingly concentrated which only deepens inequality.

1.2.5- Main contributions from Smith (1984; 1996), Brenner (2009a) and Harvey towards the construction of the author’s own theoretical approach

The analysis of the different theoretical approaches discussed so far allows me to construct my own interpretative framework arising from the identification of the main aspects upon which USD is based. The different authors researched shed light on the multidimensionality involved in its treatment. Some points they have in common and which constitute the main theoretical framework of the research herein are:

- *Space as product/ producer in USD:* Space is not just the scenario of the socioeconomic process that produces inequalities, but it turns out to be a producer in itself and at the same time a product of them. It is, above all, a field of political action. Smith (1984, 1996/2012) addresses this concept from the standpoint of space production within the framework of capitalism while (2007a) does it from the material rootedness/ nature of the accumulation process in the socio-ecological fabric of life. Brenner (2009a), in turn, approaches it in so far as polymorphic space of social relationships, produced in several superimposed layers of geographical inequalities.
- *Capitalism as producer of geographical differences:* This a relevant point as it dismantles the concept that natural geography is the major source of differentiation among different spaces. Although geography plays a significant role, in the same manner as the social formations above, it is the relative position of the places within the capitalist system that eventually defines its most relevant differentiation. While Smith (1984) explains it from the dynamics of differentiation in different scales as well as from those of valuation and devaluation of the territories, Brenner (2009a) approaches these differences from the principle of place and its multiple connections to USD. Harvey (2007a), on the other hand, explicitly explains how these differences are configured, both through accumulation by dispossession/devaluation and also with the division of labor, the availability of infrastructure, transport networks, geopolitical dynamics, etc. This differentiation is based, in any way, on pre-existing geographical natural conditions, which will also be mentioned in the definition of USD.

- *The dynamics of differentiation and equalization inherent to capitalism constitute the foundation of USD.* This point has been widely explained, first and foremost, in the analytical approach by Smith (1996/2012), but also within what Brenner (2009a) acknowledges as movements of compensation and differentiation. Equalization dynamics are observed, primarily, in the intrinsic need for expansion that the capitalist system requires. Within its constant dynamism and expansion capital incorporates “new” geographical frameworks, homogenizing territories and productive forms as it renders previous frameworks obsolete. Concurrently, differentiation ensues, which as we have already stated, acquires different characteristics at different scales. Within differentiation, what becomes especially relevant in Harvey’s (2007a) theory are the coercive laws of spatial competition and the geographical divisions of labour as well as the presence of networks and the role of the different agents of the territory (Both the State and also the social movements, for instance).
- *The existence of development and underdevelopment poles in the different space scales.* The double dynamic referred to in the previous point produces socio-spatial organization pattern in which some spaces are privileged for accumulation (Smith, 1996/2012; Brenner, 2009a), because of either the presence of the work force, the production of regionality or the infrastructure and the role of the State in territorial administration, as Harvey states. At this point, the formation of new monopolies and the geopolitical issues could be resumed, which have a direct impact on the relative position of space in its different scales, and particularly, the land rent dynamics mentioned by Smith (1996/2012) as the main source of differentiation in the urban scale. In this way, developed and underdeveloped regions can be observed as the three authors assert to the same extent in which inequality patterns can be detected in inner urban spaces.
- *The fundamental role of scale in the production of capitalist space and the multi-scale nature of USD processes:* Scale takes on special importance in USD insofar as it is produced within the framework of capitalism as a way to organize production relations and give them a hierarchy. Scales in themselves evidence differing relevance in the analysis of each author. While Smith (1984) concentrates on the urban scale large part of his analytical structure of USD, Harvey (2007a) focuses his analysis in the production of scale and on the ensuing conflicts, for instance, that of the nation State and its role as regulator/ facilitator and the scale of capital in the production of USD. In any case, both grant special relevance to the regional scale within the nation State interior, as does Brenner (2009a). The latter analyses, in particular, more in line with Harvey (2007a), the nation-State loss of relevance in the latest neoliberal phase of capitalism²⁶, compared to the emergence of the urban-regional and global

²⁶ Other authors agree with this though they do not necessarily work with the USD approach, but they do with aspects of the scalar transformations brought about within the framework of the latest phase of

scales as major producers of USD. Although Harvey and Brenner (2009a) grant importance to the urban scale, especially in the latest phase of neoliberal capitalism, they do not develop USD specific issues that might occur within it. The role Smith (1984, 1996/2012) grants the nation-State in the production of differences is less active. Even though he observes the State “within”, he does not emphasize the way Brenner (2009a) and Harvey do on its role as regulator or facilitator in the processes of capitalist accumulation.

- *Substantial changes in USD during neoliberalism:* The changes the three authors observe, among others, are related to change in the hierarchies of the global and regional/local which acquire a higher status, and the supremacy of capital scales at the expense of the loss of power of the nation-State to define space occupation patterns. Also, the acceleration of the processes of space commodification is highlighted to the extent that the capital is transferred from the productive-industrial structure to the financial dynamic and real estate activity²⁷. Finally, technological advances and the new networks of exchange and communication have a direct impact on the production of new forms of inequality and on the socio-spatial inclusion patterns.
- *Social relationships between different agents/actors in USD, the “politics of space” and the role of the State:* In the three approaches discussed, there are different actors who operate on the basis of differing objectives in the production of USD. Among them, those who produce space in pursuit of capital accumulation (Smith, 1984, 1996/2012), can be distinguished from the state ones that follow a political logic of territorial administration, and those of social movements and society, who tend to guide their actions after the value of use of the space (in contrast to the accumulation around the exchange value of capital). Harvey (2007a) highlights the importance of the role of the nation-State in USD as the one articulating social relationship, and also, gives high relevance to the presence of social struggles and regional alliances, which have an impact, not without disputes among themselves, on USD processes. In the case of Brenner (2009a), actors appear both at the onset of territoriality and also at the beginning of the networks, and also in the acknowledgment of the political instruments that have an influence on the USD processes. For both, the State plays the role of mediator between the different actors who produce the space. Social struggles also act from an opposite direction to capital accumulation by resisting processes of dispossessing.

neoliberal capitalism. Among them, Saskia Sassen (2007) states that transnational processes such as globalization turned critical the concept of nested scale and due to that it is necessary to overcome “the methodological nationalism” to move towards new interdependence schemes of processes in multiple scales such as a transnational geography in which the cities (global ones for the author) have a central place.

²⁷ These issues are taken over in Latin America by local authors like De Mattos (2009) y Rolnik (2017), among others.

- *The central role of urban spaces:* Urban spaces possess considerable relevance for an understanding of USD now that as the three authors have stated, since the start of agglomeration economies, they represent the territorial unit where a large part of the relationships of production, labor and accumulation are realized. Specific patterns of USD can be observed in them, typical of this scale and also of neoliberalism both at inter and intra urban level. (Smith, 1984; Brenner, 2009a). At interurban level, the relative position of urban spaces in the capitalist system has a strong impact such as territorial administration, the social relations that shape them and the network in which they are inserted. At the intraurban level, conversely, the commodification dynamics associated with the expansion and renovation of cities constitute the main differentiating factor.

The points mentioned above, summarize, in our view, the main discussion underlying USD theory. Their articulation provides a general framework to account for in the multiple scales of the territory the multiple dynamics on which inequality is based, as shown in the chart below (Figure 1.8).

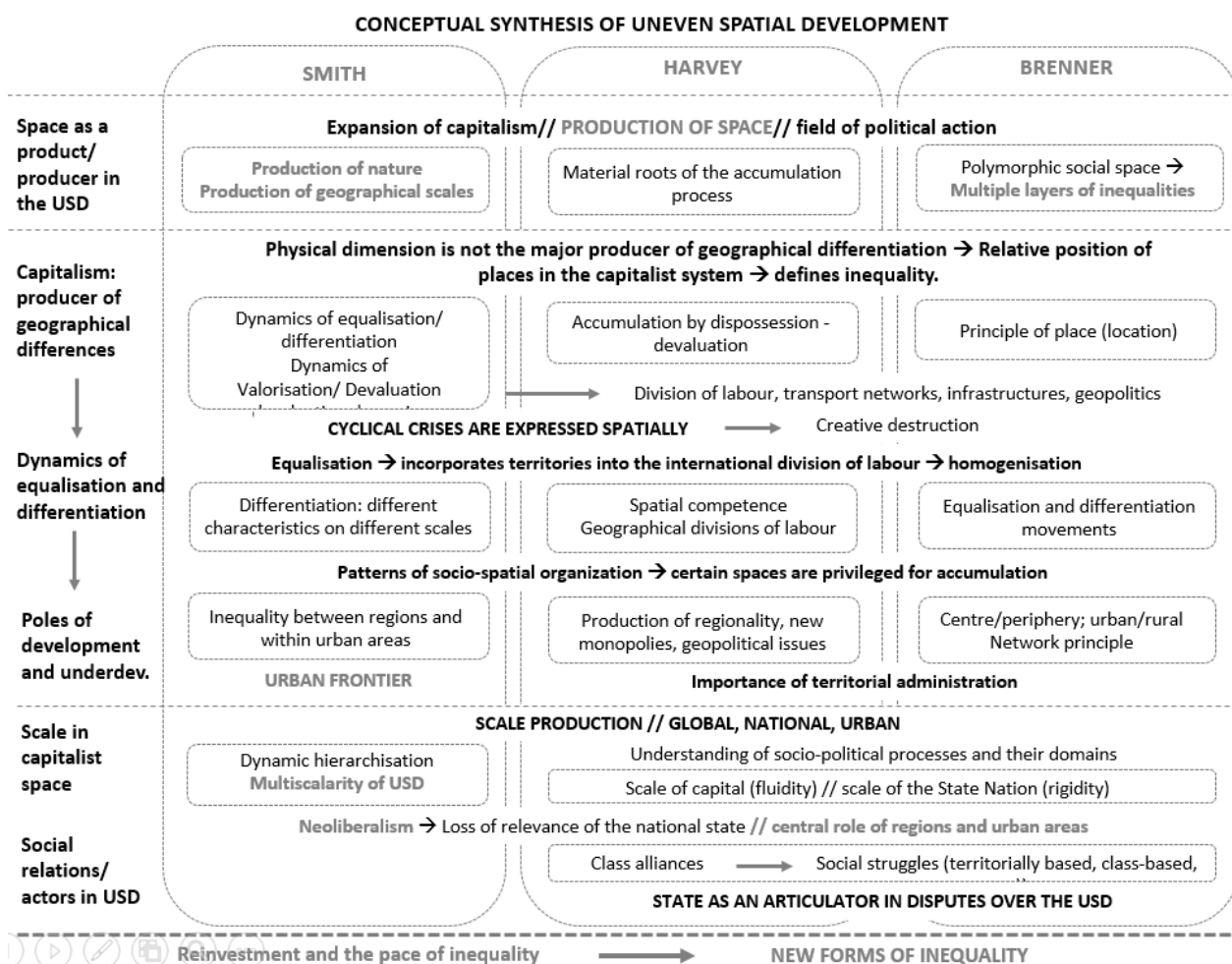


Figure 1.8: Conceptual synthesis of USD. Source: Developed by author

These contributions are central to this thesis and its objective to identify the forms the relation urbanism-inequality adopts, which shall be put to the test in the understanding of the spatial manifestation of USD in a specific territory, the cities of Tierra del Fuego. In that sense the analytical categories suggested by Smith (1984; 1996/2012), Harvey and Brenner (2009a) are key to understand the emergence of geographical inequality in multiple scales but are not enough to analyze the resulting inequality configuration in the Latin American urban space and its specificities.

Even though Smith (1996/2012) proposes a more concrete approach to a specific form a USD in the urban scale, his treatment focuses mainly on the dynamics that originate that process and not so much on effectively describing the spatial characteristics that the same acquires. He addresses the issue more from a causal perspective than from the observable, in as much as spatial 'consequence' or 'product' do. Also, the author especially writes for the U.S. context, an issue that modifies, at least relatively, the dynamics observed. It is acknowledged, in that sense, a difference between the dynamics that 'give way to' from the ones which 'result from' uneven spatial development.

We believe therefore that this research can be a contribution to the theory to the extent that it focuses on understanding the space produced starting from uneven spatial development and not only the uneven spatial development within space. In order to continue exploring this second line of approaching the USD, the following sections will resume the main dynamics 'resulting from' the production of Latin American space in the phase of neoliberal capitalism. In the first place, the USD patterns in the region will be analyzed. Then, an in-depth analysis of the urban processes will be carried out and finally, urban informality, as a specific form of uneven spatial development will be delved into.

1.3 The historical formation of uneven spatial development in Latin America

Latin American urbanization processes possess particular characteristics which have resulted from the historical and territorial structuring in which they are immersed which gave way to the production of cities different from the North American or European ones and to concrete dynamics of USD (Quijano, 1968; Pradilla, 2014; Kalmanovitz 1977; Castells, 1973; Singer 1973). Authors connected to the Theory of Dependence²⁸, which was at its peak in the decades of the 60s and 70s, asserted at that moment the need to address the Latin American urbanization processes by taking into consideration the peripheral incorporation that these had had to world capitalism (Quijano, 1968).

²⁸ From a dependence theory perspective, it is understood that Latin America has been dependent since colonial times with the destruction of prior society, and in this sense, dependency is not only economic but also part of the historical process of territorial and institutional configuration. The interests supporting the dependency across time are shared by dominant sectors internal and external to the region. The resulting uneven territorial configuration does not depend only on external impositions but also on local actors with power.

1.3.1- Stages in the Uneven Spatial Development of Latin America according to Pradilla Cobos

Even though Pradilla Cobos(1995, 2014), does not attempt to elaborate a general theory of USD, as the previously discussed authors do, he suggests a relevant analysis of its application with a view to understanding the uneven formation of Latin American cities. Beyond the differences that might exist later among nations and even within them, the specific historic context and the place Latin America had to occupy in the capitalist development of the region leads to, following Harvey (2007a), a production of regionality in which common dynamics of USD in multiple scales can be verified. From a Marxist perspective with a Latin American tone, Pradilla's analysis (1995) starts with understanding the urbanization processes immersed in broader territorial structuring processes, at the macro-regional scale²⁹. He observes, specifically, how the Latin American territory is unevenly produced "outwards" and "inwards". He recognizes, therefore, different stages of modernization in the constitution of Latin American regions, nations and cities, connected to the imposed places³⁰ they had to occupy in the successive stages of capital internalization and which molded the configuration of USD patterns.

Colonial exploitation began with the Portuguese and Spanish colonies in the middle of the transition from feudalism to capitalism. Through different subordination strategies³¹ large parts of the pre-Columbian forms of social organization, of labor and of space were dissolved, which previously operated as autonomous regional societies. Inwards, new political administrative territorial divisions were formed, which resulted in colonial cities that functioned as administrative, political, religious or military protection centers (Figure 1.9). This first formation of the colonial city coincides up to contemporary times with the historic centers of many capital cities of the region.

²⁹ These result from the combination of existing processes and contradiction both inside the Latin American territory and those that take place outside and are internalized by integration to capitalism in different phases.

³⁰ These processes were imposed by successive economic, military and/or political powers.

³¹ The following stand out among them: the destruction of earlier forms of political, social and material organization; the establishment of new modes of production of the semi-feudal regime; cultural imposition of language, religion: uneven trade exchanges in favor of the accumulation of capital coming from Europe, etc.

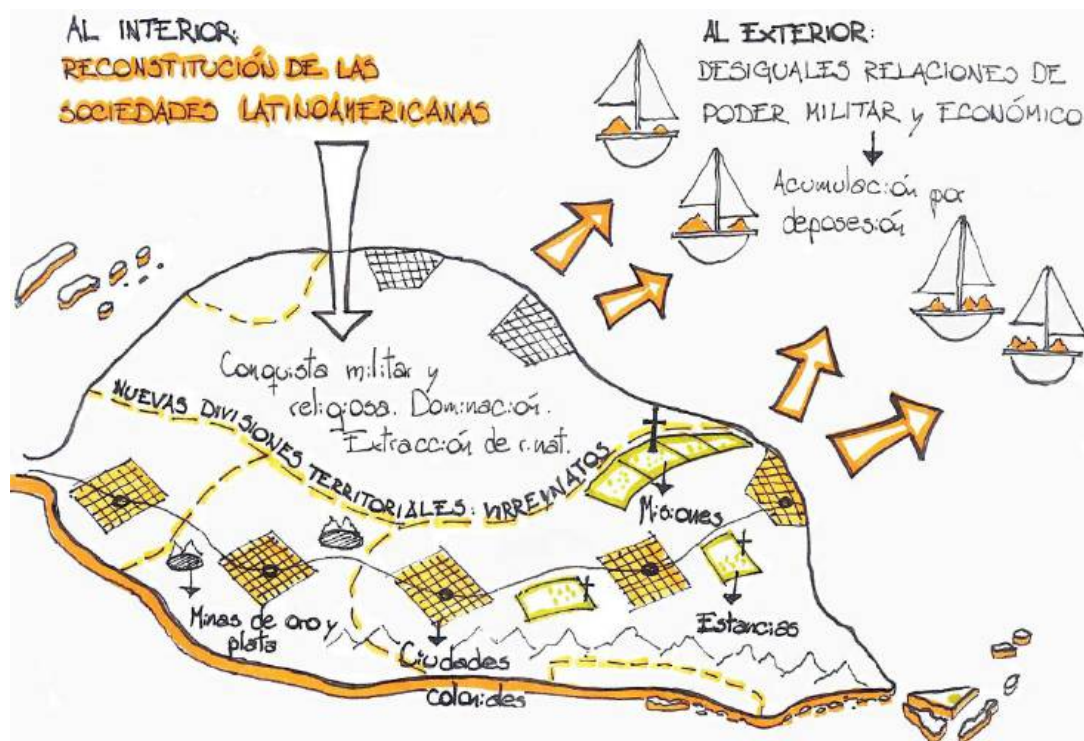


Figure 1.9: Territorial structuring of Latin American colonial USD. Source: Developed by the author

“Outwards”, the reconstruction of Latin American cities was marked by the resulting uneven relations of military and economic power with the colonial centers and also by the extraction of the natural resources for accumulation by dispossession (Harvey, 2007a).

Subsequently, *merchant capitalism* started with the pro-independence processes and the formation of the national States in America. Inwards, a new social class was constituted which was made up of creole landowners, owners of the farm estates and it led a process of appropriation, restructuring and concentration of the land by means of new judicial and military forms. This led to new forms of social and economic dependences. “Outwards” the incorporation of the Latin American states to the international division of labor towards the late XIX century as importers of manufactured products and exporters of raw materials “defined the material basis for the semi-colonial dependency” (Pradilla Cobos, 1995: 59).

The transformation of the production matrix brought about new territorial changes. The territorial expansion of agricultural activity was accompanied by the foundation of new population centers for supply. New maritime and river transport networks were built and also railways and roads for the transportation of goods and at the same time the ports were modernized for exporting and importing activities. To the same extent, the capital cities grew, especially the ones which evidenced a high trade activity with the “outside”. (Figure 1.10).

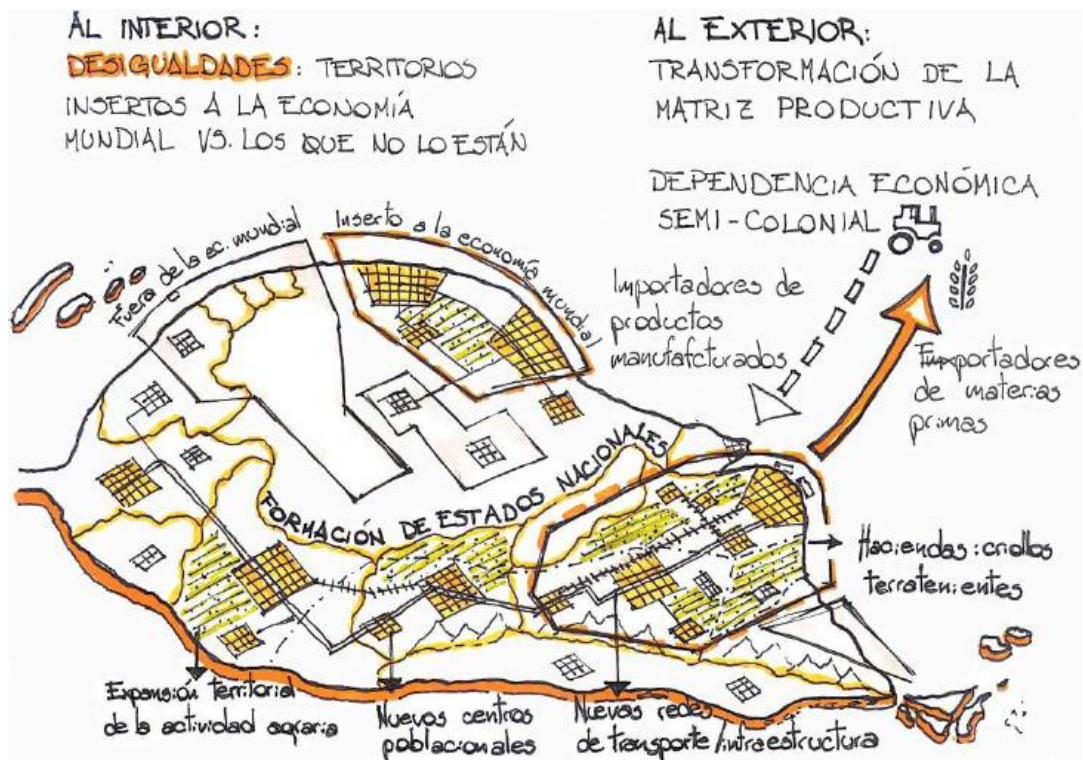


Figure 1.10: Territorial structuring Latin American merchant capitalism USD. Source: Developed by the author

Inequalities were transformed in relation to the previous period. “Outwards”, the Latin American states found themselves economically (and in many cases militarily) dependent on the countries which produced manufactured goods. “Inwards”, significant inequalities emerged between the territories which managed to become part of the world and urban economy, and the ones which were relegated or connected in a more indirect way. One of the aspects that can be clearly observed as USD producer inwardly is the provision of infrastructure (Harvey, 2007a) giving places hierarchical status.

Following the historical structuring of Latin America suggested by Pradilla (1995), during the interwar period (1919-1939), a process started which was known as import substitution industrialization in several countries in the region in which the State played an active role³². Industrial capital entailed a major concentration of population and resources in the large cities provoking a dynamic of territorial homogenization or, as it was observed before, of equalization. The role of the nation-State was essential for the industrial development and the subsequent urban concentration³³.

³² Industrialization started late with regard to the industrial centers at a world level due to the advanced development in the production means of the latter and of capital concentration. (Hikino, T., Amsden, A. H., & Wolfson, L., 1995).

³³ Through economic policies, the production and industrial exchange conditions were promoted both for private accumulation and for the creation of state-owned companies.

To the same extent, the pre-capitalist forms of agricultural production and manufacturing ended up almost dissolved by means of the replacement of peasants with agricultural machinery, land seizure from small farmers and the impoverishment of field work. The “outwards” articulation of the market continued to be connected to the exportation of raw materials and the importation of production means for the industry, while “inwards”, industry prevailed in the territorial and economic structuring. (Figure 1.11).

Both agrarian capitalism and the industrial process had no homogeneous impact on the territory but they rather produced multiple dynamics of differentiation. While the former had as its center the large land estates of primary production for exportation, the latter focused mainly on urban centers which met certain conditions of previously accumulated capital, namely, laborers who could be turned into ‘proletariats’, pre-existing trade networks, urban and communication infrastructures and high-income consumers. Within this context, mass migrations from the countryside to the cities began, giving rise to the process of “the urban explosion in Latin America” which reached its highest peak of urban concentration towards the 1960s. (Lattes, 2001).



Figure 1.11: Territorial structuring of USD of Latin American industrial capitalism. Source: Developed by the author

The USD of the industrializing process was based on the new territorial division of labor, the concentration of capital and new territorial fragmentations characterized by marked differences

between the developed industrial and agrarian territories and the pre-capitalist ones. In turn, major inequalities ensued between the countryside and the city, and also in the inner cities, in which unemployment became structural leading to an increasing social marginalization.³⁴ (Quijano, 1970).

The import substitution model ran its course by the end of the sixties, severely limited by the opening of international markets and the lack of competitiveness and range of local products (Rappaport, 2000; Kosacoff, 1993). The territorial occupation pattern was therefore modified with the industrialization (of minor relevance) of intermediate urban centers dedicated to the production of non-durable consumer goods (also known as primary industrialization) linked to the fact that in these areas there was a less unionized and thus cheaper working class (Pradilla Cobos, 1995; 2014). In addition, in territories distant from urban centers and/or strategic localization, new 'secondary' industrialization processes emerged which were encouraged by the national State through a series of incentives such as fiscal, tariff, credit etc. These processes, which can be verified in Argentina as well as in Mexico and Brazil, had geopolitical objectives seeking to revert the existing territorial imbalances between the large industrial centers and the rest of the country (in the next chapter we will be focusing on this point as these policies are direct precedents of the Tierra del Fuego case). However, they did not manage to revert the territorial concentration that had been developed in the industries and the agglomeration economies around the big cities (Azpiazu, 1988; Donato, 2007).

The world capitalism crisis that started in the 70s and deepened in the 80s, generated the conditions for the beginning of the fourth stage of modernization in Latin America: the stage of *neoliberalism and the dynamics of territorial restructuring* (Pradilla, 1995). The effects were not the same for all the economies, and as could be expected, it had a greater impact on the peripheral countries (as was the case in Latin America) than in the developed ones³⁵.

The restructuring of capitalism at a world scale after the crisis led to the emergence of neoliberalism as a political economic model, in opposition to Keynesianism and the centrality of state action, characteristic of the previous phase. The move from a production Fordist model to a flexible and dynamic one caused changes in the production and value distribution modes manifesting in a new territorial division of labor associated to important changes to the industrial organization and financialization of the economy³⁶ (Harvey, 2005, 2007a; Theodore, Peck and Brenner, 2009; Brenner, 2009a; Pradilla, 2014). Restructuring at global scale led to a process of "capitalist homogenization"

³⁴ The issue of marginalization can be broadly approached in the studies by Anibal Quijano (1968: 1970). From a dependence theory perspective, the author refers to the marginalization product of a dependent industrialization process "within a structure that amalgamates unequal production levels and relations" (Cortes, 2017).

³⁵ In Latin America at the end of the 80s, there were approximately 183 million poor people, which was equivalent to 44% of the total population and 71 million more than in 1970 (ONU-HABITAT, 2016).

³⁶ Among the main features of this phase, the following are worth mentioning: the indiscriminate opening of the national economies to international trade and finances, the growth of transnational companies, and the reterritorialization and rescaling of production processes associated to technological advances in communication and to new, more flexible and precarious, working conditions (Lipietz, 1997).

dominated by the hegemonic blocs³⁷, which imposed, by means of different disciplining strategies, new forms of dependence based on recipes of economic liberalization and external indebtedness of the peripheral countries (Pradilla, 1995, 2014). In this sense, neither the productive reconversion process or its territorial impacts have been homogeneous at a global or regional level (Carrillo, Mortimore y Estrada, 1988). Uneven inclusions occur among the regions in the process of globalization, and at the same time processes of polarization and segregation were reflected within these territories.

In Latin America, a key breaking point with the previous stage and of neoliberal insertion were the political, social and economic dynamics taking place during the Condor Plan of 1975 and the dictatorial governments which had started in some cases previously and continued well into the 80s (Martinez Rangel, Soto Reyes Garmendia, 2012; Torres Vázquez, 2018). The combination of strategies of State terrorism (among which the forceful abduction of people, the extermination of leftist groups and opponents, and the systematic plan to appropriate minors, stand out) and of economic recipes based on external debt, the privatization of public companies and deindustrialization left many countries subsumed in a long period of dependencies and structural vulnerabilities. In economic terms, in Harvey's words (2005), an extreme process of accumulation by devaluation developed in the region to the extent that these recipes were applied from the United States and generated new structural forms of political economic dependencies which had an impact on USD.

In the following decades, the Latin American socioeconomic and territorial structures started to depend as much on the integration of the new global economies as on the implications of the internal neoliberal modernization. "Outwards", the national states underwent an opening and restructuring process of their economies through which their relative position in the international system was modified. The competitive advantages on which this opening was based however, did not involve actual benefits for all the countries given the basis of pre-existing social, political and economic inequalities. Latin America was left inserted within globalization in a peripheral manner, under an asymmetrical territorial organization contrary to the previous period of strong development (Pradilla, 2014).

Within the Latin American territorial structure, the incorporation into the global economy, and principally, the measures taken by the Washington Consensus (1989) led to the "State reforms" (Pradilla, 2014). They also led to economic deregulation articulated with fiscal adjustment policies and a major prominence of the market in the politico-economic territorial decisions. Particularly in Argentina, the neoliberal model initiated in the 70s and deepened in the 90s went hand in hand with an economic operation by financial valuation, the dismantling of the capacity of the State, the concentration of wealth and an increase in the deepening of the social and economic inequalities of

³⁷ At international level, the dispute for world economic hegemony involved the three main blocs: The USA (American bloc), Germany as hegemonic power of the EC and the Asian block led by Japan. Latin America would be strongly hegemonized by the USA.

the 80s and 90s (Burchardt, 2012; Espinosa, 2013; Deluca, 2018). State intervention was reduced in the social sphere and in public expenditure, modifying the regulating role of the State for that of facilitator to achieve a greater interference of the market.

These processes were accompanied with territorial fragmentation processes. As areas with relative advantages for transnational capital were integrated due to their low production costs and natural resource endowment, other areas became impoverished and were excluded from the new patterns of accumulation. Territories began to structure more from international land and maritime ports, the new assembly plants in the periphery and international tourist hubs rather than from the former domestic industrial hubs (Figure 1.12).

The traditional industrial cities became economically stagnant as they evidenced drawbacks for the prevailing transnational model as well as for the stagnation of the internal market³⁸. Conversely, the foreign market-oriented cities boosted their urbanization and accumulation rhythm. Urban-type migration grew in that sense, especially towards intermediate cities to the detriment of concentration in the large cities (Lattes, 2003). In addition, the urban-rural differences continued to deepen both due to the increasing technification of rural spaces³⁹, and the deterioration of the territorial integration of transport and infrastructure associated with the privatization of these services⁴⁰. The transformation into a predominantly urban territory⁴¹ which had taken place up to 1975 with a 60.2% concentration of population in cities (Lattes, 2001) was key to position them as epicenters of the deepening of the territorial and socio-economic inequalities. During the 90s, capitalist accumulation processes around urban spaces intensified. This, compounded with a scenario of deindustrialization and unemployment fostered inequalities in the cities.

³⁸ Only the large industries with monopolist features survived. Big cities became contradictory scenarios of deindustrialization, commodification and extreme poverty.

³⁹ In Argentina, small villages based on primary activities ended up isolated as the railway system was dismantled.

⁴⁰ The privatization process of public goods and services affected the infrastructure available in urban spaces in the same way in which the State role as housing supplier diminished (Pirez, 2014a).

⁴¹ The countries which were most affected by the process of import substitution industrialization in the previous periods evidence higher indicators of urbanization. In Argentina, by 1950, 65.3% of the population was urban, while by 1970, 78.4% was urban and by 2000, 89.9% (Lattes, 2001). The population considered urban in Argentina refers to that concentrated in localities with more than 2000 inhabitants (Lattes, 2003).

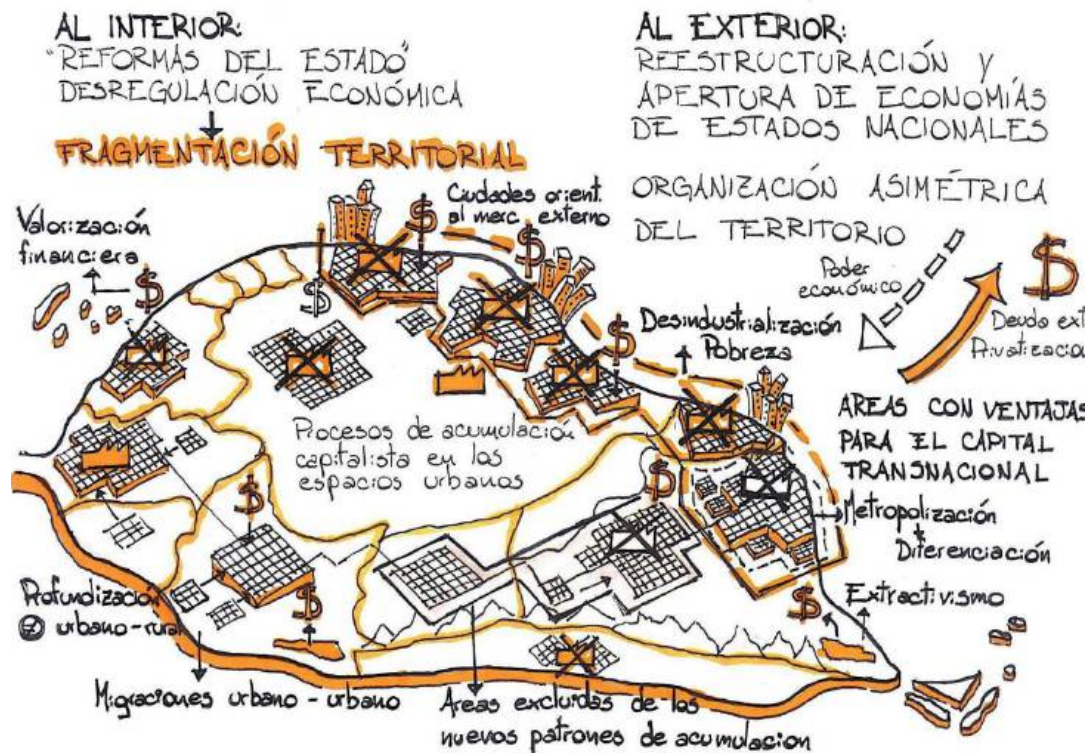


Figure 1.12: USD territorial structuring of Latin American neoliberal capitalism. Source: Developed by the author

We could argue therefore that the “modernization” process initiated with neoliberalism and globalization modified the USD pattern with regard to the production processes, the general conditions of accumulation and territorial organization (as they only develop in cities and regions integrated to the new international pattern of accumulation).

A series of neo-developmental governments during the first decade of the XXI century (among them Argentina, Brazil, Ecuador, Bolivia) restrained, but did not reverse, the strongest tendencies of neoliberalism by implementing policies with a marked state presence (Calderón, 2018). Among others, the following are worth mentioning: the application of policies aimed at production valuation operation, the renationalization of formerly private companies, foreign debt relief and the implementation of social policies of universalist bias aimed at reverting inequality. Even though these were interesting experiences, and in some sense, counter-hegemonic with regard to the flows of global accumulation of capital, they did not thrive in due course because of both the world economic crisis of 2009 and the models’ own limitations (Catenazzi and Reese, 2016; Calderón, 2018).

In summary, in all the history of space occupation in Latin America, a dialectical movement can be observed between homogenization and capitalist territorial integration, and the fragmentation and disintegration of the territory as it was stated by Smith in terms of equalization and differentiation dynamics (1984, 1996). While the first tends to “dissolve regional formations or the uneven development of preexisting territorial environments”, the second tends to “recreate, reproduce or

gestate them” (Pradilla, 1995: 65). In this way, permanent changes are enacted which reorder and at the same time provide a new hierarchy to the regions beyond the geographical aspects in an apparent state of permanence.

It should be highlighted that neither the international division of labor nor regionality can fully explain in their entirety the territorial restructuring processes. A very important role is played by the particular way in which each nation, subnational region or city inserts itself into the dominant accumulation pattern at world scale, as well as the manner in which this incorporation materializes in each one of these territories (Pradilla, 1995). In terms of that, two aspects have an important influence on USD, the role of state administration in Harvey’s perspective and *territoriality* for Brenner (2009a), among others, through the application of certain production policies.

1.3.2- Production Dynamics and the production of regionality in USD

Socio-spatial inequality at inter-urban, intra-urban and regional level, is crisscrossed by broader USD dynamics, typical of the production of capitalist space. The place the production activities occupy, and their localization is central to this relationship to the extent that they affect the territorial division of work, the production of scales, regionality, the geo-political issues, the provision of infrastructure as well as concrete patterns of space occupation.

Since the crisis in industrial capitalism, towards the late sixties and even more with the consolidation of neoliberalism, central production activities have changed as the dynamics of capital expansion demanded new spaces of accumulation to overcome the equalization of profit rates and the overaccumulation crisis.

New activities emerged with neoliberalism, and others, such as industry undergoing transformations because of technological advances, new transport and communication networks and the restructuring of production on a global scale (De la Garza Toledo, 2000). Among the emerging activities are neo-extractivism, as an innovative form of appropriation of natural resources, tourism (Pradilla, 2014, Svampa, 2014), as well as other activities such as finances and the commodification of space (Pirez, 2016).

Their spatial distribution, within a framework of “regionalized internationalization” according to Pradilla (2014) was manifested in an uneven and fragmentary way in the Latin American territory. In its equalization dynamics, the tendency for capital to localize investment and production in a homogeneous way in the different territories can be observed while disregarding the existing material, political and geographical conditions. On the differentiation side, Pradilla (1995) distinguishes some characteristics typical of the region: homogenization is *subordinated* to the extent that the power over the use of the territories is defined extraterritorially. It is also *uneven* as it adopts different paces in the different spaces and sectors of the economy and prioritizes areas integrated to the transnational

economy with an emphasis of accumulation. It is *fragmentary* as it does not include all the territories but parts of them at multiple scales. Finally, it is *discontinuous*, “leaving territorial discontinuity ruptures among the integrated and homogenized fragments and those which are not”, (Pradilla, 1993:13), saved by the transport and communication networks.

In many places, the re-territorialization and de-territorialization processes associated with the financial and productive neoliberal map have generated negative impacts on the local-regional spaces where they are inserted (Brenner 2009a). Being defined in an extraterritorial manner, the advantages of accumulation tend to be absorbed by small economic groups while most of the population remains excluded or inserted in an unstable way in labor flexibilization schemes⁴².

In relation to industry, one of the central tenets of this thesis, within the framework of the new international division of labor, “competitiveness hubs” were consolidated in the developed countries where industrial development aimed at innovation was combined with research and scientific and technological development activities (Mounier, 2016). On the other hand, by means of exceptional tax advantages and subsidized conditions, many peripheral countries, particularly the Latin American ones, “became subcontractors and contract manufacturers of end consumption parts and products and exporters of raw materials and natural resources” (Pradilla, 1995: 10).

The characteristics industry acquired in the Latin American context generated, as we will mention in detail in the following chapters, impacts on the spatial and sociodemographic structure, among which stand out the increase in the levels of vulnerability and the new processes of socio-spatial segregation associate to precarious working conditions⁴³. In turn, territories with non-renewable resources became vulnerable to the extent that the global market scale generated imbalances in the regional ecosystems. State-downsizing processes were added to this together with those of natural adjustment accompanied by decentralization processes in which the nation States transferred responsibility to local and regional governments, without the necessary resources or distributed unevenly, issues which deepened territorial imbalances (Kessler, 2014).

1.3.3- Production Policies and USD

The policies applied by the State played an essential role in the economy-production articulation of space, especially, in the reduction or growth of inequalities. The State as political-social organization is linked, as it was discussed previously, to capitalist accumulation processes, their modes

⁴² Tourism, for instance, as a strategic space of accumulation and to draw investment during the periods of economic crises, “tends to absorb local culture and disrupt the local modes of production (Ávila Romero, 2015).

⁴³ Among the regions that were not able to insert themselves into the global market, described by Coraggio as the “regions that lost” (2005: 3), are those that were unable to promote export-based development, or suffered, due to technological advances, the replacement of workers by machinery and the closure of industrial companies.

of production and successive historic cycles⁴⁴, and has a direct impact on USD. As a social relationship (Oszlak, 1984), it is materialized in a set of apparatuses which are the institution (administration) and public policies. Following Oszlak and O'Donnell, a public policy can be understood as:

...a set of actions and omissions that manifest a certain modality of state intervention in relation to a matter that draws the attention, interest or mobilization of other sectors in civil society. Out of that intervention it can be inferred a certain directionality, a determined normative orientation that will predictably affect the future course of the social process developed around the issue (Oszlak and O'Donnell, 1995:112- 113).

Public policies therefore entail taking a stance on the part of the State and it also means that the different actors (citizens, NGOs, businesspeople) take a position as well.

Regarding productive policies, their definition is broad. Tavosnanska (2019) describes “measures of macroeconomic, fiscal and regulatory in character, among others, whose objective is to promote or develop some type of economic sector in particular” (2019:1)⁴⁵. Productive policies have a territorial dimension to the extent that they tend to base activities in a concrete geographical space, having a direct impact on the economic matrix as well as in the demographic, social and spatial ones. They constitute, in this sense, territorial policies (Casalis and Villar, s/a) and their orientation strongly influences also the USD processes and the inequalities between regions, urban centers and/or national environments.

According to Mounier, following Krugman (1998), there are two logics behind the territorial production policies in relation to the localization of the activities,

The first one has as its objective social equity in the struggle against territorial disparity and a more egalitarian distribution of activities on the territory [...] A second logic is by contrast an uneven space policy of construction of regional industrial poles whose dynamism entails accelerating development and the economic growth of the group (Mounier, 2016: 401).

Mounier distinguishes a transformation of the production policies, particularly the industrial ones, among those applied until 1970 imbued with the spirit of the Welfare State, and the ones applied later within neoliberalism, which produced changes in the distribution of activities on the territory and the emergence of new inequalities. The first were applied to the nation-States and were connected to the logics of social equality and the egalitarian distribution of the activities on the territory. They generally had as their objective the production of consumption goods for the domestic market. Neoliberal policies, however, were principally aimed at foreign markets and have more prominence in

⁴⁴ According to Tarcus (1992), following Marxist theory, each capitalist cycle is characterized, first, by a certain type of capital accumulation; second, by a certain form of production and social reproduction; and finally, by a certain form of state.

⁴⁵ Other authors associate them more specifically with industry, not only manufacturing, but in a broad sense, encompassing other economic sectors such as science, technology, commerce and other types of industries (Beckerman and Chiara, no year).

the regional and local States; they promote competition among regions and the logic of territorial imbalance underlies them. A key point of this transformation will be the reduced state intervention after the 70s in the regulation of the market dynamics. With regard to that, Mounier states that while the former granted the State a central place in the allocation of resources for the planned construction of industry, the neoliberal productive policies leave the matter of the resources in the hands of private companies, the State restricting itself to generating macro policies that might augment competition.

The spatial component of the neoliberal industrial policies (a topic generally addressed from the political economy of development, geographical economy and “regional science”) evidences an industrial distribution that produces uneven territorial configurations and economic disparities associated to localization, transport costs and salary levels, among others.

In summary, we can argue that the territorial distribution of production activities has a direct impact on the dynamics of spatial equalization/differentiation and that production policies have a central role on their orientation. Industry, politics and USD are thus connected to the extent that industry generates growth poles and of development of other activities, “polarized regional growth”.

In the following chapter we will discuss in particular, the policies that demarcated Special Economic Zones in Latin America in the 60s and 70s, which generated fiscal benefits for the industrial development of certain regions and which had a direct impact on the reconfiguration of USD patterns as is the case in Tierra del Fuego.

Next, we will address in more depth Latin American USD patterns in the production of urban spaces and the specific forms of inequality characteristic of the latest neoliberal phase.

1.4 USD Intra-urban Dynamics

Urban spaces have modified their shape and functions in parallel with the changes to the political and economic structures that shaped the different historical moments⁴⁶. As we have discussed, there is a correlation between the globalization of capital and the way in which the cities grew, assuming that urbanization constitutes an expression of capitalist relationships at a global and local level (Harvey, 1977, 1998; Pirez, 2014b).

Urban spaces possess a central role in USD: their agglomeration economy, the infrastructure and labor available transforms them into the preferred spaces for new forms of accumulation (Harvey, 2007). Among the reasons that produce inequality in urbanization processes, Kalmanóvitz (1977) and Singer (1973) point out the different role of societies and relationships of dominance, different social, political and cultural structures, the temporary nature of processes, the different geographical

⁴⁶ City and urbanism are systems of stabilization and self-perpetuation of a certain mode of production and are at the same time spaces of accumulation of contradictions that give rise to new modes of production. A certain mode of production will be characterized by a dominant urban form (Harvey, 1998).

mediums, territorial pre-existences, and the ones configured as part of space occupation processes. We acknowledge from the urban critical studies tradition that in the production of urban processes and of the inequalities within and between them, basically two types of dynamics intervene: extra-urban and intra-urban ones. The first ones are those connected with the processes occurring at regional, national and global scale and that condition and shape the role and configuration of the cities. The dominant production modes, the production of regionality, the state territorial administration, the geopolitical matters (Harvey, 2007), and other characteristics of USD which we were analyzing previously, have a total or partial incidence on the changes produced in the forms of territorial occupation, appropriation and structuring and also on inequalities. On the other hand, intra-urban dynamics comprise equalization and differentiation processes and valuation and devaluation ones which occur inside of the cities in which the systems of objects (geographical conditions, urban structure, etc.), the actions (actors, public policies, etc.) and labor relations (Santos, 1996) intervene. Both dynamics are interdependent as long as each local space differentially inserts into the regional, national and global space and in turn, territorially enables and manifests processes that take place at other scales. Assimilating cities with towns starting from their territorial-scalar demarcation⁴⁷, and recovering the classification suggested by Alonso ⁴⁸ (2004), we can also distinguish between local and extra-local actors, who participate in the production of urban spaces and the inequalities that are present in them.

In the previous section devoted to USD in Latin America, we discussed extra-urban dynamics that influence the configuration of inequalities and territorial fragmentation processes in the urban spaces of this region. In the next section, we will deal with the intra-urban dynamics that influenced USD processes and the main urban inequality characteristics in Latin American cities.

1.4.1- Analysis of USD Patterns in Latin American Cities

⁴⁷⁴⁶ City and urbanism are stabilization and self-perpetuation systems for certain production modes and they are somehow spaces of accumulation of contradictions which engender other production modes. Certain production modes are characterized by a dominant urbanist form (Harvey, 1998).

With regard to the territorial demarcation of cities, these can be considered according to Alonso (2004) towns to the extent that they are defined within a larger territorial entity and they possess a territory, certain social relations (society) and a mode of political regulation.

⁴⁸ Alonso defines four types of actors exerting their influence through different types of interests and power relations in the cities: a- strictly local actors (their activity is developed through the reproduction of local social relations) b- partially local actors (belong to the town but their scope of activity develops outside of it); c- non-local actors who partake of local activity (external actors who develop their activity within the town) and d- actors within the city with difficulty to reproduce their daily life (they lack resources and depend on the opportunities the town offers. The author equates them to the migrant population coming from impoverished areas).

⁴⁸

USD patterns in Latin American cities were substantially transformed with the accelerated process of import substitution industrialization occurring since 1940. Until the middle of the XIX century, cities had grown slowly, “under a pattern of concentric rings with a clear centre-periphery gradient” (Paolasso, Malizzia & Boldiri, 2019). This pattern was altered first in the big cities with their accelerated urban expansion, product of the important countryside-city migrations associated with industrial activity.

The State in its urban dimension was not able to provide solutions to meet the housing demands of the new population (among other things due to capital investment time lags). This issue together with a social structure of extreme social stratification, with major inequalities regarding wealth concentration and the increase in land price, were the basis to kickstart processes of internal differentiation in the space occupation pattern (Abramo, 2012). Wellbeing increased, above all in the industrial urban centers with relation to specialized labor. The massive use of the automobile and the creation of new ways of circulation provoked, the same as in North America, growth in the suburbs on the part of high-income groups in pursuit of better environmental quality and “distinction” (Abramo, 2012).

Concurrently, in the expansion areas where there were lands of low economic value, a variety of council housing estates were erected promoted by the State, in particular in the United States where the Welfare State model was stronger, for several decades in particular. In that way the first working-class neighbourhood were configured in sharp contrast with the upper-and middle-class suburbs more familiar to the outskirts of the North American cities described by Smith (1996/2012).

On the other hand, the informal urbanization processes started, characteristic of Latin American cities⁴⁹ (Fernandes, 2016). These refer to those urbanization processes that take place outside formal channels, in which it is normally the city users themselves who materially and immaterially produce the conditions for their habitation (Jaramillo, 2010). Informality (both economic and with access to habitat) started to grow because of the imbalance between the labor offer and the volume of new migrants (Portes et al, 2005; De Mattos, 2009). It grew so much in interstitial non-urbanized areas or those not suitable for urbanization (such as under motorways and on the margins of the railways) and in expansion areas that were not very attractive to the real estate market.

Abramo (2012) distinguished in the modern production of the Latin American city, three logics of “social coordination”: the mercantile, the state and that of necessity, which responds to the production of the popular city, on the basis of individual or collective action, within which the informal city is its most important manifestation (even though it can also be a formal city produced by intermediary entities such as cooperatives and trade unions).

⁴⁹ This is not mutually exclusive for Latin American countries as in African and Asian countries it is also possible to find similar situations of informality. Informality is regarded as a persistent problem as it has been on the world’s agenda for more than thirty years. (ONU-HABITAT, 2016)

From 1970, the global neoliberal paradigm involved the restructuring of production (Soja, 2003) associated with de-industrialization, reindustrialization and financialization processes (Soja, 2003) of the economy described in the previous section, which as we have discussed, led to the spatial redistribution of the economic activities. It is possible to observe in that context a series of restructuring processes of the urban spaces⁵⁰ related to the major considerable economic and political changes provoked, which resulted in the consolidation of pre-existing differences and new forms of differentiation. The crisis of urban Fordism was articulated, according to Abramo (2012), on two main axes: flexibilization in contrast to modern regulating urbanism, and the fall of the State in its role as financier of urban materiality (housing, infrastructure, etc.).

During the 90s, the policies arising out of the Washington Consensus fostered the transformations of the cities in intra-, inter-urban terms, and in both with configurations of new centrality and marginality. Centrality can be observed in the territories integrated into the transnationalization process of the economy and space, while marginality can be observed in the cities and city sectors which did not manage to insert themselves in the global dynamics (Marengo and Falú, 2004). At interurban level, one of the major transformations was the re-hierarchization of cities in the national urban system; the large cities started to reduce their growth in comparison to the intermediary cities (Portes, Robert and Grimson, 2005). In the latter, urban inequalities started to become stronger as well. At intra-urban level, the private sector predominance (both in the form of capital as well as through the privatization of public companies) was territorially manifested under a model of elitist development characterized by a dynamic of commodification (Harvey, 2012; Pérez, 2016) of urban goods and services and of the supremacy of their exchange value rather than their use value. (Lefebvre, 2017).

From the State, characterized by its role as facilitator, the policies implemented on the regulation of the private land market did not translate into a significant intervention in production and often benefited the most concentrated sectors of real estate and financial capital (Clichevsky, 2000) without favoring access to land for lower income social sectors. On the other hand, no integral approaches aiming at reverting inequalities were applied but rather focalized actions were implemented, without articulation with other types of policies such as economic or financial ones. This constituted an essential feature of the production of cities in contrast to the previous period with strong state intervention in the regulation of land and the provision of housing (Pérez, 2013).

The growing structure of financialization of the economy and the urban space, added to the downsizing in the functions of the State, led to the worsening of working conditions, health care access,

⁵⁰ At world level, an unprecedented accelerated process of urbanization has been experienced: for the first time in history, the number of people who live in cities surpasses that of those who live in rural spaces; in 2016, more than half of the global population inhabited urban areas (ONU-HABITAT, 2015a). However, the current urbanization model becomes unsustainable in many aspects.

housing conditions, education, and basic services of vast sectors of the population as well as the increase and the deepening of the social and urban inequalities (Zárate, 2016).

With the gradual abandonment and/or lack of capacity of the governments as providers of accessible housing, and in the face of real estate speculation, a large part of the population was forced to adopt new strategies to access habitat out of the formal channels and in places not always suitable for urbanization⁵¹. In this way, between the 90s and the 2000s, the cities spread under contradictory conditions⁵², with few planning criteria on the basis of the economic capacity of certain sectors: “they became a set of sectors with differing degrees of connection and their boundaries became more and more blurred” (Paolasso, Malizzia & Boldiri, 2019:5). The classic urban-periphery structuring guidelines of concentric growth were replaced by “insular urban structures” (Paolasso, Malizzia & Boldiri, 2019:5), disjointed and differentiated both in its urban and social fabric. (De Mattos, 2009). In the occupation patterns of the expansion areas stand out socio-spatial fragmentation and segregation, as specific forms of inequality (Pírez, 2016).

1.4.2- Defining an USD Analytical Approach for Latin American Cities

Starting from the first historical characterization, we observe that USD dynamics that intervened in the Latin American processes show some similarities and other differences regarding what Smith (1996/2012) suggested for North American cities. Within global capitalism, similar equalizing tendencies can be observed among which stand out the homogenization of productive activities and the incorporation of urban space as capital accumulation space, which links to the rhythms and periods of broader economic dynamics. Also, the resulting urban expansion processes and those of restructuring of the spaces produced by the new forms of accumulation in situ.

On the other hand, similarities can be observed in the differentiation dynamics and in those of capital valuation, devaluation and reinvestment in the built environment, especially in the double process of suburbanization and reconversion of central areas (Falú and Marengo, 2004). In addition to factors such as geography and the availability of infrastructure, land rent turns out to be a major determining factor of the way in which cities are spatially structured and a fundamental factor in the internal differentiation factor to the extent that it has a direct impact on the distribution of the population in space. (Smith, 1996/2012; Jaramillo González, 2009). We will briefly analyze what this dynamic consists of from a Latin American perspective, understanding it responds to a dynamic of

⁵¹ There is a direct relationship between the growth of informal settlements and the lack of affordable housing. In the 90s, while private sector investments remained stable, affordable housing at world level went down. (ONU-HABITAT, 2015a).

⁵² Urban expansion occurred on previously rural land indefinitely in many cases generating conurbation and metropolization phenomena, with land uses disarticulated among them.

commodification of the cities. We will after that analyze differentiating dynamics of decommodification, which we consider typical of the Latin American cities.

a- Land rent and the commodification of Latin American urbanization

Land as a commodity possesses certain characteristics which make it unique, among them its irreproducibility in terms of specific localization (Morales Scheningner, 2005). Being irreproducible, land does not have a price established on the basis of the costs of its production (Scheinger), as do the rest of the commodities. The price of urban land includes both the cost of the services and the one arising from construction as well as “residue” which has to do with a windfall generated by the sales operation, which does not necessarily involve an equivalent added value. (Morales Scheningner, 2005; Fernandez Wagner, 2009). With relation to the latter, for Jaramillo González⁵³ (2009), and following Marx, the price depends on the whole of the rent, which has the product value of private property and whose surplus is accumulated by the owners⁵⁴. Given that the land requires transformations to be destined for urban use, it becomes the target of real estate promotion, and in this process several actors are involved. Actions such as the provision of utilities or the value that is provided by certain localization, for instance, the existence of access roads, benefit the private owners but can also be regarded as a social product. (Jaramillo González, 2009). However, the windfall is generally absorbed by the owner, as the shortage⁵⁵ of land on offer allows them to benefit from the final price and this is what we know as land value. The price then is “a capitalized expression of land value” to the extent that it contemplates potential uses which might increase the price in the future⁵⁶, and this increase depends on several issues. Fernandez Wagner (2009) acknowledges in this sense:

- Structural factors: those which can increase the absolute value due to a higher pressure on urban spaces (such as population growth);
- Circumstantial factors: related to temporary situations;
- Structural specific factors: issues that affect a sector of the city in particular such as changes in the use of the land and the allowed density.

It should be pointed out that commercial logic gives precedence to some uses over others. Competition also influences the parties, as a restricted offer context allows the owner to increase the

⁵³ According to the author, price becomes a contradictory issue within the theory of labor value as it does not originate out of any labor.

⁵⁴ Property grants power to the owners of the land to the extent that the land is essential both in production as well as in space consumption, and in that sense, they are the ones who mainly appropriate their value, which is socially produced.

⁵⁵ Shortage is not only related to lack of land, but rather with its location, provision of utilities and authorization for a certain use. In that sense, land scarcity is physical, judicial and also economic. This last type occurs when land plots are preserved waiting for a moment of higher value to sell them.

⁵⁶ This makes many owners decide to “wait” for the moment to sell as they speculate with the potential value.

prices and the capital gain. In a deregulated market, the price will be the one that the market decides in terms of accumulating the largest windfall possible.

Another characteristic that should be mentioned as a determinant for the price has to do with localization. The concentration regarding preferences over certain locations (Jaramillo González, 2009), has a direct impact on the value and in the internal differentiation of the cities. Localization does not depend only on a technical-functional distribution based on the potential uses but also on the inner workings of the market. The symbolic dimension of the city plays an important part in this as well⁵⁷ (Jaramillo, 2009). Within commercial logic and through the land prices dynamic, the best localizations are reserved for the high-income social groups, while the other social groups are unable to access them. In this sense, land value constitutes an exclusion dynamic in space (Jaramillo González, 2009). One issue that should be pointed out is that since land is a basic good for the reproduction of life, its commodification and the inequalities it generates are transferred to other associated markets, such as housing and the rental market, where rules of scarcity, localization and prices are also set in terms of maximum profit.

The market⁵⁸, consequently, operates according to the owner's interests as well as the characteristics of the property structure and the instruments regulating its use. The State plays a key role as regulator (or not) of the land price dynamics as producer of space and infrastructure and at the same time as internal revenue agent (Fernández Wagner, 2009). In this sense, it favors the generation of value or promotes actions in pursuit of recovering part of the surplus to distribute it socially. At the same time, it has a direct impact on the spatial patterns of urban inequality connected to the commodification of the land. Particularly in the case of Argentina, Cuenya (2016) analyses the role played by urban policy regarding the commodification and elitization process⁵⁹ of urban spaces. The commodification project is led by, according to the author, land occupancy and public-private requalification dynamics related to the valuation possibilities of large plots that generate as a result "exclusive urban environments" homogeneous in character.

As a result of commodification, there is the emergence of space occupancy forms typical of Latin American cities. Cuenya distinguishes two major categories of exclusive urban environments: private urbanizations and large urban projects or new centralities. The first one is produced through the occupancy (and transformation) of rural or peri-urban land in spaces far from urban areas. They

⁵⁷ As capital determines the social hierarchy within capitalist classes, differences are made explicit through conspicuous spending which is not aimed at satisfying a basic need but as the effect of manifesting economic power in order to belong to a given social class.

⁵⁸ It should be noted that there are formal land markets, safeguarded by judicial structures and also informal markets, which according to Morales Scheninger (2005) are governed by the same laws.

⁵⁹ By elitization he means "a new pattern of urbanization focused on the needs of real estate capital and the upper echelons of society", as a "spatial project of capitalism in its globalized stage". The urbanization patterns that respond to the elitization of the city, arose as a result of both the greater relevance of real estate capital in urban spaces, and the emergence of a "new consumer elite", i.e., uniting both supply and demand (Cuenya, 2015).

can offer different products and services such as club houses, sports courts, etc. and in tourist areas these are combined with strategic locations related to landscape conditions such as being close to the sea, lakes or natural reserves. In turn, large urban projects are localized within cities, with better conditions of accessibility, on vacant land (Due to obsolescence by prior use, re-functionalized or re-urbanized use). They also evidence high-end infrastructure and services but unlike closed urbanizations they can cater for another, equally exclusive demand, different from the residential one, for instance corporate offices.

Urban policies were key to the emergence of these new forms of production of commercial space, both in terms of their orientation towards business logic and *laissez faire* logic through the non-regulation of the land market and its transformation.⁶⁰.

b- Decommodified Urbanization

Due to the factors mentioned above, we can observe that land rent dynamic and the commodification of goods associated with housing and services constitutes a fundamental one for USD in urban space and the resulting inequality patterns. Nonetheless, analyzing only the commercial production of the city may not seem enough in order to understand the uneven urban configurations product of Latin American space production processes. Considering that in many of them half the built space is produced informally, (Fernandes, 2011; 2016), and a similar amount is produced by the State at its multiple levels, it becomes essential to understand this logic underlying city production which have to do with an USD dynamic which we may call decommodification or not commercial. While the commercial pathway is directly related to the commodification generated regarding the production and consumption of urban goods and services, the non-commercial one has to do with urbanization processes which do not have as its ultimate objective the accumulation of capital (Pirez, 2014b; 2016). In this sense, it is not a differentiation dynamic based on capital's search for comparative advantages, but its flip side. Decommodification can address both the production and consumption of a commodity (Pirez, 2014b). In the first case, it excludes the production process from “the capital accumulation relationships”, while in the second one, a monetary contribution is not required for its usufruct, or in the cases in which the prices are established on the basis of payment capacity and not the profit that the commercial exchange generates (that is, not on the basis of a windfall profit)

This thesis holds the view that it is necessary to include decommodification in the analysis of USD in Latin American cities as much as it constitutes a differentiation dynamic given its relevance within the urban expansion processes which in most of the cases result from capitalist urbanization. In addition, different authors argue that city decommodified production has the capacity to influence

⁶⁰ While the *laissez faire* policy started in the 70s, the corporatist one did so in the 90s.

commercial production to the extent that it challenges the scarcity produced by the market (Abramo, 2012; Fernández, 2016; Pirez, 2016).

In view of the above, and on the basis of the description previously made about Latin American urbanization, two city production logics are identified which must be analyzed within what we consider the decommodified dynamic of USD. In the first place, and in order to be in line with what Smith (1984; 1996/2012), Harvey (1998, 2007) and Brenner (2009a) suggested, there is the logic alluding to the *particular role the State acquires*, in this case through urban policies in the differentiation dynamics of cities. In the second place, we can identify the logic that refers to the *production of civil society*, but we will focus primarily on informal city production. In the following section, we will expand on these two logics underlying the decommodified dynamic.

The role of urban housing policies in USD

As we have already discussed, the State plays a key role in city production both as urbanizing agent as well as in its role of urbanization regulating agent (Fernández Wagner, Jaramillo). At a local scale, the State can be identified with one type of government which takes the form that of Municipalities (Pogiesse, 2000). We might say that the most concrete manner of its materialization are the housing and urban policies.

Di Virgilio and Rodríguez (2016) understand urban policy as a sociopolitical process with a territorial dimension which is determined by the part the State plays. Said policy is necessarily (but not exclusively) related to local government as it is its territorial scope of responsibility as producer and agent of territory planning instruments, urban land, public services, etc. On the other hand, housing policy can be defined as "the way in which the State intervenes in the resolution of habitat problems, expressed in guidelines, programs and specific actions to guide and intervene in the production of housing areas" (Villavicencio, 2000: 265). Both are closely related since urban policy conditions and impacts on housing uses (given that housing is in constant articulation with other goods and services of the city), while housing spaces "have a decisive impact on the conformation of the urban structure" (Scheingart 1989, in Gargantini and Pedrotti 2016: 7).

Urban-housing policies framed within urban management⁶¹ turn out to be defined in the configuration of cities through their different actions and instruments (Herzer, 1994). In turn, as they are contextualized within a given society which possesses a certain structure and power relations, they involve the participation and articulation of different actors and are affected by different interests both

⁶¹Urban management understood as "the set of processes aimed at articulating (use, coordinate, organize, allocate) resources (human, financial, technical, organizational, political) which might allow to produce, operate and maintain the city and provide the population and economic activities the satisfiers of their needs" (Herzer, Pirez; 1994: 17)

economic as well as political (Yuvnosvsky, 1984). Both also have a central role in the USD processes at urban scale to the extent that they can directly influence the capital accumulation processes in the cities, and in addition, reduce or accentuate certain differentiation dynamics which affect the non-commodified population⁶².

Urban-housing policies have an impact on USD at other scales such as in transverse territorial policies and in their articulation with other sectoral policies. As the State is not a homogeneous entity but it is also structured by scales and sectors, simultaneous disjointed actions from different levels on the same urban space, that is their juxtaposition to, or disconnection from other types of policies (For example, production policies) can have a direct impact on the growth of inequality (Acuña and Repetto, 2006). The same as happened with production policies, the objectives, management models and their connection with other policies, these can have aims of territorial equity or benefit capitalist accumulation. The form of city production and the incidence these policies can have or not in the reduction of urban inequalities will be directly related to the understanding of the urban-housing issue which might support them (commercial or otherwise). As we mentioned above, neoliberal urban policies had a central role in Latin American USD to the extent that they augmented socio-economic inequalities producing socio-residential fragmentation and segregation in the diverse urban areas and reduced their vitality (Clichevsky, 2000; Reese, 2006).

Landholding conditions within USD: differentiation dynamics between the formal and the informal city.

Considering that in all the Latin American countries there are informal settlements and that in some of them informal space reaches a 70% of the produced space (Fernandes, 2016), a relevant differentiation dynamic has to do with the informal production of the city in which the irregular land and/or real property tenure and occupancy conditions are relevant. Informality in access to habitat, as has been discussed, alludes to the urbanization process in which it is the city users themselves who self-manage their inhabiting conditions, without being the legal owners of the land⁶³. Informality, then, is a consequence of macroeconomic conditions, State policies (which regulate, produce and commercialize the land and housing) and the operation of the housing and land market (Clichevsky, 2009). It is not understood, then, as a symptom of the current economic model and of urban growth,

⁶² Topalov (1979) stated in this sense that the State can reduce uneven development in space when it intervenes in the generation of capital gain associated to urbanization. The localization windfall that the market accumulates produces areas in which capital is spatially concentrated. Planning and zoning policies as well as certain instruments to regulate prices have a direct impact on the reduction of spatial inequalities.

⁶³ There are two forms of informality in the access to habitat which do not involve land occupation, like the occupation of real property (Di Virgilio, 2015). However, informality due to land occupation is the most widespread practice in the region and also the one that causes most of the problems for the settlers in the region.

or its distortion but it is part of the model in itself, “of the Latin American way of producing urban space (Fernandes, 2016: 86). Among the origin and reproduction mechanisms, an urban planning that is elitist and technocratic in tradition can be recognized, which is carried out in most of the Latin American cities. (Fernandes, 2016). In the author’s words,

The informal production of cities occurs on the basis of the impact of urban planning criteria which can be technically ideal but which do not reflect the city production socio-economic conditions, excluding along this route a large part of the population and reserving for the poor those areas of interest or those that the markets don’t have access to such as the preservation areas and all types of areas which are unsuitable for construction (2016:90)

A basic difference regarding the formal city (be this one produced commercially or by the State) is that production and/or access to real estate (land/housing) within informality is generated outside the formal channels representing violations to current judicial, administrative and/or technical regulations. According to Clichevsky (2009), this is materialized in two types of transgressions: one related to ownership aspects and/or the urbanization process⁶⁴. Irregular land tenure switches the central issue from the rights perspective to the judicial-legal perspective in relation to access to habitat, establishing a first differentiation between those who inhabit the formal city (with rights) and those who do not (Cravino, 2017). Associated with its condition of “unlawfulness”, urban informality entails limiting predicaments for the full development of life in the cities (Clichevsky, 2000), that many times are ignored from the judicial-legal perspective. On the one hand, situations related to the precariousness of the habitat, connected to its frequent localization in areas that cannot be urbanized, lacking in basic utilities and the absence of basic technical skills involved in the urbanization process. On the other hand, isolation from the rest of the urban dynamics generates greater socioeconomic vulnerability as well as processes of stigmatization of the inhabitants. This results in a higher state of vulnerability and a constant uncertainty regarding possible evictions. With regard to that, the informal settlements commission acknowledges,

Compared to other urban inhabitants, the people who live in informal settlements, especially in marginal neighbourhoods, suffer greater economic, social and spatial exclusion in relation to the benefits and opportunities of the broader urban environment. They suffer constant discrimination due to geographic marginalization, deficit of basic utility, deficient government framework, limited access to land, and poverty, precarious livelihoods, and because of the location of these informal settlements, they are very vulnerable to the adverse effects of being exposed to an impoverished environment, climate change and natural disasters. ONU-HABITAT (2015a: 2)

The document acknowledges, in turn, that the inhabitants of these settlements are constantly exposed to eviction, diseases and violence. Fernandes (2011), recognizes, for his part, that informal

⁶⁴ It is also possible to find classifications, above all in academia, which characterize informality in terms of typologies associated to urbanization processes, the degree of family association and the blueprint they generate: regular, irregular, feasible to be urbanized or not. etc. (Monayar, 2014).

urbanization generates higher legal charges (in the face of uncertainty regarding ownership), social ones (due to the exclusion from urban benefits and their stigmatization) urban-environmental ones (as it is generally linked to habitat precariousness situations and exposed to greater risks), political ones (because of the infringement on their rights and a greater exposure to political clientelism) and fiscal and economic ones (typical of urbanization in the face of scant criteria of technical efficiency and which demands triple the resources to rectify)

For all of that, we understand there exist issues stemming from this informality status that exceed the question of the legal property of the land itself and the availability of services (without underestimating in the least their attention), and that have to do with the processes of socio-spatial exclusion suffered by the groups that live in informal situations.

Starting with this first differentiation, another issue can be identified which contributes to the reproduction of the differences between the formal and the informal city and which have to do with the policies destined to deal with them. There have been several views on how to address informality in public policy, ranging from intolerance to permissiveness depending on the time and the specific context⁶⁵ (Cravino, 2017). Intolerance is based on the assumption that informality disrupts “urban order” and with that, repressive and condemning actions on the settlements and their inhabitants are justified (Ozlak, 1991). The types of policies applied in these cases have included settlement eradications, evictions and forced relocation, which commonly involve displacing the settlers to peripheral areas of the city. Permissiveness, on the other hand, entails some recognition over the space informally produced, and the action taken in this case is principally done by means of legal actions that formalize the settlement among which land/ownership regularization policies usually predominate (Fernandes, 2011; 2016). While some address settlements from a comprehensive approach (which is not only legal but also economic, social, environmental and urban), many regularization programs only cover aspects related to access to land and the availability of basic services, such as water and electricity (Smolka and Biderman, 2009). These are usually introduced in a sectorized and discontinuous manner (Ziccardi y Contigiani, 2015). In many cases, they are narrowed down to focused actions and limit their intervention to the legal execution⁶⁶, or to the provision of a larger amount of housing radically saving time and cost. The accumulated experience in our continent demonstrates the failure of the implementation of regularization program in isolation, insofar as they

⁶⁵ In Argentina and in many other countries of the region up to the 80s, the policies that could be identified were ones of intolerance accompanied in most of the cases with violent eradications. With the return of democracy in the year 1983, the settlement programs that lasted during the whole decade of the 90s started. They were supported by international organizations like the World Bank. From 2001, and with the last process of real estate valuation, in many cities there was a reversal to intolerance policies compounded with “pedagogical evictions” of new settlements.

⁶⁶ “Regularization” started to consolidate since the 80s as a dominant policy for the handling of informality in Latin America, with the aim of guaranteeing the security of land tenure in the face of forced evictions, with a nominal objective of socio-spatial integration (Fernandes, 2016).

have not translated into real integration actions⁶⁷ (Fernandes, 2016). For the assistance criteria that only take into account the utilities and access to the land, the families can cease to be “informal” in the light of these indicators, but they are still “outside” the city; that is, the assistance provided to informality is done on the “outside of”, or in parallel to, the discussions held regarding urban planning, urban laws and rights.

All of these situations lead to the perpetuation of inequity, the exposure to risk and the loss of city for the dwellers who are affected by informality and the policies that deal with it, even when these give a response to the basic indicators of informality. They leave aside, as Lefebvre (2017) maintains, the urbanist conception when they react to a notion of habitat as an isolated urban function, which understands the functional dimension as separated from the extremely complex ensemble the city is, without taking into consideration the conditions of inhabiting, that is, “the plasticity of space [...], as well as the appropriation on the part of groups and individuals of the conditions of their existence” (Lefebvre, 2017: 40). On the basis of our previous discussion, we understand the informal production of city associated to the irregular occupancy of the land as a fundamental dynamic of differentiation within the USD of the Latin American cities to the extent that it entails an urbanization of lesser quality and a “second-rate” vision on the part of the other actors that produce the city.

1.5 Patterns of Urban Inequality in Latin American Cities

Being a product of the dynamics previously discussed, the resulting urban inequalities were more extreme in Latin America than in North America, as Smith (1996/2012) referred to. We observed that in Latin American cities, besides land rent, the State role through its policies, both of planning as well as of regulation and commodification of the land and housing, have played a central role in the dynamics of differentiation within USD processes. In turn, we observed that the suburbs, unlike the North American cities, reveal inequalities on the basis of the different actors who intervene in the production of the space. The processes of “urbanization of poverty” stand out (Mc Donald, 2004) and the precariousness of the habitat as the other face of commodification to the extent that wide social sectors have found themselves excluded from the formal housing market. Secchi (2015) refers to this

⁶⁷ Regularization schemes are not always connected to urgency criteria or with cases that mean greater exposure to risks, but on the contrary, they depend on interests’ issues or the availability of lines of funding. On the other hand, they do not respond to issues associated to localization in the city (on land plots that cannot be urbanized, far from public facilities, sources of employment) or to adjacent housing problems (overcrowding, housing quality) or socio-economic conditions of the families and communities (employment situation, education level). In short, instead of promoting socio-spatial integration, regularization programmes aggravated the segregation processes and the conditions of the informal production of cities (Fernandes, 2016). Given their healing nature, they make sense to the extent that they are conceived in a broader context of preventive policies.

phenomenon as “Spatial Injustice” given the deep and growing social inequality in urban areas, manifestation of a double process, that of differentiation and exclusion.

Boldrini (Paolasso, Malizzia & Boldiri, 2019) and others state that socio-spatial differentiation, characteristic of Latin American urban spaces correlates with the social division of society, in hierarchies or classes, urban spaces, insomuch as spatial crystallization of their differences. Herzer (1994) defines three types of processes in agreement with those pointed out by Abramo (2012), which impact on the uneven production of cities: the communal ones, the ones orientated towards market profits and the state ones. As we have seen, these processes involve different logics that mobilize the actions of the various actors involved (Abramo, 2003) and express often conflicting interests and territorial projects (Schweitzer, 2008), defining in turn different forms of territorial expansion.

Currently, these differentiation patterns can be clearly observed depending on the actors mentioned above: the high-income groups, inserted in the market logics and capitalist accumulation, who define exclusive urbanizations with the common typology of the gated community, which generate distinction by means of “spatial” capital (Secchi, 2015), logistic corporate parks, financial centers, etc. localized in areas of higher land value, with environmental conditions of accessibility and privileged centrality (Cuenya, 2017).

On the other extreme, a significant growth of urban informality can be verified from the beginning of neoliberalism as a consequence of the market supremacy in the management of urban goods and services to the detriment of the state regulatory function. The logic of need displays a mosaic of informal production with different typologies like slums, settlements and informal parcellations (Clichevsky, 2000; Cravino, 2006; Di Virgilio, 2015), occupying generally areas which are not attractive to the market and many times of considerable environmental degradation. Their expulsion towards the periphery has stood out to the extent that a commercial renovation of central areas advances concurrently with the criminalization of the land settlements. In that sense, and as is illustrated in Figure 1.13, the idea of an urban frontier is transferred from the suburbs to the central areas in order to be considered in relation to the informal city: a city upon which the market advances, moving it further away, and pushing with it the boundaries of what is considered peripheral.

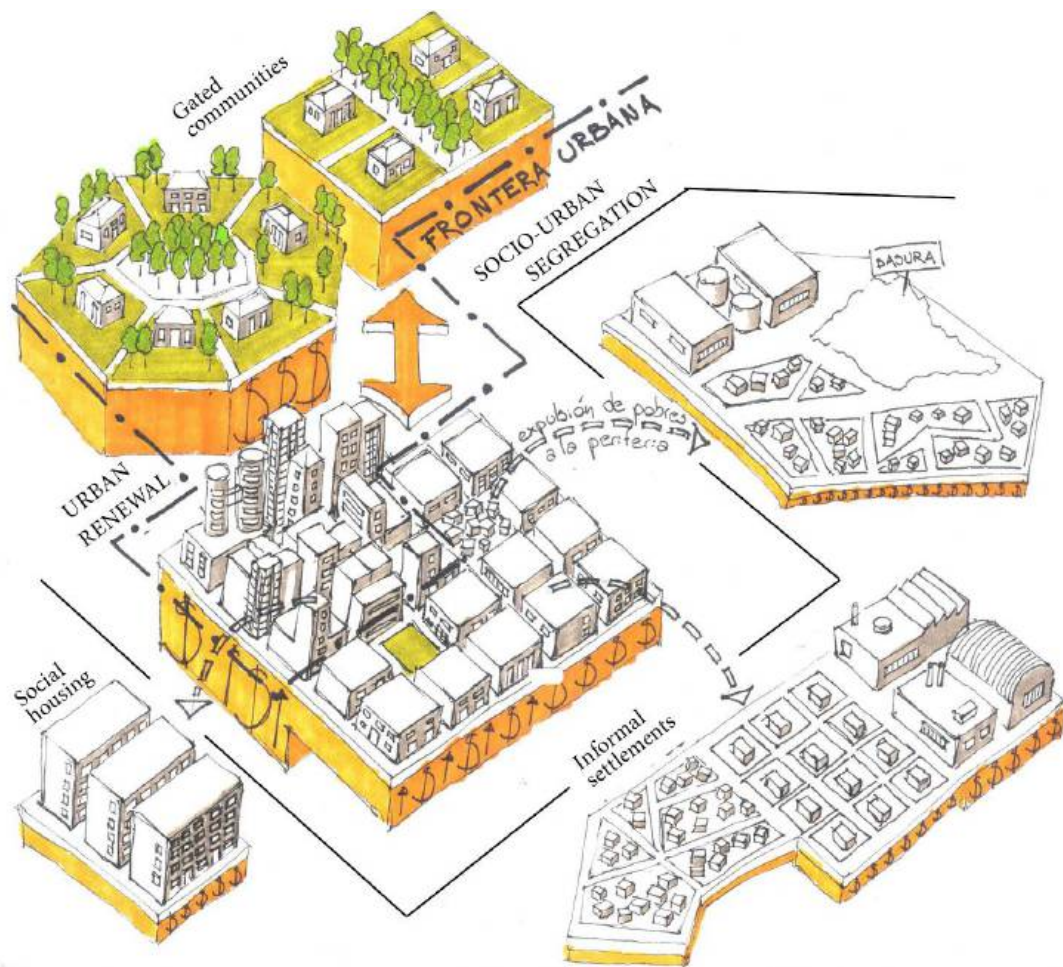


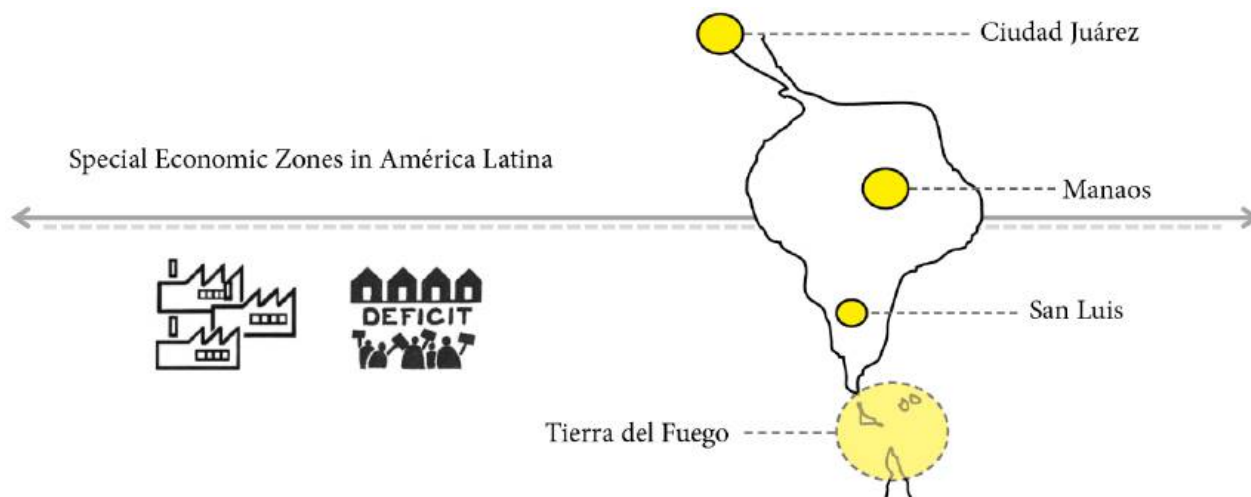
Figure 1.13 Interpretative summary of the urban frontier in Latin American cities. Source: Developed by the author.

It becomes interesting, therefore, to articulate the theoretical and analytical aspects deriving from the macro discussions pertaining to the theory of Uneven Spatial Development, with our own discussion of the Latin American urban studies as a way to enrich situated knowledge. The challenge lies in being able to articulate in the empirical investigation the economic and political processes occurring at global, national and regional scale, which directly impact on the differentiation of places, with the dynamics taking place within urban spaces and which end up consolidating certain inequality patterns.

In the following chapter, we will focus on the analysis of precedents of regions which have been affected by specific production policies, similar to the ones that were applied in Tierra del Fuego and which consist in defining certain territories as Special Economic Zones. To that end, we deem it necessary to look into previous research which has accounted for the relationship existing between certain economic incentives linked to industrialization processes and the effects these have had in the configuration of urban inequality patterns of the places that were affected by them.

Chapter 2:

Economic-productive transformations and production of spatial inequalities. Latin American background



In the previous chapter general discussions of uneven spatial development (USD) and the inequalities it has produced in Latin American urban spaces, has been addressed. The current chapter focuses on background studies analysis, related to the USD patterns that resulted from the definition of special economic zones (SEZs) in strategic Latin American spaces. The SEZs were defined by economic-territorial policies, emerged as a consequence of the production of regionality (Harvey, 2007a), and geopolitical issues occurred since the end of industrial capitalism. They have generated new configurations of spatial inequality.

In first place, some of the main productive transformations at the global scale will be described, in which the production of scale and the role of the States -through the application of policies to promote certain activities- are essential to understand the new patterns of spatial accumulation . Special attention will be paid to the industry dynamic and how it begins to locate and relocate in strategic spaces, promoting territorial imbalances.

In second place, case studies that analyze the transformations of urban spaces in relation to changes in the productive structure will be attended. Territories that have become special economic zones will be addressed, particularly affected by industrial policies in the context of productive restructuring, and that reached their peak with the beginning of neoliberalism. Although -as it has been mentioned before in the theoretical discussions- neoliberalism represents the crisis of the industrial era, these cases do not respond to the classic Fordist industry, and neither have been

historically industrial centers. On the contrary, they gained momentum thanks to industrial promotion policies, which are part of the characteristics described above of USD.

In this sense, this chapter begins with a brief description of SEZs general characteristics, and analyzes afterwards the cases of Ciudad Juárez, Manaus and San Luis. For each case, different research works that analyze different dynamics of the USD were addressed. Finally, the main background of the study in the cities of Tierra del Fuego will be presented, both in relation to economic-productive dynamics, and in the field of urban studies and informal habitat.

2.1 Productive policies: transformations in the context of productive restructuring and spatial implications.

As we mentioned before, Capitalism expresses itself territorially under different productive activities that have a direct impact on USD. The restructuring of production on a global⁶⁸ scale, implied changes in the internal and external functioning of companies, labor relations, technology management, as well as the territorial relocation of production. The emergence of new monopolies, as Harvey (2007a) argues, in the form of transnational corporations, entailed the reorganization of the different instances of production in the territory. According to this logic, Fordism, as a system of accumulation "characterized by the articulation between mass production and mass consumption" (De la Garza Toledo, 2000: 718), presented its crisis in the 1970s. Two levels of analysis can be done: first, the productivity crisis encountered by Fordist production processes; second, the crisis of the institutions and norms that governed it.

Within the advent of neoliberalism, industrial planning policies prevailing since the 1940s were abandoned in favor of less government intervention (Mouiner, 2016). In terms of industrial activity, post-Fordism recognized the end of the Fordist institutions and mass production, as well as it present the current era as one of transition, both for production and the institutions that govern it. This period is "characterized by the flexibility of labor" (De la Garza Toledo, 2000: 717).

According to their comparative advantages, the various components of the global value chain have been dispersed throughout different regions since the 1970s. As low value-added production increased in the periphery countries, central countries' position strengthened as specialized R&D hubs. The shape of territorial-regional occupation of the new industrial structure was reconfigured in large part due to the industrial policies of the time. These policies throughout Latin America supported the

⁶⁸ In contrast to conventional neoclassical economics and market-centered analyses, institutionalist economics incorporates institutions, actors, and norms for the analysis of economic behavior. Institutional economics is where theories on productive restructuring first emerged, in the middle of the 1970s (De la Garza Toledo, 2000). Three schools of thinking, according to De La Garza Toledo, can be distinguished: French regulationism, flexible specialization, and neo-Schumpeterianism, including authors like Aglietta (1979), Lipietz (1985), and Coriat (1990).

application of several similar instruments, like the creation of new infrastructure networks, tax advantages, and the designation of special zones, within the goal of encouraging foreign investment or, in some cases, rebalancing the territories (De Oliveira, 2014). The policies that gave rise to special economic zones are central in this work, in order to understand during the following chapters the production of the urban-regional space in Tierra del Fuego.

2.1.1- Special economic zones

Special economic zones (SEZs) are geographic areas defined through instruments for the promotion of productive transformation and investment (IFC, 2018). They are generally created with the purpose of inserting a region into production networks and into the global economy. The objectives they pursue vary in each case and at different historical moments, and can range from reversing economic imbalances within a nation, to strategically boosting certain regions or productive sectors, often generating new territorial imbalances. Their delimitations are generally established by the States, through the impulse of economic or fiscal incentives. The aim is to attract foreign capital and boost employment and/or production.

This type of zone is distinctive in the sense that it stands in the area between a territorial policy and a production policy, encouraging the development or production of a particular region inside a nation state. The study held by Hernández Rodríguez (2019) finds that SEZ represent a:

"...geographic region whose economic laws are more open to foreigners compared to those that are generally applied in the country, i.e., they offer preferential treatment such as exemptions for material imports and product exports, lower cost labor, tax exemptions [...] and the infrastructure required for manufacturing operations and the transportation of goods..." (21).

There are diverse SEZ types. Arias Guzman, Cruz Díaz, and Romero Paredes (2016), based on FIAS (2008), propose a classification of the most well-known ones, such as free trade zones, free ports, export processing zones, enterprise zones (EPZs), specialized zones, and special single-company schemes, shown in Table 2.1.

Table 2.1: Classification of the best known types of special economic zones (SEZ)

<i>Type of SEZ</i>	<i>Characteristics</i>
Free Trade Zones	Delimited areas, free of tariffs, oriented to storage, distribution, re-shipment and re-export operations. These are territories within national states with special customs legislation, where current tax regimes do not apply. Commercial.

Export processing zones	Industrial zones oriented to process industrial products, characterized by intensive labor and low technology. Industrial (clothing industry, household appliances). They usually generate benefits for companies that produce value-added to products for export.
Enterprise zones	Zones that seek to revitalize a region through tax incentives and financial support.
Free ports	Large areas, generally cities that include all types of activities: tourism, retail, real estate, residential. They encompass different benefits such as commercial and service infrastructure. Commercial.
Specialized zones	SEZs dedicated to specific tasks, such as technology parks, eco-industrial parks, oil refinery areas or with a special logistical need, such as ports and airports. Industrial, commercial.
Special single-company schemes (maquiladoras)	These are those that provide special incentives to individual companies. A great advantage is that they do not have to be located in a certain area to receive the incentives. Industrial.

Source: Arias Guzmán, Cruz Díaz & Romero Paredes (2016) y FIAS (2008)

Although the first SEZs date from previous decades⁶⁹, they expanded around the world since the 1970s in the context of the transition to neoliberalism, especially in peripheral countries of the global⁷⁰ economy (Zaldivar, 2017). This was done (at least theoretically) in an effort to reverse the territorial and economic disparities brought about by capitalism's dual dynamics of equalization and differentiation. During the twenty-first century, new SEZs have reemerged, as a political tactic used by several states to place particular regions in the global economy. There are already more than 4,000 SEZs worldwide, employing more than 70 million people (CFI, 2018).

While some cases -as many SEZs in China- have been successful in terms of integration with the local or regional economy where they are inserted, in other instances this has not been the case, due to their strong dependence on national and global economies, to the detriment of local economies. (CFI, 2018). As long as they integrate a region into the global accumulation pattern, they can strongly impact the deterioration of other locally-based productive activities. In the particular case of Latin American countries, the installation of SEZs during the 1960s and 1970s led to the formation of new

⁶⁹ The first one was developed in the 1950s in an Irish town.

⁷⁰ The CFI (2018) singles out the cases from India, China, Russia, Mexico, and Brazil among them. India was the first Asian country to establish an SEZ in 1965, particularly with an export processing zone (EPZ) in Kandla, followed by the Santa Cruz EPZ in 1973. According to the CFI, these experiences "were externally promoted by the geographical deconcentration of the production of large multinational companies (...) and internally encouraged under the argument that they would generate (...) employment and the foreign exchange required for a higher level of welfare" (CFI, 2018:197). The use of promotional regimes to increase territorial sovereignty is also noteworthy, similar to the industrial promotion of Tierra del Fuego. In the case of China, the implementation of the SEZ began at the end of the 1970s, with the designation of an area in the south of the country as an "experimental zone". After this pilot experience, the national government implemented similar policies in port areas, then in inland cities, including a total population of 160 million inhabitants by 1988.

industrial regions, fundamentally constituted as terminal production units, given the low wages and labor flexibility conditions present in these spaces.

A fundamental issue to take into account is that SEZs have the potential to transform not only the productive structure, but also the social and spatial structure where they take place (Zaldivar, 2017). This way, while they include new territories in the dynamics of global accumulation, they establish new dynamics of differentiation, increasing USD processes at many scales. As we will analyze below in the cases of Ciudad Juarez and Manaus, the configuration of SEZs led to the transformation of both the productive and demographic structure, substantially altering the patterns of spatial occupation and generating new forms of urban inequality.

2.2 Uneven Spatial Development and Special Economic Zones in Latin America. Industry and new forms of urban-regional inequality.

Case studies background, in which SEZs policies have been applied to strengthen a particular region through industrialization, will be analyzed in the section that follows. These policies have led to changes in the USD process, which have resulted in new patterns of urban inequality. The selected cases relate to the historical period when the Tierra del Fuego Special, Fiscal, and Customs Regime was put into effect. These cases involve pre-neoliberal measures with greater effects in later decades. Two international precedents are analyzed, which began their productive-territorial transformation process in the 1960s: the State of Chihuahua, Mexico (particularly the impacts on Ciudad Juarez), the Amazon region, Brazil (particularly the impacts on Manaus). There is also a national precedent, the case of the province of San Luis, where a TDF-like regime took place, although with different urban effects. In order to validate and complete the analytical categories of USD identified in the theoretical discussions, empirical categories of analysis are then extracted from these case studies.

2.2.1- Maquila impacts on space: The case of México

The industrial development of the State of Chihuahua, México, was part of a geopolitical strategy, due mainly to the federal government's concerns about the strong economic and cultural influence of the United States on the northern Mexican border (Figure 2.1). The region had historically been linked to agricultural activities, and since 1920, particularly to cotton production which experienced a crisis in the 1960s and resulted in high unemployment. The crisis particularly affected Ciudad Juarez, the region's main population center, located far away from the country's major production and consumption centers. The dependency ratio of this and other border cities such as Tijuana was high with respect to the United States. This situation represented a potential border conflict.

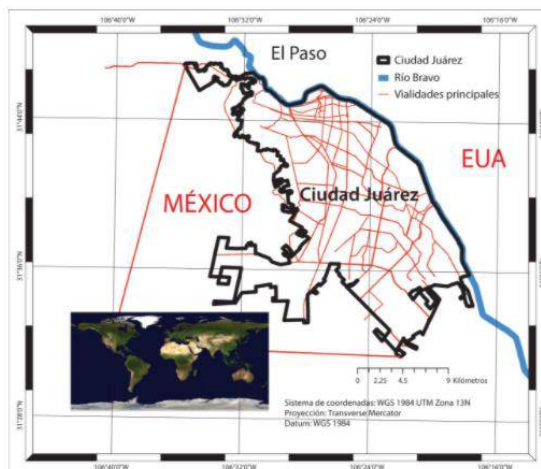


Figure 2.1: Location of Chihuahua State. Source: Ruiz Hernández, 2015

In order to look after this territory, since the 1930s, the Mexican national government had promoted various actions to boost the region's industrial economic development, such as the formation of free trade zones. However, its industrial development continued to stagnate in the following decades in comparison with the large Mexican cities⁷¹, which had seen their industries strongly developed during the import substitution industrialization. Despite previous attempts⁷², it was in 1965 with the creation of the Border Industrialization Program (BIP) that the maquiladora industry began to develop strongly (Douglas and Hansen, 2003)

The BIP was developed in a context of high unemployment rates in the region, which reached 50% of the population. Simultaneously, SEZs had begun to develop in the international context, as part of the so-called productive restructuring process. At the same time, manufacturing processes had begun to be inserted in territories that offered lower labor costs, in order to increase company profits, given the high wage costs of these tasks in the central countries⁷³. In the case of Mexico, at the end of the 1960s, the minimum wage in the northern border region represented between a quarter and a third of the U.S. minimum wage (Douglas and Hansen, 2003).

⁷¹ In the mid-1950s, the National Chamber of the Transformation Industry attempted to include Ciudad Juárez, the main border city, in the import substitution model by encouraging the establishment of national industries in the region. The proposal seemed to be successful as cotton production typical of the region was stagnant by the end of that decade.

⁷² Industrialization had its first experience with the application of the National Border Program (PRONAF) in 1961, with the aim of promoting social and economic development in border regions. This took the form of a series of tax incentives both for the establishment of industrial companies and for transportation, while at the same time promoting various commercial projects and boosting the tourism industry.

⁷³ This situation crystallizes the wage inequalities between industrialized and peripheral countries. Douglas and Hansen states: "In general terms, EPZs performed assembly activities for transnational corporations as part of the then incipient phenomenon of global or international production sharing" (2003: 1050)

The main objective of the BIP was to integrate the historically isolated northern border region into the Mexican economy through job creation and productive development rooted in the export manufacturing sector (Leslie Sklair, 1993). Also, to integrate it into the U.S. productive process. For this reason, tax exemptions were granted for the importation of capital goods and raw materials into free trade zones for assembly and later exportation of finished items. The official name was free zone industry, although it is popularly known as maquiladora industry. The term maquiladora refers to "any particular activity in an industrial process - for example, assembly or packaging - carried out by a party other than the manufacturer" (Angulo 1990, in Douglas and Hansen, 2003: 1045). The maquila designates then, a foreign industrial plant that subcontracts processing operations of components temporarily imported into Mexico for export (Rodríguez Álvarez, 2002). The demand for intensive labor, leads to considerable gains in employment in the regions where it is located, and is a key element of this industry (Rodríguez Álvarez, 2002).

In the Mexican case, there was limited production diversification in the maquiladora industry. It was primarily focused on the production of textiles and the assembly of electronics products. Thus, by the end of the 1960s most of the foreign investments were concentrated in the Chihuahua region, particularly in the assembly activity.

In 1966, Mexico's first industrial park was built in Ciudad Juárez and the accelerated growth of the industry began; by 1967, there were 57 maquiladoras and 4257 workers; by 1969, there were 147 maquiladoras and 17,000 workers, most of whom were women. By 2002, there were 549 industrial establishments located in industrial parks and corridors, 371 of which were located in Ciudad Juárez⁷⁴ (Douglas & Hansen, 2003).

The maquiladora industry produced strong changes in the economic productive structure of the border area to the north of Mexico, which were reflected both in the accelerated demographic growth of the region and in the ways in which urban spaces were produced. The shift in the economic structure from a primary activities-based economy to one with an industrial base drastically altered the spatial configuration. There are at least four studies that seek in the ways maquila affected cities.

The doctoral thesis of Rodríguez Álvarez (2002) recognizes the close relationship between economic processes and the production/configuration of urban space. This research particularly addresses urban transformations that took place in Ciudad Juárez with the settlement of the maquiladora industry since the early 1960s. It argues that the simultaneous process of industrialization⁷⁵ and urbanization transformed both the spatial and social structure, giving rise to polarization processes in both structures.

⁷⁴ Ciudad Juárez was attractive for the establishment of maquiladoras due to its proximity to the United States and the large supply of available labor.

⁷⁵ The incidence of industry in the city is confirmed if we take into account that of the 1,218,817 inhabitants in 2002, 42% were engaged in manufacturing industry at the time this work was carried out.

According to the author, the industry had a significant impact on the urban morphology of the city in the spatial sphere due to three primary difficulties. First, because pre-existing urban and social situations evidenced people's lack of rootedness, and thus, few traditions in these areas. Second, related to the region's isolation compared to other areas. Third, because of the passage character the city possessed, as a result of the ongoing immigration to the US.

The accelerated flow of migration caused by the maquila industry⁷⁶ led to the saturation of services and infrastructure. For this reason housing, transportation and basic services were insufficient and difficult to access especially for the poorest sectors of the population, at least until the beginning of the 2000s.

The impacts resulted in the polarization of social groups in the urban space. On one hand, a north-south industrial area was created, strategically situated in respect to its exit to the American border, surrounded by high economic level neighborhoods. This sector offered all essential services in full, as well as public areas and high-quality housing. The usage of high-tech materials and "global scale" architecture in the design reflected transnational influence and had no reminiscence of Ciudad Juarez's historical urban profile. Functions in architecture were also a response to global economic interests, particularly shown in the dominance of the service sector as a complement to industry, in spaces for finance, upscale real estate, golf courses, and shopping centers, among others. This sector was surrounded by walls that defined its clear boundaries. On the other hand, to the northwest, a completely different city was exhibited, characterized by the proliferation of informal neighborhoods and shantytowns. This sector originated mainly from the population trying to migrate to the United States and who were "trapped" at the border. Regarding inequalities in urban space, Rodríguez Álvarez (2002) states:

“When looking at the city, the image that comes to mind is that of an archipelago made up of industrial parks and their facilities, encircled by a vast sea of substandard housing that is dispersed and disorderly among undeveloped territory. In this way, the urban space of the city is seen as being divided into two: one produced by the transnational class, who creates its own space in the best estates of the city, with luxury housing and large buildings of steel and glass; and the other produced by the remaining population, dispersed in marginal areas on the outskirts, where the conditions for habitation are becoming more precarious "(s/n).

The author emphasizes the social influence of the maquiladora sector on migration flows to Ciudad Juarez from other metropolitan regions of Mexico's poorest states, as well as from rural areas. These migrations were one of the main reasons for the accelerated growth of the city, translated into more precarious conditions: "This population creates its own space in the city, in disadvantaged places

⁷⁶ The tertiary sector, indirectly increased by the maquiladora industries, was one of the main responsible for the migration to Ciudad Juarez in recent years.

[...] where poverty, the deterioration of housing, urban services, criminality and environmental degradation mutually reinforce each other" (Rodríguez Álvarez, 2002: s/n).

Several important points about the effects of the maquila in Ciudad Juárez urban production are pointed by the author in the conclusion. Regarding economic impacts, she emphasizes the city's significant dependency on the American economy. Related to this, she mentioned as a problem, the reliance on economic processes in the production of urban space. Lack of consideration for the effects on the social and physical spheres due to the production-centered mindset increased inequality, which was manifested in the polarization of metropolitan areas. Finally, faced with the large migrations resulting from the creation of industrial jobs, the State showed insufficient capacity to provide services and housing to the new population, which has led to the growth of spontaneous settlements and situations of great vulnerability.

According to Patrick Gun Cunighame's research (2007), the Mexican maquila created a transnational process that increased inequalities between the two sides of the border, and made them visible. He suggests the reconstruction of cross-border identity based on the identification of workers in the interstice between globalization and localization, with all the contradictions that this implies. For this author, social polarization and the identity reconfigured from the process of maquila inequality is also contradictory in the urban space. Indeed, a depopulated historic center and neighborhoods without minimum services can be observed, in contrast to the industrial sectors of higher technology.

Additionally, several studies focus specifically on the issue of urban informality, which had its beginnings at the same time as the growth of the Mexican maquiladora industry started. Caraveo (2009) claims that neoliberal policies implemented over the past years and territorial effects of maquiladora industry growth, have been the cause of serious deficits in housing, infrastructure, education and health, as well as the proliferation of informal settlements. The author first explains the causes that position access to housing as a social problem, followed by a second approach to the particular problems of the informal settlements.

Regarding the first question, she claims—in line with Rodríguez Álvarez (2002)—that economic policies that sparked the industrialization of the city's northern border strip were not coordinated with urban policies for the provision of equipment and infrastructure. Neither, with housing policies that provided the new population with the bare minimum of habitability conditions. The author suggest; 1-the increased demand brought on by demographic growth; 2-the processes of commoditization, and 3-the loss of purchasing power of workers as a result of the devaluation of their salaries, are the explanatory factors that characterize the problem of access to housing in Ciudad Juárez. Moreover, land concentration, increased land speculation, weak urban planning policies and its complicity with economic interests, are also important factors in the housing access problematic.

Added to this is the lack of supply of low-income housing by the formal real estate sector, which is concentrated in high-income sectors.

Regarding informal settlements, Caraveo (2009) states that they are located mainly in peripheral areas (southeastern and western sectors) which, due to their natural conditions, are not suitable for urbanization. They cover approximately 35% of the urban area, and most of their inhabitants are low-income wage earners.

Also related to urban informality, Ruiz Hernández (2015) makes in his research, a suggestion for the delineation of informal settlements and their needs based on the development of an analysis model that integrates socio-economic, physical, and spatial organization attributes of the urban environment. GIS is used in conjunction with spatial analytic tools, remote sensing methods, and quantitative databases of census data for this purpose. According to the model's application, there are 331,781 people living in informal settlements in Ciudad Juárez, in a total of about 85,359 homes. Figure 2.2 illustrates the spatial distribution of informal settlements, according to the model applied.

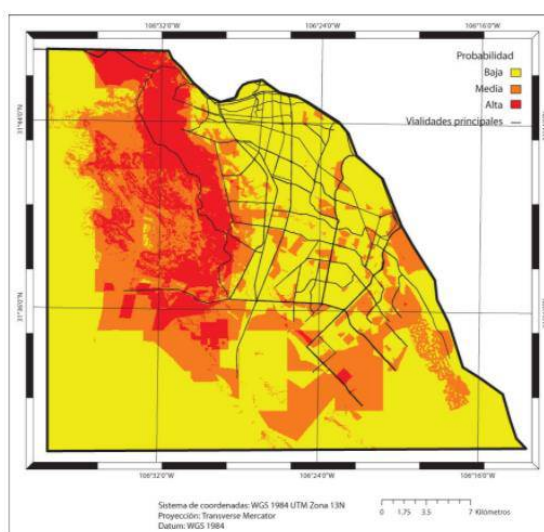


Figure 2.2: Informal spontaneous settlements final model. Source: Ruíz Hernandez, 2015

2.2.2- Industrial promotion regime in Manaus

Manaus is the capital of the state of Amazonas, officially founded in 1856. Its location at the junction of the Amazon and Negro rivers has been for long time, important for the commerce of goods including coffee, cotton, and tobacco. Since being included into the global capitalism system, it has had an enclave economic structure that is distinguished by its reliance on external stimuli and separation from other local economic sectors. This situation makes it extremely vulnerable to crises in various economic initiatives (Pérez Álvarez, 2017). From the late nineteenth century until the 1960s, the main driver of economic, population, and urban growth was the extraction of rubber resin;

however, its advantages started to diminish due to a production issue brought on by an increased supply from Asian nations.

At that time, the central region of Brazil was the object of various territorial integration policies. This process began in 1960 with the transfer of the National Capital to Brasilia. Since the colonial era, the national territorial structure had been established in relation to the port cities. This, resulted in significant disparities with regard to the country's center, which was mostly occupied by the Amazon jungle and mostly uninhabited (by occidental culture).

Between 1966 and 1985 the Amazon region was directly impacted by the military dictatorships' geopolitical project of social modernization and revitalization of the frontier areas. This project gave place to the establishment of new institutions, infrastructure improvements, and economic policies that altered the pattern of space occupation (Schor and Oliveira, 2011). Manaus was promoted in this context, in 1967⁷⁷, through Decree No. 288/67, as a development pole. One of its key goals was to strengthen regional autonomy through economic integration with the rest of the nation and through population settlement (Beckerman and Dulcich, 2017).

In order to reduce disadvantages associated with location, the regime introduced a number of tax incentives for a 30-year initial period, by the promotion of industrial, agricultural, and commercial activities. Therefore, an industrial zone was established in 1970, 6 kilometers from the Manaus city center, and so population as industries began to grow rapidly. There were 136 industries and 32,000 employees in 1977; 248 industrial companies and 51,000 jobs existed in 1984. The region's economy increased from 0.7% to 1.6% of the national GDP by 2010. Industry, despite experiencing ups and downs⁷⁸, dominated the city's economic and population growth.

Industry in Manaus was developed to meet domestic demand rather than for export, which is very similar to what we would observe later in the case of Tierra del Fuego. The industrial structure revealed a significant presence of national capital firms, particularly in the metal-mechanic and engine sectors. Labor circumstances were similar to those described in Mexico, with high rates of precarious female employment and outsourcing.

In demographic terms, Manaus grew rapidly due to massive migrations of dispossessed rural workers from other areas of the country (de Oliveira, 2014b). The city's population increased from

⁷⁷ The Free Trade Zone had actually been created 10 years earlier in 1957 (Law No. 3,173), however the zone was physically restricted to a warehouse near the port of Manaus until its reformulation in 1967. The benefits were then extended to the entire western Amazon.

⁷⁸ The industry went through positive and negative phases since its promotion, in accordance with the national policy profile, which had a direct impact on the demographic and spatial structure. The opening of imports during the 1990s generated an economic crisis in the city, which ceased to be as attractive for shopping as it had been until then. Tourism, however, especially international tourism, increased during those years due to the natural conditions of the location. The neo-development policy during the 2000s gave new impetus to industrial activity. Currently, and in spite of new ups and downs in the profile of Brazilian economic policy, the regime continues to exist, extended until 2073.

173,000 in 1960 to more than 300,000 by 1970, 640,000 in 1980, up to more than two million in 2010.

In urban space, population growth was not accompanied -as well as in the Mexican case- by state policies that responded to the new population needs. This situation led to an increase in housing and infrastructure deficits. Four studies have addressed the relationship between industry and urbanization, some of which particularly analyze the growth of urban inequalities.

De Oliveira (2014a) proposes in his research (very much in line with what Pradilla Cobos, 2014, developed for Latin America), an analysis of the relationship between the processes of urban-territorial restructuring and the main economic activities that were shaping Amazonian territory since the beginning of capitalism. He acknowledges mechanisms of imposed homogenization in Amazonian cities, which have processes of fragmentation as their counterpart, both sides of the same uneven spatial process involved the formation of urban space. It draws attention to the State's crucial position in the interaction between these two parties.

The author makes distinctions between various periods in the structuring of the urban network, specifically for the Amazon region. The first period is associated with the colonial era, when cities and towns became the basis for "control of the territory" by serving as hubs for trade, religious missions, and public authority representation. Another significant event occurred in relation to the production of rubber: Manaus' population increased from 35,000 in 1856 to 52,000 in 1890, introducing a period of urbanization marked by the construction of significant architectural pieces, as well as the implementation of public services. Subsequently, and coinciding with the industrial promotion, another moment of territorial structuring began. The construction of ports and airports, the laying of a communications network, and other infrastructure projects changed the region's spatial structure. In contrast to 1940, when only a quarter of the region's population lived in cities, by 1980 that number had increased to more than half, and by 2010, it had reached 70%. It is remarkable in this historical construction of the capitalist production of territory that new territorial structures are superimposed over and coexist with previous territorial structures, while natural territory plays a central role in the creation of the urban landscape. Old local character structures are entangled with new global dimensions in the diverse spatialities that the various regional actors create. The National State is responsible, according to the author, for some of the articulation between these various spatialities.

Campos Alvez, Silva da Freitas and Queiros do Santos (2020) make a historical-spatial approach to the process of land use and occupation in the city of Manaus. They address urban expansion in different time periods, starting in 1972 with the creation of the Manaus free trade zone and continuing with the years 1984, 1994, 2004 and 2011⁷⁹.

⁷⁹ The selected years are linked in this work exclusively to the quality of the images used for the mapping and not to economic, historical or social processes.

Until 1972, the post-World War II rubber boom was mostly responsible for Manaus' urbanization. The population had moved into the areas south and west of the watercourses by the early 1970s. According to Figure 2.3, 64% of the urban area was natural land in 1972.

The primary driver of Manaus's urban growth was the Manaus Free Zone (Souza, 2006). The urbanized area expanded primarily in the east and north, reflecting the population growth. Figure 2.3 illustrates how the area classified as urban nearly doubled between 1972 and 1984. The northern part of the city experienced the most growth at that time, as the *Cidade Nova* neighborhood was built there under the supervision of the Amazonas State Housing Superintendency (SUHAB). Under this scheme, 15,000 state housing units were constructed without taking into account the natural conditions of the area, advancing over waterways, forests, and ignoring the relief, which led to significant environmental issues.

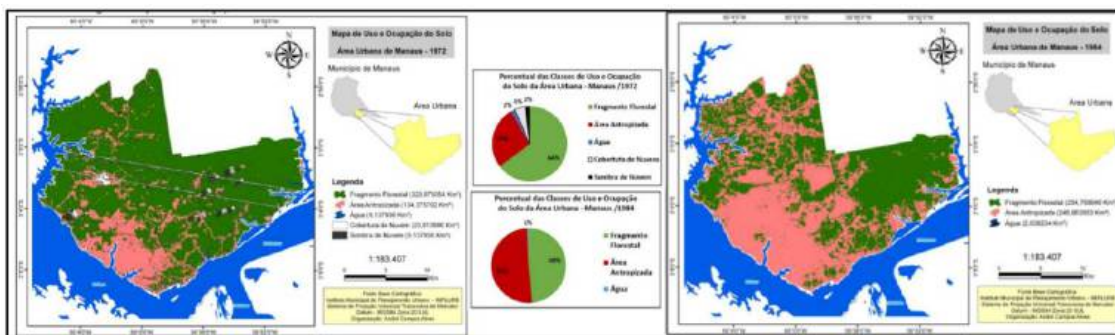


Figure 2.3: Land occupation in the urban area of Manaus. 1972 (left) and 1984 (right). Source: Campos Alvez, Silva da Freitas & Queiros do Santos (2020) (2020)

By 1994, the anthropized area corresponded to 62% of the urban area. The northern and eastern areas of the city, which had risen at a faster rate, already displayed a substantial environmental degradation due to the increased urban growth, as illustrated in Figure 2.4. The eastern region suffered the greatest ecological degradation and the greatest influx of refugees. In 2000, there were 1,793,416 people living in urban areas, 37.2% of whom were from other cities.

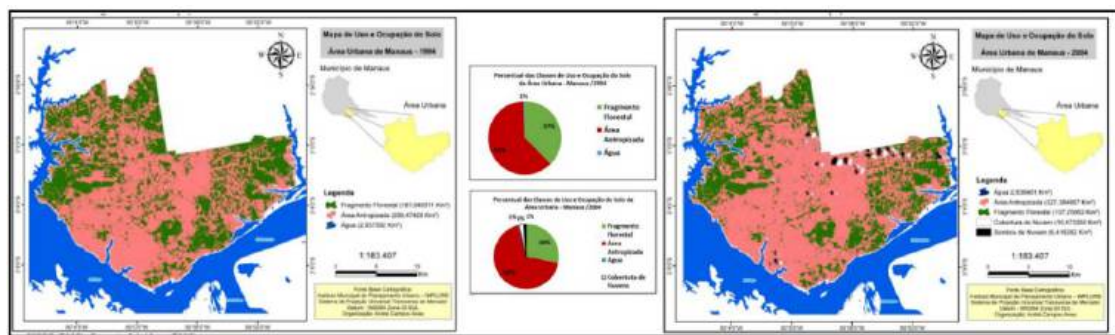


Figure 2.4: Land occupation in the Manaus urban area. 1994 (left) and 2004 (right). Source: Campos Alvez, Silva da Freitas & Queiros do Santos (2020)

Figure 2.5 shows the area as being 67% anthropogenized in 2011. The city contained a significant portion of the educational, health, and service facilities, as well as more than 50% of the State of Amazonas's population, according to data from the 2010 Census.

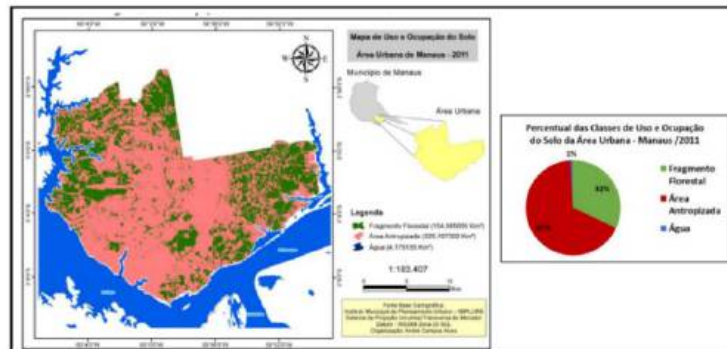


Figure 2.5: Land occupation in the Manaus urban area. 2011. Source: Campos Alvez, Silva da Freitas & Queiros do Santos (2020)

The study arrives at the conclusion that the free trade zone's encouragement of industry played a significant role in the city of Manaus's accelerated population expansion. They draw attention to the State's failure to encourage measures that would offer the new immigrant population urban and housing solutions.

Kanai (2014) approaches the urbanization of the city of Manaus in the context of global capitalism from the theoretical perspective of USD, recognizing that the theories of planetary urbanization are insufficient to explain the urban-territorial transformations that took place in peripheral contexts.

Despite not being traditionally considered among the main cities of Brazil, the author highlights the relevance of Manaus in the national productive and employment ranks, whose highest levels were recorded between 1990 and 2012. Like the other named researchers, he also attributes specific relevance to the Manaus industrial pole, which results from the SEZ strategy of 1967. In this way, he addresses some of the primary dynamics of USD, such as the creation and appropriation of nature, the production of regionality, the role of the State, geopolitical challenges, etc., from a multiscale conception.

According to the author, the industrial pole represents a project with a dual character. On the one hand, it was strategic, as it helped the region grow in a context of significant relative inequality with respect to other national territories. On the other hand, as a source of significant economic vulnerability due to its reliance on processes of global accumulation. The profitability of the industry and its simultaneous state of permanent fragility impulse geopolitical actions and the production of regionality on the urban economy of the city.

In this context, as both public investment in infrastructure and private investment in real estate grew, inequalities in the city deepened. Urban space is expressed in a fragmented manner, with luxurious towers and neighborhoods of the highest urban environmental quality in contrast to sectors without basic services. The weakness of urban planning regulations, according to Kannai (2014), has allowed the advance of private entrepreneurs to appropriate "premium" spaces in front of the river, to the same extent that public access was reduced. The author also observes urban renewal processes promoted by the State, characterized by providing the center a character that invites transnational capital rather than attempting to integrate the social sectors currently expelled from the city.

Due to a lack of available urban territory on which to expand, the Manaus metropolitan area was institutionalized in 2007, including minor communities on the other side of the river, which were previously connected by a public ferry, through the building of a significant bridge. According to the author, the delimitation was arbitrary, and the new expansion process started out with little planning criteria. The new metropolitan space proposed areas of special interest for the expansion of real estate capital: areas of tourist interest, new luxury housing developments on the coast, commercial technology districts, etc. The original population was displaced from these places, which increased land prices. The construction of the bridge rendered the ferry inoperative, directly affecting 18,000 residents living near its base; this way, unemployment, insecurity and inequalities increased in this sector.

Considering the above, Kanai (2014) states that the Amazon region's commodification, and in particular the financialization of Manaus' urban environment, contributed to its inclusion in the DED of planetary urbanization. He also emphasizes the impact of economic changes on patterns of urban space occupation, both within the city itself and in the interurban dynamics in which it is inserted.

In Assad (2012) research, Manaus's informal settlements—also connected to the industrialization process—stand out from the other face of commoditization and the disparities it creates. This author examines the issue of informal settlements that she refers to as "invasiones," given that this is how they were perceived socially, and their links to social exclusion and a lack of employment in Manaus. Assad claims that the disparities and injustices are what define the urban growth process in Brazilian cities. Since the 1980s and linked to economic processes, these have crystallized in the process of urbanization, with the growth of various forms of informal occupations. The settlements began to grow in Manaus as a result of industrial promotion and the absence of public policies⁸⁰ to address the urban-housing problems present in the region.

Due to the abundance of urban voids that arose as "available" land, they initially expanded towards the west at the end of the 1960s but then started to spread towards the east and north in the 1970s. Due to a scarcity of available land, numerous settlements have recently started to be erected in

⁸⁰ Regarding the role of the local state, the author says that local government has historically been behind the growth of informal settlements.

areas that are unsuitable for urbanization, including rubbish dumps in the northern part of the city, banks of streams, slopes at risk of collapsing, and even under high-tension cables. All of this may be done in frequently extremely unsanitary conditions. According to Assad, in a context of unemployment, many of the settlements function as a means of livelihood, to the extent that the informal land market also functions as a source of income. This is known, according to her, as *industria da invasão*, that is, invasive industry⁸¹.

Over time, and with the goal of merging the actual city into the legal city -within the framework of the Statute of the City⁸²-, measures aiming at the consolidation of informal neighborhoods and the regularization of land ownership started to be put into practice. Thousands of occupations that had been taking place on state land for at least five years were able to become regularized thanks to the 2001 implementation of the special use concession for housing. The regularization programs' "curative" nature did not, however, lead to a resolution of the socioeconomic structural inequities that are manifest in metropolitan areas.

After analyzing the Latin American international background, it can be observed that the industrial developments in Ciudad Juarez and Manaus exhibit USD dynamics resulting from the transformation of the economic structure brought about by a SEZ-type policy, which in both cases promoted industry as an equalizing factor. The demographic and socio-spatial structure transformed as a result of changes in the economic structure, reflecting dynamics of differentiation, particularly in the distinctions between formal and informal cities.

2.2.3- The case of San Luis and Industrial Promotion: Period 1983-2001

The Province of San Luis was affected in the early 1980s by an economic development policy based on the incentive to industrial activity, which had a strong impact on the socio-demographic structure as well as on the territorial structure. It also resulted in new landscapes of segregation and new forms of exclusion (Buseti, 2007).

San Luis is one of Argentina's 24 provinces, located near the national geographic center. In comparison to other provinces that had profited from the import substitution industrialization process (ISI) since 1930, it had a pre-industrial economy until the 1970s (Mario, 2009), centered on the

⁸¹ The author makes an interesting link between the housing shortage and the supply of housing in the informal market.

⁸² The right to housing was added to the Brazilian Constitution in 2000 through a constitutional amendment, and municipalities were given responsibility for advancing housing programs (CF/88).

exploitation of agricultural and mining resources. Due to this situation, the province was characterized up to this time as an expeller of population, with approximately 200,000 inhabitants by 1980.

Up until the start of the 1980s, Argentina underwent a number of promotional campaigns that varied in their goals but all intended to create different SEZs⁸³. In the case of San Luis, these measures were framed in a context of military dictatorship as in Brazil, within Law 21.608/77, which aimed to expand the national industrial capacity, "strengthening the participation of private enterprise in this process" (Law 21608: Art 1). Under this regulation, promotional benefits were granted⁸⁴ to those projects that, among other things, "have a multiplying effect and are located in areas with high unemployment rates or very low zonal product, or high internal migration rates, or where security reasons or geopolitical considerations make it advisable" (Law 21608: Art. 2-d). Promotion was thus both industrial and regional at the same time.

Industrialization generated transformations in different dimensions, including economic, social and spatial transformations. Three studies address different aspects of these transformations.

Busetti's work (2007) links the economic transformations with those that took place in the demographic and spatial structure. At the economic level, a period of industrial expansion began in 1983, which implied a GGP growth of 227% between 1983 and 1991. During this period, the composition of the GGP changed drastically and structurally. The industrial sector, which had previously made up less than 10% of the GGP as a whole, increased to occupy more than 60% of the total and became the main driver of the economy of the province during this time, as shown in Figure 2.6. San Luis completely transformed from a pre-industrial agricultural and cattle economy to an economic-social structure resembling an industrialized society over the course of roughly twenty years. According to the author, the manufacturing sector had a crucial role in creating jobs, and was a major driver of migration, which had a significant impact on the demographic structure.

⁸³ La Rioja (Law No. 22,702) was the first province to do so effectively starting in 1978. Catamarca and San Luis thereafter joined the promotion, and the Law went into effect in 1982 for a 20-year term in those provinces. Law 19,640, which solely applies to the National Territory of Tierra del Fuego, serves as a precedent. Insofar as there were significant variations between the central region, the primary industrial engine during the ISI, and other regions, geopolitical concerns in the border regions and territorial rebalancing are among the primary causes. It also seems to have been part of a strategy to deindustrialize the traditional industrial regions and to insert new regions into the process of global accumulation with processes of low value added and greater economic dependence (Azpiazu, 1988). This situation will be discussed in greater depth in the following chapter.

⁸⁴ Following Busetti, we identified three fundamental measures of the promotional regime: exemptions from national taxes and import duties for capital goods or inputs; restriction on the importation of similar goods; incentives for the exportation of production goods; and incentives for the exportation of goods for the production and sale of goods.

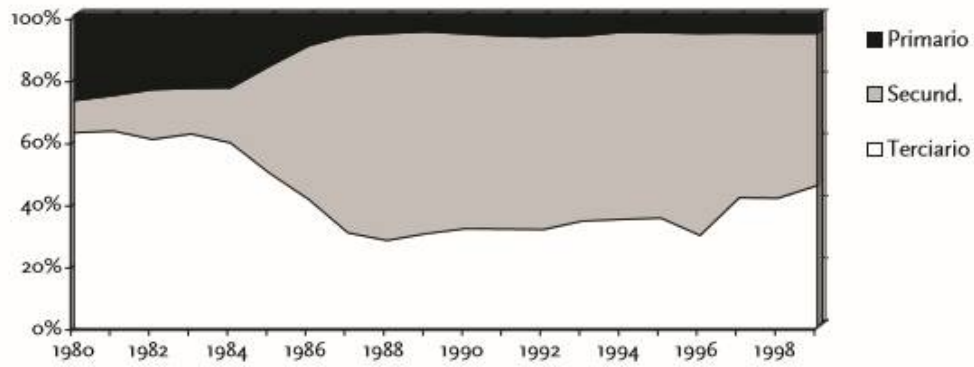


Figure 2.6: Relative participation of the sectors in the Provincial GGP . 1980- 1998. Source: Busetti, 2007

At the same time, the demographic composition changed: the urban population increased by more than 10% (Olguín, Páez, Busetti, 2002) between 1980 and 1991, which meant that more than 80% of the total provincial population was located in the industrial urban centers, mainly the capital and Villa Mercedes (Busetti, 2007). Strong inequalities resulted from the transformation of the productive and demographic structure in the interior of the provincial territory, where some areas served as poles of attraction for the new population while rural areas experienced depopulation processes and a decline in the activities available as well as the labor force. The association between population growth and the placement of industries in the provincial territory is shown in Figure 2.7.

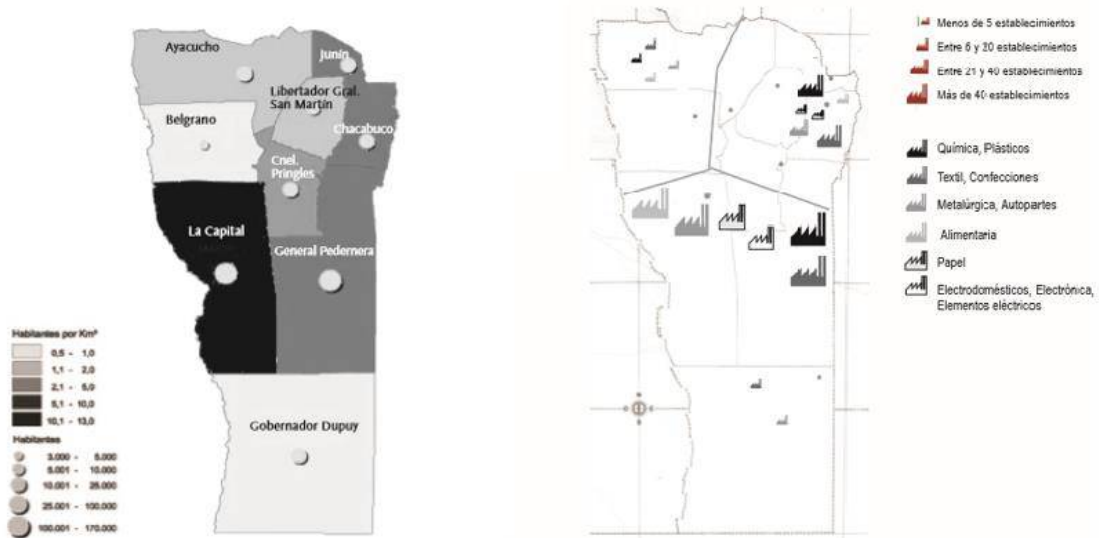


Figure 2.7: Population density by Department of the Province (left) and industry location (right) Source: Busetti, 2007

The employment rate began to fall in 1998, together with the increase of unemployment and the retraction of the activity rate in the manufacturing sector, with the end of the promotion, in parallel with the growth of employment in the public sector. According to Busetti (2007) at the urban level, it

also generated strong changes in the territorial configuration, expressed in a large increase in the urbanization rate, as shown in Figure 2.8. This led to a growing demand for housing and the need for basic infrastructure, due to the location of new industrial activities.

Año Censal	Tasa de urbanización (%)	
	Total del país	San Luis
1947	62,2	39,1
1960	72,0	51,8
1970	79,0	57,3
1980	83,0	70,0
1991	87,2	81,1

Fuente: Dirección de Estadística y Censos, San Luis –INDEC.

Figure 2.8: Urbanization rate in 1947 and 1991: Busetti, 2007

The two cities that saw the biggest impact on their configuration were San Luis and Villa Mercedes. This is explained by the fact that they were the major industrial attractors and therefore the ones that housed the largest population. Both cities' urban fabric significantly increased in size and density, moving into rural regions primarily as a result of the demand for land for residential use and in particular as a result of the building of housing schemes under the control of the provincial government. Environmental degradation was seen as a result of the expansion of unregulated landfills, the use of highly polluting industrial waste disposal methods, the contraction of the road, building, and service infrastructure, as well as other factors.

In this context, the housing issue played a fundamental role in the provincial government's policy, expressed in the construction of more than 60,000 housing units distributed in the main urban centers from 1983 to date, mainly with funds from FONAVI. According to Busetti, the distribution of these plans within the provincial area was highly inequitable, because the criterion for their location was directly correlated with the increase in population in the centers where industry played a significant role. Housing programs have been the most relevant element in the configuration of urban growth in the provincial capital.

The case of San Luis is remarkable, since unlike the other antecedents, the role of the provincial state played a fundamental role in the production of urban space, which is expressed in 80% of the urban expansion produced by state logic (Fernández, 2014), while the growth of informal settlements is not evidenced.

Regarding the importance of the role of the State in terms of producing housing solutions, there are two publications that describe this issue: Lentini & Palero (2006) and Rouquaud (2008). Both authors draw attention to the fact that San Luis' housing strategy was geared toward the execution of major housing developments, which—due to their size and the services they provide—represent integrated urbanizations. Large portions of undeveloped land outside of metropolitan areas were

required for this. The development of the city "La Punta" is the clearest expression of this policy (a unique case in the 20th century of founding a city in a previously uninhabited territory).

Lentini and Palero (2006) make the additional claim that the policy of house construction has prevailed over that of city building and planned growth. This was strongly influenced by the hegemonic party domination from 1983 to the present, marked by the administration of Adolfo Rodríguez Saá, who was governor from 1983 to 2001. Thus, housing policy has been a pillar of successive administrations (Lentini and Palero, 2006; Rouquaud, 2008), in which an approach to the housing problem linked to the vision of the welfare state, which considers the construction of housing of social interest as a dynamizing factor of the economy and employment, has predominated.

Regarding the housing management model, Lentini and Palero (2006) claim that the centralized model of housing administration predominates at the level of the Executive Power. There are currently two programs: the Urbanization and Housing Program (housing plans within urban areas) and the Interior Housing Plans Program (carried out in the interior of the Province). In terms of housing offer, an official prototype of a complete housing unit is used, which is repeated in all cases, varying only in the details of completion.

According to Lentini and Palero (2006), San Luis has seen positive results in addressing the housing deficit especially when taking into account the demographic factors that have been in play since the 1980s. However, this study found that overcrowding per room has increased, which may be due to the fact that housing supply can't meet a diverse demand due to its homogenous typology. Social housing has grown to be a significant urban territory shaper for all of these reasons.

2.2.4- Discussion of the background of the case studies

In the three studied precedents, the emergence of neoliberalism and the National State's strong support for productive promotion were accompanied by changes in USD patterns. In this sense, productive transformations are understood as extra-urban dynamics, given that they were not linked to local development, but to economic, political and social processes that took place on a broader scale and had a focused impact on a certain region or city.

Prior to the promotions implemented in each location, the various scenarios demonstrated economies focused on primary activities that were expressed in territorial configurations devoid of significant metropolitan centers. In the three analyzed cases, promotion strategies that led to the changes in the territory were based on geopolitical considerations, applied with the intention of populating areas that seemed to be economically isolated from the rest of the nation or depopulated. In this sense, industrialization appears as an "excuse", as a strategy for populating regions.

In the Mexican, Brazilian and San Luis cases, productive policies were applied in contexts broader than the urban scale, generally in states or provinces, depending on the national administrative

división. However, given the nature of industrial activity, these policies had a significant impact on the major urban centers. Each of these three situations had a distinctive interaction with industry throughout time. The proximity of Mexico to a superpower like the United States contributed to the sustainability and expansion of the maquila industrial production model, whereas in the chaos of Manaus, the scale that the city and its production acquired in the context of the nation and the world also contributed to the industry consolidation in the city. The industrial plan of San Luis did not succeed over time. In all of these cases, however, there is a great vulnerability of the regional economic dynamics due to the dependence of the activity on the national context and global accumulation patterns.

In these three situations, industrialization meant changes in many dimensions. In the productive dimension, it meant the transformation of the productive matrix from one that was focused on primary activities to one that was firmly rooted in industry. It is a manufacturing industry in all three instances, with a focus on assembly activities and integration into global supply chains.

In terms of demography, it led to significant migrations, which directly affected urbanization processes. Depending on the situation, urban centers changed from being small towns to large or intermediate cities.

In all three cases, at the interurban level, industrialization generated inequalities between industrialized and non-industrialized centers. The provision of infrastructure was a key factor in the consolidation of these differences.

It also meant new dynamics of differentiation at the intra-urban level in the cases of Ciudad Juarez and Manos in relation to the formal/informal city, distinguishing, on the one hand, a clear dynamics of mercantilization and, on the other, a strong precariousness of the habitat, giving rise to the presence of processes of social polarization in space. In the case of San Luis, the provincial state's contribution to housing development served as the primary impetus for the development of novel spatial occupation patterns. Comparatively, this instance is interesting because despite having a housing shortage and a policy that was quite comparable to those in Ciudad Juarez and Manaus, as well as having similar effects on demographic growth and the rise in economic indicators, things turned out very differently. While housing was one of the major socio-territorial issues in those two cities, it has been a strong provincial state policy in San Luis that, without getting into the evaluation of the policy itself, has been able to address the rising housing demand brought on by industrial growth. It should be noted that in this case there is also an example of dissociation between housing policy and urban policy, given that in the face of population growth, housing is planned to accompany it, but not urban development from a perspective of urban sustainability and city construction.

Regarding the research that addressed these cases, it can be seen that some concentrate their analysis on the political-economic aspect of the urban and regional transformations, while others concentrate on the changes to the socio-demographic structure and urban spaces. Many of them

addressed different aspects of USD and the development of disparities at the urban scale, the rise of urban informality, and the function of urban housing policies. Particularly, the works of Rodríguez (2002) and Kanai (2014) can be mentioned in this sense.

According to the precedents examined, those who handle comparative assessments between regions impacted by industrial promotion programs, like Beckerman and Dulcich (2017), do so from an economic standpoint without taking into account factors related to territorial implications. Even though they use historical comparisons, these are limited to legal considerations or economic indicators of changes in industrial activity. The processes observed were not necessarily analyzed by focusing on the articulation between economic-productive, political and territorial dynamics in the production of inequalities. Table 2.2 summarizes the main analytical components identified in the background that are considered fundamental inputs for the analysis of USD in the case of Tierra del Fuego cities.

Table 2.2: Analytical components of the USD in the worked background.

<i>Case</i>	<i>Authors</i>	<i>Productive Transf.</i>	<i>Socio-dem. Transf.</i>	<i>Urban Transf.</i>	<i>Urban-housing policies</i>	<i>Informality Inequality</i>
<i>Mexican Maquila</i>	Douglas y Hansen, 2003					
	Caraveo, 1993					
	De la O Martínez, 2001					
	Gun Cuninghame, 2007					
	Mungaray Alejandro, 1998					
	Rodríguez Álvarez 2002					
	Ruiz, Hernández, 2015					
<i>ESZ in Manaus</i>	Beckerman, Dulcich, 2017					
	Schor, Tatiana; de Oliveira, José Aldemir. 2011					
	Oliveira (2014)					

	Kanai, 2014				
	Pérez Álvarez, 2017				
	Campos Alvez, Silva da Freitas y Queiros do Santos, 2020				
<i>Industrial Promot. San Luis</i>	Buseti, 2007				
	Lentini, Palero, 2006				
	Olguín Raúl, Páez, Busetti, 2002				
	Rouquaud, 2008				

Source: Own elaboration

2.3 Background in Tierra del Fuego

Regarding the Tierra del Fuego case, some research can be found that address many facets of the fuegian economical, demographic and territorial structure, representing an interesting background for USD s and urban inequalities analysis.

A wide variety of antecedents linked to the understanding of productive dynamics are recognized, particularly in relation to the transformations that have taken place since the application of the Tax and Customs Regime (Law 19.640) that gave rise to the industrialization process in Tierra del Fuego. The first were produced during the 1980s to understand the characteristics and effects of industrial promotion (Nochteff, 1984; Roitter 1987; Azpiazu and Nochteff, 1987; Azpiazu, 1988, Kosacoff and Azpiazu, 1989). While some address the production context of the industrial promotion regime, others focused on the transformations of the productive structure of Tierra del Fuego and, particularly, on the main features of the industry based on census analysis and qualitative approach. Studies on the Fuegian industry from a "second generation" can also be differentiated (Filadoro, 2007; Aggio, Gatto, and Romano, 2014; Schor and Procelli, 2014), in particular those that attempt to explain its geographical location (Sanchez,2019). Mastrocello (2008), makes a general characterization of the economy of Tierra del Fuego and proposes a historical analysis through the main stages of economic evolution and its crises, paying special attention to the place space occupied.

Additionally, there are some other research works that make an effort to comprehend the territorial changes caused by the modification of the production matrix since the 1970s. The first study we came across, Ciccollela (1989), discusses both the industrialization process and what it meant in terms of demographics, urban growth, and housing deficiencies. His analysis, however, ended in 1986

and has not been continued by other works. Hermidas (2018), on the other hand, makes an effort to comprehend the function of the National State in the formation of the Fuegian space production processes in the context of capitalism. However, he does not address these relationships from a spatial perspective and instead places a greater emphasis on the political sphere in his analysis.

Regarding the process of urban space production, there are some works that have been carried out by research teams of the National University of Tierra del Fuego. Among them, those that analyze urban housing policies applied by municipalities stand out (Finck, 2019; Martinez, Finck, Lobato, 2019). Also, some particularly referring to eviction policies (Martinez and Finck 2017). In turn, Chiari (2013) and Molpeceres (2017) link, in the case of Ushuaia, the demographic effects derived from industrialization with the process of urban growth of the city. Regarding the analysis of informal settlements, the Master's thesis of Alcaraz (2015) and Finck (2016), make valuable contributions in Río Grande and Ushuaia, respectively, regarding their conformation and growth in the period 2005-2015.

Although all of them are valuable contributions to the understanding of the historical and economic construction and urban policies that accompanied the processes of spatial production in Tierra del Fuego and its cities, there is still a deficit in the approach to the relationships that may exist between these dynamics (economic, politics and territorials) from a spatial perspective.

2.4 Background study considerations for addressing uneven spatial development in special economic zones

The study of different cases where the definition of SEZs generated transformations in urban and regional spaces allows us to empirically appreciate some of the most relevant aspects of the discussions on USD that we addressed earlier. The patterns of intra- and inter-urban polarization caused by industrialization are first identified as being driven by geopolitical considerations and the formation of regionality.

It appears necessary to emphasize the role played by the State and public policies in the process of uneven spatial development. Is a state that isn't present the same as one that is? Does an articulated state produce the same policies at all of its many scales as one that is disarticulated? What happens with the connections between the various policy fields? The establishment of SEZs has benefited private capital, particularly foreign capital, more than the region where they are inserted, according to many experiences.

As we have seen, on the side of the equalization tendencies are not only the industrialization processes, but also the dynamics of commoditization of urban spaces that emerged in the following years.

On the side of differentiation appears the growth of informal settlements, generally in a context of urban policies that do not reach (or decide not to reach) to provide the popular sectors with urbanization. It can also be noted that the role of urban-housing policies in mediating the impacts of new economic forms typical of neoliberalism in urban spaces is central.

Based on the analysis of the theoretical framework and background mentioned above, we will describe below the main methodological aspects that will guide the analysis of the USD processes in Tierra del Fuego and its cities.

Chapter 3:

Uneven spatial development and urban inequalities: building of the methodological scaffolding for comparative study in cities from Tierra del Fuego



This chapter addresses the methodological design proposed for the analysis and understanding of the dynamics of uneven spatial development involved in the production of space and urban inequalities in the cities of Tierra del Fuego, since the beginning of the industrialization process, coincident with its definition as a Special Economic Zone in 1972.

In the first place, we will present the process carried out until the definition of an appropriate methodological design, the different stages identified and the approach to the object of study. Two main phases in which the methodological procedure was established are recognized: an exploratory phase, based on the first empirical research problem, and a phase of elaboration of a proper methodological design, based on a redefinition of the research problem, according to its new theoretical-empirical delimitation. Secondly, the analytical approach proposed for the research will be described. The methodological design based on a comparative case study will then be presented; the main components of analysis defined according to the theoretical approach are defined, as well as the dynamics and variables that allow their approximation in the case studies.

Furthermore, the mixed methodological approach adopted and the central criteria that guided the approach to the object of study from different perspectives: spatial, multiscale, historical and comparative will be presented. The spatial and temporal delimitation of the research problem will be defined. In relation to the latter, the criterion adopted for the defined sub-periodization will also be detailed. Finally, the methodological strategies and techniques implemented will be presented, as well as the sources of information used according to each component of analysis. The importance of the

perspective and spatial analysis guiding this work is recognized, present both in the elaboration and interpretation of data as well as in the construction of results.

3.1 The process towards the definition of the methodological design

The design and methodological strategies that guide this research work are the result of the articulation of two major issues recognized during different moments of the construction of the object of study. On the one hand, the research problem, partially identified empirically at the beginning of the study during the first field explorations. In those instances, the question about the production of urban inequalities in the cities of Tierra del Fuego arose, apparently verifiable since the beginning of the industrialization process. In particular, these visits revealed the inequalities resulting from the two predominant logics of city production: formal and informal. On the one hand, the theoretical discussions that underpinned the research, related to the Uneven Spatial Development inherent to the capitalist production of space (Smith, 1984, 1996/2012; Harvey, 2007; Brenner, 2009a) in articulation with Latin American urban studies. These discussions took shape after years of reading and exchanges, and provided a valid interpretative framework to explain the factors involved in the production of these inequalities.

From these two analyses, the main objective of this thesis emerged as a synthesis: to recognize the dynamics of Uneven Spatial Development (USD) that intervened in the production of space in the cities of Tierra del Fuego, from its definition as a Special Economic Zone (SEZ) and the concrete forms that the patterns of inequality acquired. In the definition (as well as in the realization) of this objective and coinciding with what was previously mentioned, two major temporal phases of methodological construction were identified.

A first exploratory phase⁸⁵, which preceded the definition of the theoretical approach adopted, was guided by some initial empirical questions such as: why urban informality grew in two of the richest cities in the country, Ushuaia and Río Grande; to what extent its growth is associated with the industrial dynamics that began in 1972 in Tierra del Fuego (territory to which they belong); how to explain the processes of differentiation between formal and informal city production in each case and what similarities-differences they present; and what role did urban-housing policies play in the production of these differences. These questions led the initial readings related to Latin American cities, as well as the first approaches to the field and led to the identification of a first research object

⁸⁵ The exploratory scope of this first part had to do with the lack of background information at the beginning of this research regarding urban studies in the territory studied.

of relational type⁸⁶ (Hernández Sampieri, 2014). The focus was on understanding the growth of informal settlements and their particularities within the urbanization processes of the cities from Tierra del Fuego, since the definition of the territory as an SEZ in 1972 and until 2015, considering a purely urban perspective.

After a first round of exploratory interviews and subsequent spatial analysis in the office, the first data and partial results related to the dynamics of urban expansion and the identification of cycles in the growth of informality in each city, initiated a moment of crisis in the research. It was then observed that the problem was more complex than it initially appeared, insofar as the production of urban inequalities in the case studies did not seem to be explained solely from the understanding of internal processes of the cities. Nor, as a process of continuous growth over time, and even less so, as a process that can be approached exclusively from an urban perspective. The identification of broader economic and political dynamics that seemed to directly influence the cycles of urban dynamics and the production of spatial inequalities led to the search for new theoretical approaches that transformed the research problem.

The theoretical approach to USD, presented in Chapter 1, opened a new framework of analysis more suitable for the explanation of the observed phenomena⁸⁷, redefining the object of study towards the USD process in the cities of Tierra del Fuego and the resulting configurations of urban inequality. It allowed, in the first place, the incorporation of complementary analytical perspectives to the field of urban studies, such as critical geography, economic geography and industrial geography. Associated with these new visions, it allowed, secondly, the adoption of a multiscale and multidimensional perspective in the definition of the problem, opening the game to other variables and dynamics of analysis that were developed at other scales but that had a direct impact on the cities. Finally, it provided analytical elements that made possible a more rigorous comparison between the two cities, as well as conceptual coherence for the identification of temporal, economic and urban cycles within the period under study.

However, the level of abstraction of the theory on the one hand⁸⁸ and a very concrete and particular casuistry on the other, demanded the design and construction of a methodological

⁸⁶ This was initially integrated by the study of three urban aspects: the expansion processes of the cities of Tierra del Fuego, the urban-housing policies that mediated this process and urban informality, considering as the contextual framework of the analysis the beginning of the industrial promotion in 1972.

⁸⁷ The definition of this theoretical-empirical object is based on the premise that the configurations of inequality observed within cities cannot be explained solely by analyzing urban issues, insofar as there are processes that go beyond the jurisdictions but have a direct impact on them. Nor can they be explained by analyzing only the present configuration, insofar as the historical conformation of the patterns of occupation of space has a direct impact on the processes of differentiation in each city.

⁸⁸ None of the authors presented in the theoretical discussions on USD work on particular empirical cases that require an analytical approach, but rather explain at a macro-conceptual level geographical and urban processes.

scaffolding of its own, which we recognize as the second methodological phase, which is presented below in this chapter. Figure 3.1 illustrates the two major methodological instances mentioned.

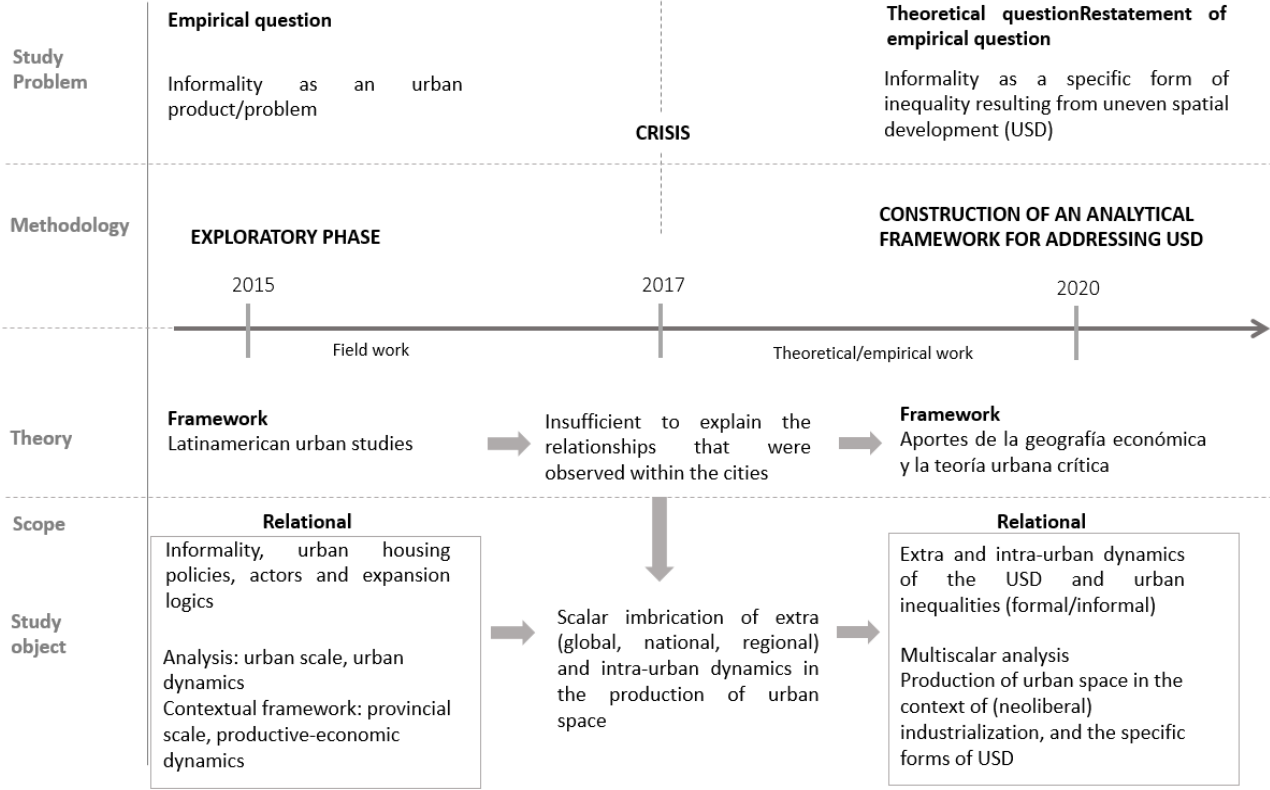


Figure 3.1: Instances of methodological construction and the object of study. Source: Own elaboration.

The methodological design adopted based on a multiple case comparative study served as a lens to cross the urban-territorial reality of Tierra del Fuego with those macro processes that allowed explaining its production and current configuration. The case studies and the methodological tools that were combined to carry them out, made it possible to generate contributions to the general theory of USD, particularly in the field of Latin American critical urban studies. In this sense, an understanding of USD processes was pursued through their operationalization into components and variables, their analysis and the explanation of their interrelationships and changes over time. It should be noted that although these initial methodological decisions were made to frame the object of study, based on the new challenges that arose, the methodological design was constructed and refined during the course of the research (Hernández Sampieri, 2014).

3.2 The analytical approach of Uneven Spatial Development for the understanding of urban inequalities in cities of Tierra del Fuego.

As previously mentioned, the object of research required a methodological design based on the development of an analytical approach of its own, which allowed to operationalize the main interpretative keys of the USD in the configuration of urban inequalities in Tierra del Fuego. Based on the mixed approach used, it was decided to elaborate a *sequential transformative design*, which consists of recognizing a broad theoretical perspective (in this case the USD) that guides the study and the qualitative and quantitative approaches according to the case (Hernández Sampieri, 2014), as well as their subsequent integration. The spatial perspective also gained special importance in this work. Space is considered in this methodological design as a central object of study; source of both primary and secondary data (through methodological tools linked to its observation of spatial analysis that we will describe below), as well as main input in the interpretation of the results, according to the instance of development of the thesis.

3.2.1- Theoretical-analytical approach of the methodological design

Based on the theoretical discussions presented in Chapter 1, the main *components and dimensions of analysis of the USD* were first recognized, considering a nested hierarchical structure, from the highest to the lowest level of abstraction. The cases presented in Chapter 2, in which economic-productive dynamics and spatial dynamics were addressed jointly (or separately), and the configurations of inequality resulting from their articulation, provided concrete elements for analysis from a Latin American perspective.

Regarding the components, the temporal issue was central to their delimitation. In this sense, three analytical moments were identified in the territorial configuration of the USD, which correspond to the specific research objectives. These, in turn, respond to three methodological stages and involved different degrees and strategies of analysis, as we will describe below. The first stage corresponds to the recognition of the territorial conditions prior to the definition of Tierra del Fuego as an SEZ. From a theoretical point of view, knowing them was key to understanding the structuring of the territory and its subsequent transformations. It is a first moment of USD, insofar as the different phases of capitalist accumulation in space are based on the conditions previously generated. The second moment corresponds to the analysis of the USD process, which in the case study begins with the definition of Tierra del Fuego as an SEZ in 1972. It involves the multi-scale study of the extra- and intra-urban dynamics that were involved in its formation, considering their interrelationships and transformations up to 2019. Finally, the third moment corresponds with the analysis of the configuration and urban

inequalities of the cities under study in 2020, particularly those related to the differences between formal and informal urbanization.

Figure 3.2 summarizes the study components according to the three analytical moments described above: pre-existing territorial conditions, development dynamics (extra- and intra-urban), urban inequalities.

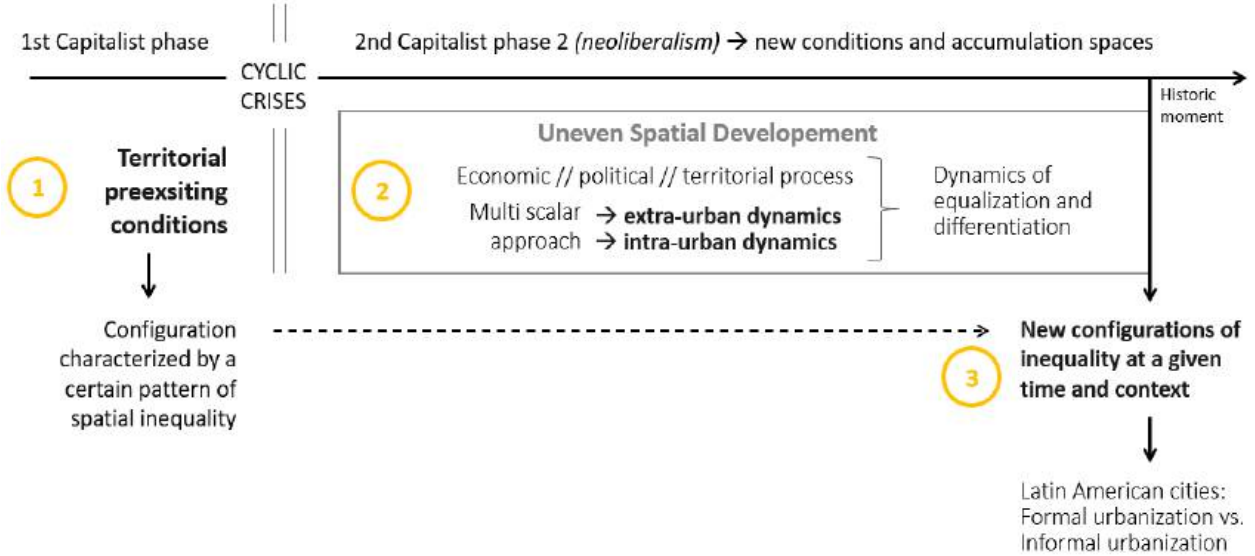


Figure 3.2: USD components and analytical moments Source: Own elaboration.

According to the nature of each component, two major separate instances of the object under analysis were identified, depending on the type of result they pursue. The first has to do with the understanding of a processual dynamic, linked to the way in which the USD is produced. This includes the first two analytical moments: the pre-existing conditions, as well as the extra- and intra-urban dynamics involved in the production of urban space and its inequalities. The second, with the acknowledgement of the concrete expression that USD patterns acquired at a given moment, which we translate in this case as the "final" (present) configuration of urban inequalities. These inequalities are no longer analyzed as a (processual) dynamic but as the result of processes at a given moment.

Based on the recognition of the components according to the analytical moment and their different nature, the dynamics and variables of analysis within each component were identified at a second level of approach, taking into account the theoretical perspectives adopted. While in the approach to pre-existing conditions and extra-urban dynamics, the interpretative keys provided by international authors predominated to a large extent (Smith, 1984, 1996/2012; Harvey, 2007a; Brenner, 2009a), in intra-urban dynamics and the analysis of inequalities, the contributions of Latin American urban studies were essential, as they allowed an empirically based interpretation according to the context.

Figure 3.3 summarizes the analytical scheme of the proposed approach from a theoretical level (a similar scheme incorporating the empirical problem will be shown later). The components of analysis at a general level are described below.

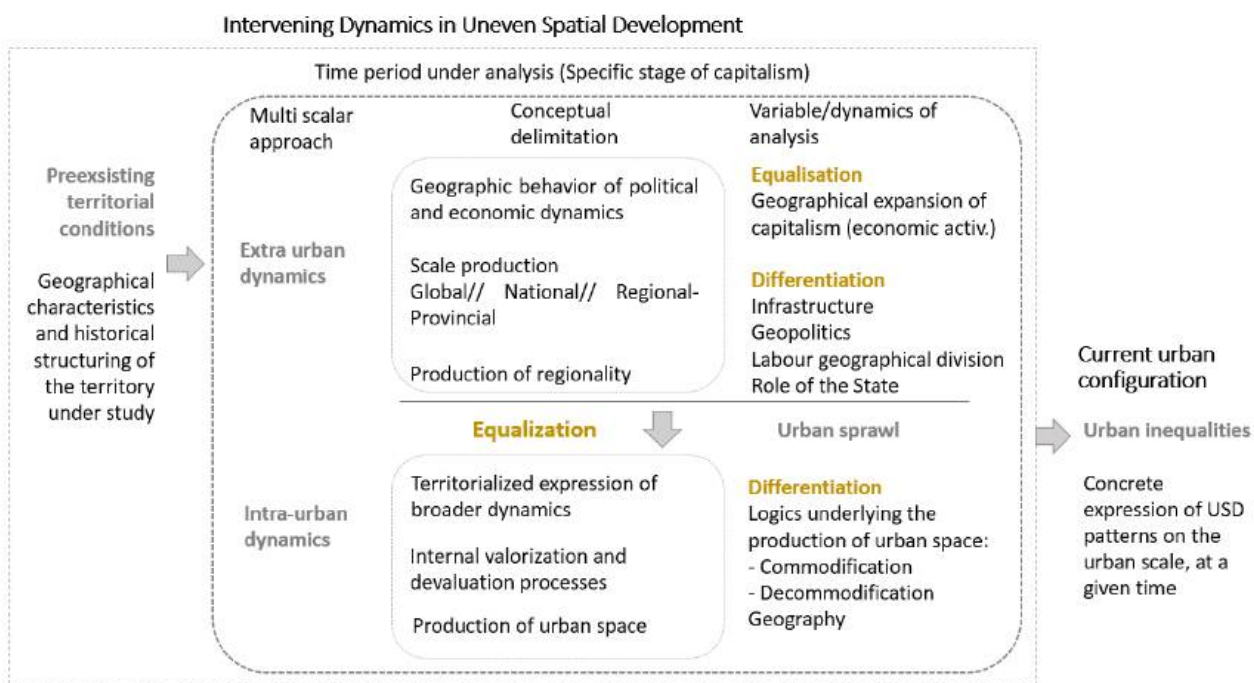


Figure 3.3: Analytical scheme for approaching Uneven Spatial Development for the study of urban inequalities. Source: Own elaboration.

Pre-existing territorial conditions: Returning to the theory and considering that the different productive activities proper to capitalism settle on territories with specific characteristics, the pre-existing conditions refer to the recognition of the main aspects that make up the territorial structuring of a certain place, prior to a specific capitalist phase of analysis/observation. Physical geographic aspects are taken into account, such as location, relief and climate conditions, as well as aspects related to the occupation process and spatial organization patterns, considering the productive, political and social formations prevailing until then.

Intra-urban and extra-urban dynamics involved in the USD: Considering that the different phases of capitalism generate specific unequal territorial formations, this analysis refers to the recognition of those dynamics that intervene in the USD formations in a given place and time. As we have already said, capitalism advances through a double process of leveling and differentiation, prioritizing certain spaces and territorial/economic/geographical aspects over others. Within this framework, urban spaces are transformed by dynamics that occur both at the urban scale and at other scales, and that have a direct impact on their production.

From a multi-scale perspective, *extra-urban dynamics* are those that occur at the global, national and sub-national/provincial regional scales, and that have a direct impact on the way in which

cities grow and are produced. As already mentioned in the theoretical discussions, their predominance varies from one scale to another, just as certain dynamics of leveling at one scale may generate dynamics of differentiation in another⁸⁹ (Smith, 1984, 1996/ 2012). In addition, aspects that differentiate in one scale (such as the geographic division of labor) can generate leveling in another (the labor market is a leveling condition within a city).

On the other hand, *intra-urban dynamics* refer to those processes that take place within cities, related both to the way in which different factors that take place at other scales "have an impact" on them, as well as with accumulation processes inherent to capitalist urban formation, which generate internal mechanisms of valuation and devaluation. Both are crystallized in patterns of inequality that are more easily observable on this scale than on others. While there are USD dynamics common to cities in the latest phase of global capitalism (neoliberalism), such as urban expansion associated with a greater concentration of functions and activities, there are also dynamics that are specific to certain places. In the case of Latin American cities (as already mentioned in the theoretical discussions), the way in which they grew, the different logics of production and occupation, as well as the role assumed by local states, directly influenced the definition of particular forms of mercantilization and, above all, non-mercantile forms of city production that result in specific (and more extreme) forms of inequality.

Urban inequalities: from the theoretical approach adopted, urban inequalities are considered as the concrete expression derived from the USD pattern in a specific context. Taking into account the specific approach of Latin American cities, the patterns of spatial inequality are more extreme than in other contexts (Segura, 2014). Di Virgilio and Pelerman (2014; 2021) emphasize the multidimensional and multi secular nature of thinking about urban inequalities. Its investigation is not limited to studies of aspects linked to the analysis of the income structure, but rather to the set of differences that originate as a result of the production logics of the space under a given economic model. This gives rise to multiple analytical approaches, and in the case of this thesis, it implies recognizing the multiple elements in which unequal access to urban space is crystallized (Segura, 2014). Its clearest expression has to do with the differences between mercantile and non-mercantile forms of city production, particularly between the city that is produced informally by the logic of necessity, and the rest of the formal city, produced by the market or by the State.

These three components of the USD respond to a chronological order of approach to the object of study. In this sense, they correspond to the main research stages of this thesis and also to the specific objectives. Due to the complexity and different analytical approach required by the extra- and intra-

⁸⁹ In this way, while the geographic expansion of capitalism through certain productive activities "levels" while at the same time expands the conditions of production at a global scale, aspects such as geopolitical issues, the role of states and the geographic division of labor generate differences between nation states (Harvey, XX). The same is true for the different regions, which are integrated or not into certain activities depending on aspects such as the provision of infrastructure, policies that benefit their inclusion in a certain accumulation pattern, networks, etc.

urban dynamics of the USD, these are addressed separately within the specific objectives and methodology. Although they respond to the same theoretical moment, they were unfolded as two distinct components, thus forming two successive stages of analysis.

A central matter that emerges from the conceptual approach presented is the thematic articulation between economic-productive dynamics, spatial dynamics, and those that refer to the "politics of space", as it is argued that Brenner (2009a). As will be shown, they are approached with different methodological strategies and have different analytical predominance according to the scales of approximation. Although the focus is placed on the spatial issue, the relational approach implies being able to identify both issues and to recognize the way in which they are linked and interact with the production of space.

Considering then finally four components, the empirical approach corresponds with the four development chapters of this thesis. The spatial and temporal delimitation and the analytical approach of the case study are presented below. The first allows us to concretely order the times and scales of analysis. Regarding the analytical approach, it is presented with a concise description of the variables and dynamics selected for the study of each component, and the fundamental methodological strategies required. A more detailed methodological analysis of each particular topic is presented at the beginning of chapters 4, 5 y 6.

3.3 Case study: cities from Tierra del Fuego

Given the characteristics of the problem under analysis and the process carried out from the observation of the mentioned phenomena in two cities of Tierra del Fuego, a methodological design based on multiple case studies was selected (Yin, 1984,1989), of a comparative type. Case studies are focused on the description and in-depth examination or analysis of one or several units and their context in a systemic and holistic way (Hernández Sampieri, 2014). These studies are based on the premise that an in-depth examination of a case and its context can generate meaningful information about other similar cases (*The Sage Glossary of the Social and Behavioral Sciences*, 2009). Following Chetty (1996), the case study enables the understanding of processes (in this case the production of urban spaces within the framework of USD) through in-depth analysis, while at the same time allowing for the analysis of phenomena from multiple perspectives. The units of analysis in this type of design are the cases: the cities of Ushuaia and Río Grande for the present study. In the multiple-case design adopted, the review of the cases is similar, that is to say that the same variables and aspects are adopted for the analysis, data collection instruments and the process in general. Observing different cases helps to enrich the understanding of the research problem. In the present investigation, the comparison made it possible to analyze the way in which the implementation of a policy at the subnational level (Tierra del Fuego as SEZ) generated different processes of USD in each city. While the comparison is

important and convenient, the analysis must be carried out for each case in depth. In this regard, authors such as Yin (1984/1989) and Mendoza (2012), consider that case studies are useful for refining, confirming and/or extending theory and producing knowledge. In this work, a multiple case study is implemented, as it allows to illustrate or contribute to a theory, reinforcing analytical generalizations through comparison.

3.3.1- Spatial and temporal delimitation

The spatial and temporal delimitation is directly related to the definition of the research problem and the analytical approach proposed for its treatment. Given the necessity of understanding the dynamics of the USD that played a role in the production of urban inequalities in cities of Tierra del Fuego since its definition as Special Economic Zone, the period selected for its analysis covered from 1972, year in which the Special Fiscal and Customs Regime was enacted for Tierra del Fuego, until 2020⁹⁰. This period of time coincides with the second and third analytical moments mentioned above, the USD dynamics (extra- and intra-urban) studied between 1972 y 2019 and the configuration of urban inequalities in the year 2020, and represent the most important, powerful and comprehensive analysis of this research. Within the period of study of extra- and intra-urban dynamics (second analytical moment), sub-periods of analysis were identified⁹¹ that emerged from the study of economic and territorial dynamics considered extra-urban, and particularly, from the recognition of positive and negative cycles of the industrial activity (predominant in the economy of Tierra del Fuego during this period)⁹². These cycles had a direct impact on the socio-demographic and spatial dynamics of the cities of Tierra del Fuego. Four sub-periods were recognized:

- 1972- 1990: Sub-period corresponding to the industrialization of the Tierra del Fuego territory. First years of the Special Fiscal and Customs Regime and, from 1980, territorial expansion of industrial dynamics.

⁹⁰ At the beginning of the thesis a time cut was intended for 2015, coinciding with the beginning of the present study. In that year, and linked to the effects of the national policy, the productive promotion policy for Tierra del Fuego took an important turn towards a process of deindustrialization, which lasted until the end of 2019, and brought new consequences for the cities. Although it is difficult to collect information on this last stage, which is still incipient, the decision was made to incorporate it, at least as a trend, to the extent that its study allows generating knowledge that contributes to the discussions that are currently taking place in academic, political and social organization spheres, referring to both productive and urban issues.

⁹¹ This issue is described in depth at the beginning of chapter 5.

⁹² Stages of industrialization and deindustrialization were recognized in function, mostly linked to political and economic processes that took place at national and global scales, and that directly impacted productive activities (particularly industry) and the Tierra del Fuego area. The established time periods are directly related to the recognition of crisis and/or change of industrial direction.

- 1991- 2002: Subperiod of deindustrialization. Widespread industrial crisis and tourism emergence in Ushuaia.
- 2003- 2015: Subperiod of new industrialization.
- 2016- 2019: Subperiod of new deindustrialization trends. Last years of the regime and limitations of the SEZ.

Subsequently, the study of intra-urban dynamics was carried out for each sub-period of analysis, establishing relationships between productive dynamics and the dynamics proper to the growth and production of the cities in the different sub-periods. Urban inequalities were addressed solely for 2020, as a present synthesis of the urban configuration and of the possible trends that are recognized for the future.

With respect to the first analytical moment linked to the study of pre-existing territorial conditions, although it precedes the period under study, its temporal and spatial analysis was necessary for the understanding of the patterns of spatial occupation that conditioned the forms of spatial organization after industrialization. Its temporal delimitation covered the process of occupation of the territory of Tierra del Fuego, from the first native peoples who occupied the Isla Grande around 5000 years before western occupation, until the definition of UDS as an SEZ in 1972. Historical stages were identified, pre and post insertion of the territory of Tierra del Fuego into the process of capitalist accumulation, and within the latter, four sub-stages that defined specific forms of occupation of the territory of Tierra del Fuego.

Stages and sub-stages in the identification of pre-existing territorial conditions:

- Year 10.000 a. de C. (approx.) - beginnings of XX century: Native inhabitants
- Insertion of the territory of Tierra del Fuego into the capitalist accumulation process.
 - ❖ XVI Century- Mid XIX Century: Colonization of Tierra del Fuego.
 - ❖ Mid XIX Century- year 1943: First settlement of Isla Grande and foundation of Ushuaia y Río Grande.
 - ❖ 1943- 1958: the maritime Government.
 - ❖ 1958- 1980: The age of oil and imports.

In terms of spatial delimitation, although the ultimate aim of the thesis is related to the study of the production of urban spaces in the cities of Tierra del Fuego, Ushuaia and Río Grande, the proposed analytical approach, as already mentioned, is not limited to the urban scale, given the importance of the consideration of the context in the case study. Different scales of analysis are recognized according to the different components and analytical moments, which are presented in Figure 3.4. In this figure, a gradient is observed in relation to the predominant scale of analysis of each component, taking into account the influence and dialogue that exist with other scales.

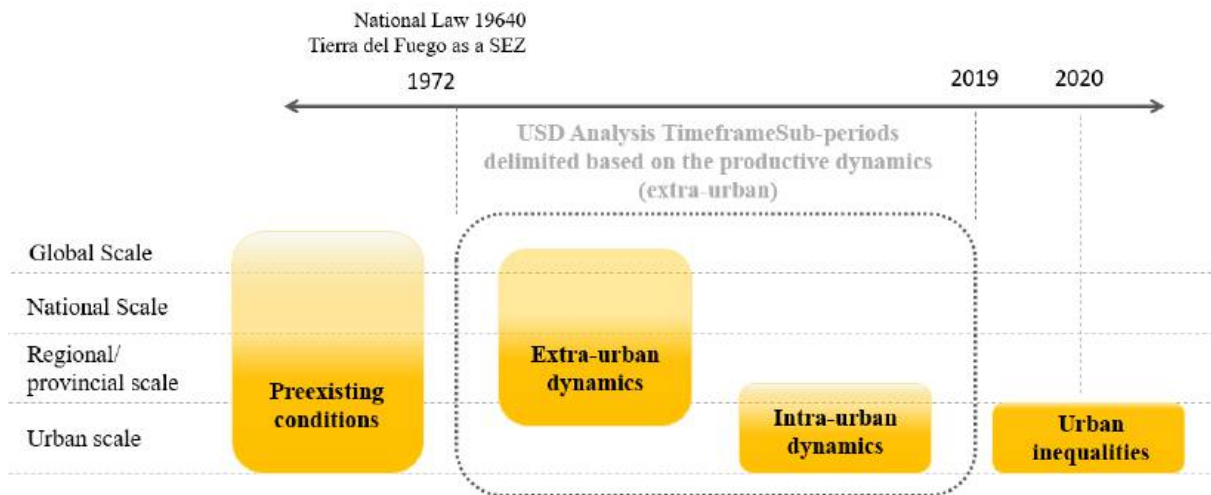


Figure 3.4: Scales of analysis according to USD analytical components. Source: Own elaboration.

It can be noticed that regarding the global and national scales, its analysis is not predominant in any case, although it is important to include it for the explanation of the phenomena observed at the regional/provincial and urban levels. On the other hand, the provincial-sub regional scale, and particularly the territory comprising the Isla Grande of Tierra del Fuego, gained central relevance in the study, fundamentally in the analysis of pre-existing territorial conditions and extra-urban dynamics. This is so to the extent that both the historical process of spatial occupation as well as the productive policies that gave rise to the industrialization process had Isla Grande as a territorial object as a whole. For the analysis of intra-urban dynamics and urban inequalities, the case studies focused on Ushuaia and Rio Grande, which were directly affected by the economic, demographic and spatial transformations derived from the implementation of the aforementioned territorial productive policy. The justification for their choice was presented in the "Introduction" section.

3.3.2- The analytical approach applied to case studies

The dynamics and particular variables of each component considered in this thesis are described below, applying the analytical approach developed for the empirical problem addressed in the case study, the subject matter is complex and each of the components would give rise to a different detailed study. Taking into account the scope and limitations of this doctoral research, analytical elements considered within the proposed relational design were selected according to criteria of internal and external validity of the research, as well as reliability of the results (Hernández Sampieri, 2014). Also, according to the specific weight that each component has within the research. At a general level, the descriptive design was used in the first stage of the analysis of the information collected and made it possible to characterize the pre-existing conditions, as well as the intra- and extra-urban dynamics that developed in the study case. The explanatory design made it possible to understand the

unequal spatial conformation as a result of the relationships between the components previously analyzed. At the same time, it allowed us to recognize possible trends in the configuration of urban space.

Figure 3.5 summarizes the main dynamics and study variables corresponding to the proposed cases, which are briefly described below, considering also the methodological scope in each case and the main products obtained from the analysis of each component.

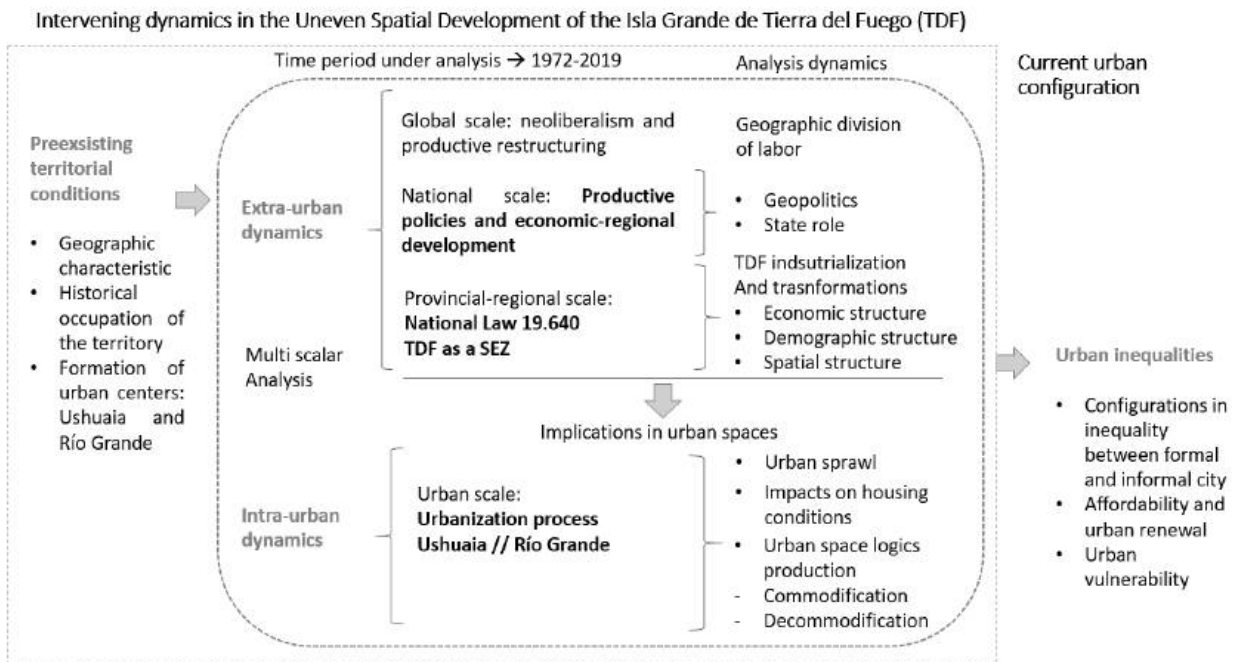


Figure 3.5: Intervening dynamics in the USD of the cities of the Grade Island of Tierra del Fuego. Source: Own elaboration

Within the study of pre-existing conditions, two fundamental issues were considered. On the one hand, the analysis of the geographical characteristics of the Isla Grande de Tierra del Fuego, taking into account aspects such as location, landscape units, climate and relief, as well as the physical characterization of the environments occupied by the cities of Ushuaia and Río Grande. On the other hand, a historical approach of the occupation process of the Isla Grande of Tierra del Fuego was carried out. Both issues were addressed considering a descriptive scope, where the qualitative approach predominated. The descriptive analysis carried out on the pre-existing conditions made it possible to arrive at summarized outlines of the territorial configuration of Ushuaia and Río Grande, prior to the beginning of the definition of the Tierra del Fuego as an SEZ. Figure 3.6 summarizes the main dynamics, variables and sub variables of analysis of the pre-existing conditions.

Pre-existing Territorial Conditions

Time period: 10,000 B.C- 1972

Dynamics of analysis	Variable of analysis	Sub variable of analysis
Geographical characteristics	<ul style="list-style-type: none"> • Location • Landscape Units • Climate 	
Historical process of spatial occupation	Native peoples	
	Capitalist occupation <ul style="list-style-type: none"> • Outward structuring • Internal structuring 	<ul style="list-style-type: none"> • Occupation dynamics produced by economic actors • Occupation dynamics produced by national state actors • Pattern of territorial occupation of the Isla Grande • Growth of urban centres, Ushuaia and Río Grande

Figure 3.6: Pre-existing conditions. Variable dynamics and sub variables of analysis. Source: Own elaboration.

Within the study of extra-urban dynamics, we considered those that directly influenced the transformation of the productive-territorial structure of Tierra del Fuego between 1972 and 2019, from a multi-scale analysis. This involves the recognition of 4 central issues. Firstly, the analysis of the factors/processes that at global, national and regional/provincial level, made possible the definition of Tierra del Fuego as a SEZ and with it, the change from a primary-based matrix to an industrial-based one. To this end, aspects such as the geographical division of labor, geopolitics and the role of the State at both national and regional/provincial levels were taken into account, while at the latter level, the approach of the Law 19.640 (Special Fiscal and Customs Regime for Tierra del Fuego) was crucial. The second issue was the historical analysis of the productive dynamics of Tierra del Fuego, particularly considering the behavior of industry (both in terms of its economic and labor supremacy) and the identification of industrialization and deindustrialization cycles. The third aspect had to do with the analysis of the spatial behavior of the industrial dynamics, taking into account its differential settlement in the cities of Ushuaia and Río Grande. Finally, the fourth question focused on the analysis of demographic dynamics. The approach to extra-urban dynamics combined descriptive and explanatory scopes, with a predominance of a mixed approach in data collection and analysis, as well as in the elaboration of partial results. Figure 3.7 summarizes the main dynamics, variables and sub-variables of analysis related to extra-urban dynamics.

Extra-Urban Dynamics

Time period: 1972- 2019

Dynamics of analysis	Variable of analysis	Sub variable of analysis
Context of the Special Economic Zone of Tierra del Fuego	<ul style="list-style-type: none"> • Sub-regional provincial scale • National Scale • Global Scale 	<ul style="list-style-type: none"> • National Law 19.640 • End of the ISI • Promotion regimes • Production restructuring (consumer electronics industry)
Changes in the production structure	Evolution of the main economic activities	<ul style="list-style-type: none"> • Industrial Gross Geographical Product • Industrial employment • Emerging activities (tourism)
Changes in the demographic structure	<ul style="list-style-type: none"> • Urban/rural population • Evolution of population growth 	<ul style="list-style-type: none"> • Sub-regional/ provincial level • Ushuaia • Río Grande
Transformations in spatial structuring	Spatial distribution of productive activities	<ul style="list-style-type: none"> • Ushuaia • Río Grande

Figure 3.7: Extra-urban dynamics. Dynamics, variables and sub variables of analysis. Source: Own elaboration.

Three main issues were taken into account with regard to intra-urban dynamics. On the one hand, the analysis of the urban expansion process of the cities under study (Ushuaia and Río Grande), understanding it as a "leveling dynamic", resulting from the expansion of productive activities in urban spaces. On the other hand, the institutional and social formations that configured the "politics of space" were investigated; that is to say, the way in which the State at the national and provincial levels responded at the territorial level to the economic-productive transformations of Tierra del Fuego, and the impacts generated on housing conditions. Finally, we worked with the production process of the urban space of Ushuaia and Río Grande based on the recognition of the dynamics of mercantilization and demercantilization, spatially identifying three major logics: from the market, from the State (at its different levels) and from civil society. Likewise, in this case, descriptive and explanatory scopes were combined from a mixed approach.

For the analysis of the current configuration of urban inequalities, three issues were taken into account to illustrate the patterns of inequality in each case in 2020. First, the conditions of urban vulnerability in each city were analyzed, identifying degrees of affectation according to the different logics of action. Second, affordability conditions were analyzed, defined in terms of a relationship established between the prices available in the formal land and rental market and the population's payment capacity. Both affordability and vulnerability were analyzed based on previous research (Fank, 2021). Finally, the conformation of scenes of inequality between the city produced under the

mercantile logic and the decommodified logic was analyzed in a synthetic way. The scope, in this case, was descriptive. Figure 3.8 summarizes the main dynamics, variables and sub variables of analysis related to the study of intra-urban dynamics and urban inequalities.

Extra-Urban Dynamics
Time period: 1972- 2019

Dynamics of analysis	Variable of analysis	Sub variable of analysis
Context of the Special Economic Zone of Tierra del Fuego	<ul style="list-style-type: none"> • Sub-regional provincial scale • National Scale • Global Scale 	<ul style="list-style-type: none"> • National Law 19.640 • End of the ISI • Promotion regimes • Production restructuring (consumer electronics industry)
Changes in the production structure	Evolution of the main economic activities	<ul style="list-style-type: none"> • Industrial Gross Geographical Product • Industrial employment • Emerging activities (tourism)
Changes in the demographic structure	<ul style="list-style-type: none"> • Urban/rural population • Evolution of population growth 	<ul style="list-style-type: none"> • Sub-regional/ provincial level • Ushuaia • Río Grande
Transformations in spatial structuring	Spatial distribution of productive activities	<ul style="list-style-type: none"> • Ushuaia • Río Grande

Figure 3.8: Intraurban dynamics. Dynamics, variables and sub-variables of analysis. Source: Own elaboration.

The methodological strategies for approaching each of these components were different, as were the techniques and sources employed.

3.4 Methodological approach adopted in the research

The need to respond to a complex problem defined the adoption of a mixed approach, based on the articulation of qualitative and quantitative approaches and spatial analysis, considering that they operate in a complementary manner (Abello, 1987; Creswell, 2003) and the many advantages of its triangulation (Cantor, 2002). This type of approach presents several strengths, among them the greater explanatory capacity provided by the interpretation of data of different nature, the possibility of working on different levels of the problem under study, (Todd, Nerlich y Mc Keown, 2004), as well as greater creative potential in terms of theoretical contributions, since they incorporate more critical appraisal procedures (Clarke, 2004 en Hernández Sampieri, 2014). Given that the thesis proposes a comparative, multidimensional case study, the predominance of one approach or another is identified

depending on the nature of the dynamics and/or dimension under study, a matter that will be described in depth below. The mixed approach gave rise to a two-way relationship with theory, insofar as a defined theoretical approach was used as a starting point, but it was not applied mechanically throughout the process of the study, but rather different complementary contributions were incorporated. In this sense, inductive and deductive logics were combined and a flexible and dynamic approach was adopted (Buffalo, 2013) that allowed for continuous revisions, refinements and adjustments of the research process, based on the analysis of data, field work, theoretical reading and acquired knowledge.

Considering the predominant perspective of the field of urbanism, the research problem under study, and the mixed approach used, four central criteria guide the methodological approach of this research:

Spatial approach: The explanatory power of the spatial dimension and the relationships that derive from it are emphasized, understanding space as a primary form of interpretation of the world as well as an interpretative key to social processes (Lefebvre, 2017 [1968]; Soja, 2000). Space is emphasized not as a scene, but as a center from which to analyze other dimensions, such as economic, political and social issues. Spatiality is understood, in the words of Soja (2000), as a complex social product, composed of political and ideological forces, and presents the same explanatory potential as historical and social analysis. In addition, the spatial representation of the primary and secondary qualitative data collected, through the elaboration of the corresponding maps, allowed for a better understanding of the problem under study. Although the urban space of the cities of Tierra del Fuego is the ultimate object of analysis, its analysis is carried out from a multiscale approach, which is described below.

Multiscale Approach: From the USD theory, it is understood that the production of urban space involves a series of processes and dynamics that take place at other scales and that influence what happens within cities. The starting point is the departure from a nested scalar conception, in which the global has an impact on the national, the national on the regional and the regional on the urban. As Brenner states (2009a), a complex network of political and economic processes and dynamics that, within the framework of global capitalism and the model of flexible accumulation, intervene in an overlapping manner in the different scales of the territory. In this sense, the urban is a unit of analysis, which contains and is contained by processes that occur at multiple scales. Those processes that take place "outside" the urban are interpreted as extra-urban dynamics, while those processes that take place within the urban are interpreted as intra-urban dynamics. Analytically, the extra-urban dynamics are approached separately and in the first place, considering a "from the general to the particular" approach, carrying out the most in-depth analysis at the last scale of approach, the

urban scale. Particular emphasis is placed on the analytical importance of the subregional scale, corresponding to the territory comprising the Isla Grande of Tierra del Fuego, in almost permanent dialogue with the urban scale of the cases studied.

Temporal (historical) approach: The production of space in the context of capitalism is influenced by processes of transformation that occur over time, as the phases of accumulation change. This thesis deals longitudinally with the spatial transformations that have as their framework the last phase of neoliberal capitalism, which began in the decade of 1970. The time frame for the USD analysis then comprises 48 years, from the beginning of the industrial promotion in 1972 until 2020, within which sub-periods of analysis are distinguished, which were developed as part of the research process. However, the historical analysis also covers, as we shall see, the historical formation of the space prior to 1972. This is approached with a higher level of generalization, but it is an important issue in the understanding of the subsequent analysis. In terms of methodology, space is approached historically from the synthetic-analytical method (Delgado García, 2010), which allows breaking down a phenomenon into multiple aspects and then analyzing their relationships together, chronologically and geographically.

Comparative case approach: The knowledge acquired from critical urban studies is based on the appreciation of place and specific histories. Comparison, following McFarlane (2010) and considering a postcolonial perspective, is an appropriate strategy to reveal the different character of urban spaces (as well as of the different forms of knowledge). This author proposes to abandon comparisons based on paradigmatic urbanism, focused on superlative, prototypical urban formulations, to abandon the universal narrative where the "others" are compared with some paradigmatic city. From an alternative approach, both the content of the comparative study and the structure from which knowledge of the urban is produced are put in crisis, and the comparison appears as a strategy rather than as a set of methods. It is a strategy of "criticism" and "otherness" in the face of universalized categories of analysis that allows theoretical and methodological contributions to be made from the recognition of the singularity of urban spaces. Considering the approach through the comparative case study⁹³, we can state that this constitutes "a research strategy aimed at understanding the dynamics present in singular contexts" (Eisenhardt, 1989, en: Martínez Carazo, 2006: 174).

Space is then studied comparatively and in its multiple spatial and temporal scales. As we have seen in the theoretical discussions, the greatest specific emphasis is placed on understanding the dynamics

⁹³ Following Chetty (1996), this type of approach is considered adequate for those studies that seek to understand how and why certain phenomena occur, as is the case of the present research.

that produce inequalities, an issue that requires a complex and multidimensional methodological approach. It highlights the effort made in this research to generate a concrete method to understand the characteristics of USD in Latin American cities, both in the processual dynamics that generate it, as well as in the concrete form it acquires in specific places, which may result in a contribution to future works.

3.5 Strategies, techniques and sources used in the analysis of USD and urban inequalities.

Due to the nature of the different dynamics and variables considered in the case study, the research required the use of different methodological strategies depending on the stage of progress. These were defined by chapters, and respond mainly to the type of information required according to the particular research objectives established in each case. In this regard, a combination of quantitative, qualitative and spatial strategies was used depending on the specific objective. The techniques and instruments, as well as the sources of information and the mechanisms for systematizing the information, are described in detail in each chapter of development. Table 3.1 summarizes the main methodological strategies according to the particular objective.

Table 3.1: Methodological strategies according to specific objectives

<i>Strategies</i>	<i>Technique applied</i>	<i>Objet. 1</i>	<i>Objet. 2</i>	<i>Objet. 3</i>	<i>Objet. 4</i>
<i>Qualitative</i>	Documentary analysis				
	Conduct of exploratory interviews				
	Conduct of semi-structured interviews				
	Field visits				
<i>Quantitative</i>	Statistical data analysis				
	Production of statistical information based on the analysis of secondary sources.				
	Calculation of the housing shortage				

	Elaboration of statistical information based on spatial measurements				
<i>Mixed</i>	Documentary survey, analysis and systematization (obtaining quantitative and qualitative results on qualitative databases)				
<i>Spatial analysis</i>	Spatial analysis based on satellite images observation				
	Spatial analysis based on statistical information				
	Spatial analysis based on pre-existing documentary and cartographic information				
	Spatial analysis based on interviews (social/state cartography)				
	Spatial analysis through the production of critical urban cartography				

Source: Own Elaboration

The case study allowed us to work with multiple quantitative and qualitative techniques to obtain data, such as interviews and direct observation, documents and files (Chetty, 1996). We worked with primary and/or secondary sources, depending on the nature of the components, dynamics and variables of analysis and the methodological strategies used to approach them. The main techniques and main sources in each case are expanded below.

3.5.1- Documentary analysis

Documentary analysis, as a systematic process used for the organization, representation and interpretation of texts related to a certain subject matter (Mijáilov y Guiliarevskii, 1974; Peñaz y Pirela Morillo, 2007), constituted a fundamental technique in the approach to the processual dynamics studied in this thesis. It was used both for the understanding of historical processes of production and occupation of space in Tierra del Fuego and its cities, and for the understanding of economic-productive and political dynamics, both extra- and intra-urban. It allowed the collection of ideas or contents from pre-existing documents (secondary sources) by means of a synthetic analytical processing. This involved multiple stages ranging from the selection and collection of information, to its subsequent analysis and specific use according to the objectives or topics worked on, building a new

text (Alonso, 1995). The secondary documentary sources were complemented with statistical and cartographic sources, and are presented in the contents of each of the chapters of development of this thesis. At a general level, the main sources selected according to their specific use are presented in Table 3.2, while their complete description is presented in Annexes 1 and 4.

Table 3.2: Documentary sources according to analysis objective

<i>Objective of the documentary analysis</i>	<i>Type of Source</i>	<i>Source</i>
<i>Historical understanding of the process of occupation of Tierra del Fuego and its cities.</i>	Research work related to geographical and natural conditions.	Iturraspe y Urciuolo, (2000) Meglioli (1992)
	Historical documents related to the process of expansion and occupation of Isla Grande.	Chapman, 2008 (1989)Orquera y Piana, (1999a) Casali (2013) Canclini, (1989) Alonso Marchante (2014) Imaz (1972) Gaignard (1963)
<i>Analysis of the transformation of the productive, demographic and territorial dynamics that occurred with the definition of Tierra del Fuego as an SEZ</i>	National and provincial legislative information related to the productive promotion of Tierra del Fuego.	19.640 Law and modifications Decree PEN N° 916/2010; 39/2011; 26/2012 y 2623/2012 26.539 Law
	Research works related to the industrial promotion of Tierra del Fuego and the transformation of the socio-productive structure.	Mastrocello, (2008) Azpiazu, (1988) Filadoro, (2007)
	Research works related to the transformation of the socio-demographic structure of Tierra del Fuego.	D'Eramo y Cao (2021) Hermida, Malizia y Van Aet, (2013)
	Research works related to the transformation of the spatial structure.	Bondel, (1985) Ciccolella, (1988)

<i>Analysis of the transformation of the dynamics of expansion and production in the urban spaces of Ushuaia and Río Grande.</i>	Technical Reports from the Provincial Housing Institute.	Legislative Power from Tierra del Fuego. Official Communications N 091. 2008
	Urban plans	Ushuaia: Urban Strategic Plan (2003); Urban Management Plan (2003); Plan Río Grande: Land Management Plan (2011).
	Legislative information at the territorial/provincial and urban level related to urban planning and management.	Ordinances, laws and decrees related to urban planning in Ushuaia and Río Grande.
	Research works related to the transformation processes of urbanization of Ushuaia and Río Grande.	Pérez, Debia, Lobato & Martínez (2015) Finck, (2019) Alcaraz, (2015) Lobato, (2017) Martínez, Finck & Lobato (2019)

Source: Own Elaboration

3.5.2- Spatial Analysis

Considering the spatial approach that permeates this thesis, spatial analysis was a main technique both as a source of data generation and as a means of interpreting research results. The definition of spatial analysis is diverse and depends on the approach within geography from which it is used, i.e., whether it is closer to positive quantitative, historical or critical research⁹⁴. In this thesis, and from the critical urban approach adopted, spatial analysis is central to identify the multiple dynamics (and their interrelationships) that produce inequalities on the territory and also the specific spatial patterns (in terms of time and geography) of inequality.

⁹⁴ Madrid and Ortiz define it as "a moment in the research process in which a series of techniques are combined that seek to separate, process and classify data to contribute to the search for answers to a larger problem" (2005: 18). (2005: 18). They have two issues in common: on the one hand, the identification of space components, and on the other, the use of procedures that lead to the understanding of their functionality.

Spatial analysis makes use of different information representation techniques based on cartographic representation and interpretation. The cartographic representation of space "involves a complex process of abstraction that depends on the scale, the type of representation and the data we use; the result is the simplified image of the territory". It was used in this sense as a graphic tool that serves above all to "think geographically" (Muehrcke, 1981, en Font-Casaseca, 2021: 197), conceived as a cognitive process beyond its formal materiality, and for this purpose different analytical tools were produced. The first of these is the map, which has the capacity to "synthesize and visualize spatial patterns and relationships, organize geographic information and communicate information more effectively than other textual media" (Font-Casaseca, 2021:196). In addition to maps, other reflective and imaginative cartographic practices and resources were used, such as conceptual graphics and interpretative spatial diagrams, which are very useful tools for the synthetic-conceptual elaboration of space. Far from cartographic perspectives that advocate for their accuracy, from a critical cartographic perspective, maps and other types of cartographies are social constructions, which can be understood as an "agreement between errors" (Pickles, 2004, en Font-Casaseca, 2021), insofar as they do not show all aspects of reality but only those that are interesting for a given purpose. The maps and other cartographic tools used focused their attention on understanding the dynamics that produce inequality in space and also on the spatial forms of inequality.

The tools within spatial analysis are diverse, and their choice depended on the type of result sought, according to the different methodological instances. There are at least four major groups of tools for spatial analysis based on Madrid and Ortiz (2005), according to the type of technique used and the type of information to be represented in spatial terms. In this work, tools based on qualitative and quantitative techniques, graphical representations and maps using GIS have been used, which have made it possible to produce more or less rigorous cartographies in terms of "objective" representation of space⁹⁵, depending on the instances of research and the type of component studied. Graphic representations and qualitative techniques were used throughout the research, from the theoretical reinterpretation to the elaboration of graphs and final conclusions. On the other hand, GIS maps and quantitative techniques were used mainly to approach intra-urban dynamics of spatial production and urban inequalities, in order to establish inter-city and longitudinal comparison criteria. In that sense, the usage of the software *QGIS 3.2 BONN* was a fundamental component for the analysis and processing of the information. Table 3.3 summarizes the main applications of spatial analysis, according to the techniques used.

Table 3.3: Spatial analysis according to techniques used.

⁹⁵ It is considered that cartographies are social constructions, which show (or not) power relations, and therefore, they are far from being totally objective. On the contrary, they are always based on a position with respect to the power relations which build the territory, and therefore, it is necessary to make explicit the theoretical and/or political position of the person who develops them.

<p><i>Spatial analysis based on the observation of satellite images and aerial photographs</i></p>	<p>Technique used for the elaboration of geo-referenced cartography, used as the main instrument for the comparative analysis of the spatial dynamics of urban expansion and occupation logics of the case studies. We worked on the basis of aerial photographs and satellite images available for each city. The satellite images were consulted on the availability of Google Earth for the different sub periods of study. Historical aerial photographs were provided by the Water Resources Department of the Province of Tierra del Fuego..</p> <ul style="list-style-type: none"> · Spatial analysis of urban expansion: Historical maps of urban expansion were made for each city using GIS and <i>QGIS 3.2- BONN</i> software. The base images coincide with the time sections.: 1972; 1991; 2015 y 2019. In view of the lack of available historical graphic information, a spatial reconstruction was carried out through documentary analysis and consultations with experts. · Spatial analysis of the logics of occupation: The logics of occupation of space (mercantile, state and that produced by civil society) were geo-referenced based on the observation in an image from 2020. Subsequently, the historical construction process was carried out inversely, through documentary analysis and consultation with experts.
<p><i>Spatial analysis based on pre-existing documentary and cartographic analysis</i></p>	<p>Technique used to address the pre-existing conditions of occupation of the Tierra del Fuego territory, and also complementary to the study of expansion dynamics and logics of occupation of urban spaces. The first step was the analysis of secondary documentary and cartographic sources, both academic and public documents that had generated information in this regard. Historical documents, statistical records from official sources were taken into account (National Statistics and Census Institute -in Spanish, INDEC-, and Statistics and Census Office), urban plans of each city and historical regulations. Subsequently, the information was added to our own cartographic databases, contrasted with the observation of satellite images and interviews.</p>

Spatial analysis based on interviews with experts (social/state cartography⁹⁶)

This was the central technique, together with the spatial analysis of satellite images, in the historical approach to the logics of production of urban spaces. The actors consulted were: technicians belonging to the Urban Planning and Habitat areas from Ushuaia and Río Grande Municipalities and the Provincial Housing Institute from the Province (8), engineers and surveyors who participated in the historical urbanization process in both cities (5), and inhabitants of informal settlements (3). A total of sixteen interviews were conducted in which we worked with the maps generated based on the spatial analysis of satellite images and historical documents. In each one of them, the interviewees contributed new information from the freehand drawing on the cartographic base. Through joint work, the maps produced were corrected and completed. The spatial information was subsequently translated into statistical information and allowed comparisons to be made between the different cases. Figure 3.9 illustrates the process of constructing the social/state cartography.

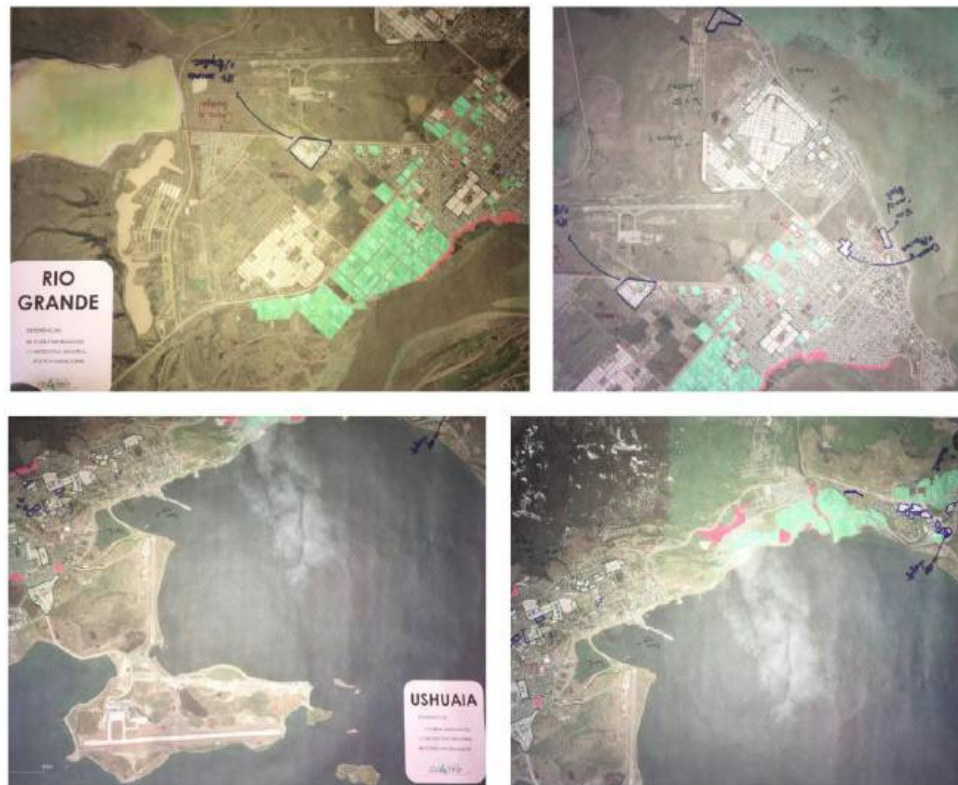


Figure 3.9: Social/State cartography construction process

Spatial analysis through the production of critical urban cartography

It was a central and transversal technique in the thesis, used for the elaboration of interpretative syntheses of the different components and dynamics under analysis, both at a theoretical level and in the empirical work. Although it does not present the technical rigorousness shown by the other ways of constructing graphic representations, its construction is based on concrete information and/or data.

⁹⁶ Social cartography is a participatory mapping technique (Barragán-León, 2019). In this work, it was used as part of the process of constructing historical maps (1972-2019) of urban space production. It also allowed us to socialize and disseminate knowledge among the different actors involved.

Spatial analysis based on statistical analysis

It was a technique used in previous studies carried out by the author, and which in this thesis allows us to approach the study of urban inequalities. It was particularly used for the study of urban vulnerability and affordability. These studies are presented in Annex 6.

Source: Own Elaboration

3.5.3- Interviews

These techniques were used in the three possible senses proposed by Kerlinger (1997): at the beginning of the research for exploratory purposes, as one of the main research instruments and, finally, as a complement to other methods. The interviews provided information on intra- and extra-urban dynamics, including spatial aspects that could be understood from them, and were a fundamental tool for the historical reconstruction of the process of production of urban space in the cities studied. Open-exploratory and semi-structured interviews were conducted, depending on the research instance. Selective sampling was the method chosen to achieve intensive, detailed and in-depth knowledge (Salgado, 2011) on the phenomena of interest studied. To this end, an ad hoc base was built on a first selection of key informants, which was subsequently expanded by "snowballing" according to the new names provided by the interviewees.

The criteria for selecting informants were thematic and temporal. From the thematic point of view, actors from different areas who provided information on productive aspects of Tierra del Fuego were identified, as well as those related to the production of urban spaces. We interviewed, on the one hand, actors belonging to the industrial companies and state actors linked to industry and the productive dynamics of Tierra del Fuego and of each city in particular. Secondly, interviews were conducted with provincial and local public actors, both technical and political, who were in office at that time or who had been in other periods within the time frame studied, linked to planning issues, as well as knowledgeable about the process of urban space occupation, in both cases. Finally, we interviewed informal settlement referents, NGO technicians, independent professionals and academics linked to urban issues, both in Ushuaia and Río Grande. In temporal terms, we tried to cover the different sub-periods under study.

In this way, the interview of key local actors became a means for historical and spatial analysis and, at the same time, a method for validating the results obtained after arduous processes of building incomplete quantitative and spatial databases. That is to say, for the construction and interpretation of data. A total of 46 interviews were carried out, which are presented briefly in Table 3.4 below and in detail in Annexes 2 and 3. The actors interviewed are also listed in each chapter, according to the subject dealt with.

Table 3.4: Interviews according to type of participant and area of work.

	<i>Productive dynamics interviews (14)</i>	<i>Occupation of urban space interviews (4)</i>	<i>Urban spatial planning interviews (28)</i>
<i>Public Sector</i>	Participants from the Ministry of Industry from Tierra del Fuego	Participants from Habitat Secretary from Ushuaia and Urban Development from Río Grande.	Participants from Provincial Housing Institute. Technical and management positions.
	Participants from the Ministry of Economy from Tierra del Fuego	Former municipal and provincial technicians and officials, who have worked in the process of property regularization in the decades of 1980, 1990 y 2000	Participants in the urban planning areas in the 1980s, 1990s and 2000s. Technical and management positions.
	Participants involved in the formulation and implementation of the 19.640 Law	Researchers from National University from Tierra del Fuego	Actors from the Urban Planning Department and the Public Works Department of Ushuaia, and from the Secretary of Territorial Planning of Río Grande.
<i>Private Sector</i>	Executives and managers of industrial companies, commerce and tourism chambers.	Independent professionals (engineers and surveyors) who participated in public tenders for urbanization and land regularization.	Independent professionals who participated in the design of urban planning instruments.
<i>Civil Society</i>	Unions	Residents of current and former informal settlements Technical participants from social organizations for the Right to Habitat.	

Source: Own elaboration

3.5.4- Statistical analysis

Statistical analysis proved to be an important technique both to identify changes in the behavior of processual dynamics and to establish parameters for comparison in the evolution of cities. In the first case, it provided complementary elements to the qualitative techniques and documentary analysis that allowed us to understand the transformations over time of the productive dynamics, to define cycles of behavior of the industrial dynamics and also its correlation in the sociodemographic dynamics. In the second case, it made it possible to analyze longitudinally and transversely the changes in the dynamics of urban expansion and production of urban spaces in the cases studied. It also proved to be a fundamental strategy in the study of urban vulnerability as part of the analysis of urban inequalities. Both primary and secondary sources were used for the statistical analysis, depending on the instance and the specific research objective. Table 3.5 summarizes the types of statistical sources according to criteria of use.

Table 3.5: Statistical analysis according to use and type of source

<i>Type of source</i>	<i>Use</i>	<i>Source</i>
<i>Economic statistics on employment and production</i>	These provided information on provincial and municipal employment for each case study and on the different productive sectors. They allowed the construction of comparative historical series on economic indicators at the provincial level and for each city.	Reports prepared by the Federal Investment Board -in Spanish, CFI-, Economic Censuses, statistical series prepared by the General Department of Statistics and Censuses of the Province of Tierra del Fuego.
<i>Social demographic statistics of population</i>	They made it possible to understand the impacts of the productive dynamics at the socio-demographic level.	Population, Household and Housing Censuses
<i>Social housing statistics</i>	They made it possible to characterize the social-housing conditions in relation to the different sub-periods of the industrialization process and other relevant productive activities.	Population, household and housing censuses, technical reports prepared by the Provincial Housing Institute, statistical series prepared by the General Department of Statistics and Census of the Province of Tierra del Fuego.

Source: Own Elaboration

3.5.5- Field visits

Field visits complemented the information obtained from the spatial analysis and interviews, and enriched the qualitative analysis. Processes and on-site observations were carried out to complement the spatial analysis of the processes analyzed, the characterization of the productive dynamics and the characterization of the dynamics related to the logics of occupation of urban space. Photographic records were taken for descriptive purposes.

For the characterization of the productive dynamics, tours were carried out in the Industrial Park of Ushuaia and Río Grande and four visits to industries (two in each city): *New San* factory and Renacer Cooperative in Ushuaia, and the productive plants of Mirgor and BGH in Río Grande. In the case of *New San* a tour of the plant was conducted in the company of the Quality and Environment Manager, during which the different stages of the production process were reviewed.

In order to characterize the logics of urban space production, urban tours and inspections were carried out, both in housing plans promoted by the State, as well as in market-driven neighborhoods and informal settlements in Ushuaia and Río Grande.

Concerning housing policy, the main housing plans of each sub-period of study were covered in the process. Regarding market-driven neighborhoods, in the case of Río Grande, the process covered neighborhoods located to the north of the city, while in Ushuaia, to the west of the city. In the case of Río Grande, the settlements located in the South Bank were visited, while in the case of Ushuaia, the settlements located in the center of the city were visited (Colombo Neighborhood) and settlements located in the mountainside (Raíces Neighborhood, Raíces 4, El Escondido Neighborhood and Dos Banderas sector). In the latter case, a visit was made with personnel from the Habitat Office of the Municipality. During the visits, written and photographic records were made, which served as inputs for the GIS cartographic construction. Table 3.6 lists the field visits according to the dynamics under study, and they are presented in more detail in Annex 5.

Table 3.6: Field visits

<i>Field visit</i>	<i>Type</i>	<i>Name</i>
<i>Productive dynamics</i>	Industry	<i>New San</i> (Ushuaia) Renacer Cooperative (Ushuaia) Mirgor (Río Grande) BGH (Río Grande)
<i>Urban dynamics</i>	Housing policy: housing plans promoted by the national, subnational, provincial and municipal governments	<i>1972- 1991 period:</i> Ushuaia: Gallinero Mount, San Salvador, INTEVU V, IV, XVII Río Grande: INTEVU I, II, III, X <i>1991- 2003 period:</i> Ushuaia: 645 houses, 245 houses Río Grande: Chacra II urbanization <i>2003- 2015 period:</i> Ushuaia: Río Pipo urbanization Río Grande: Chacra X, Los Cisnes urbanization <i>2016- 2019 period:</i> Ushuaia: PROCREAR houses Río Grande: PROCREAR houses
	Market-driven urban developments	Ushuaia: Mirador Fernández, Casas del Sur, Costa Susana, Ushuaia Chico Río Grande: Vapor Amadeo, Altos de la Estancia, EL Murtillar
	Informal urbanizations	Ushuaia: Colombo Neighborhood; Raíces 4 Neighborhood, La Cima, Andorra Neighborhood Río Grande: 15 de Octubre Neighborhood, Aeroposta Neighborhood, Esperanza Neighborhood, Chacras de Margen Sur

Source: Own Elaboration

3.5.6- Other techniques and sources

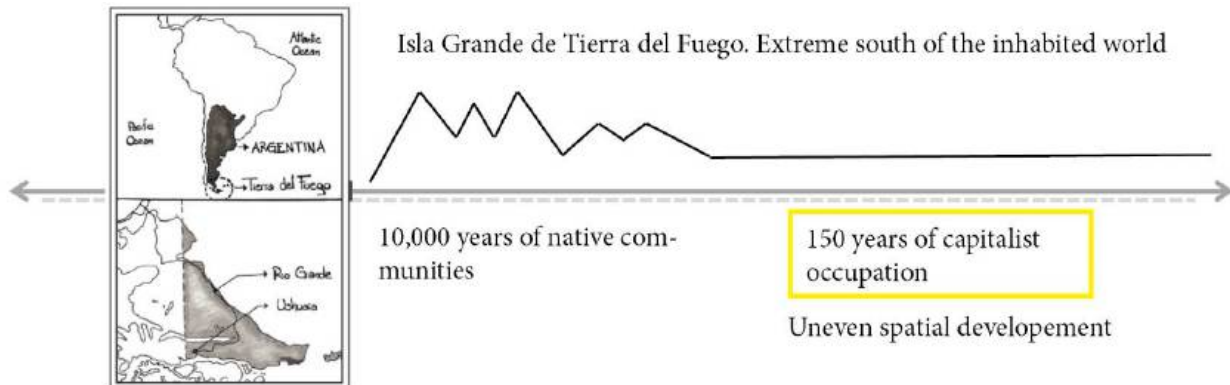
For the identification of urban vulnerability levels, work was carried out with an index⁹⁷ of urban vulnerability (IVU), which is the result of a methodological design previously carried out in the master's thesis prior to this research (Fank, 2021). The methodological design combines quantitative and qualitative strategies, with spatial analysis strategies. A summary of the method applied is presented in Annex 6. While quantitative tools were used for the measurement of indicators and the numerical definition of the index, the instances of analytical construction and weighting were defined qualitatively through the assessments of the subjects involved in the subject matter. Spatial analysis was used both for measurements and for the specialization of results. The results were also used to analyze affordability conditions in relation to the land and rental market.

With the theoretical and methodological aspects clear, we will now approach the empirical work developed, initiating with the study of the territorial conditions in Tierra del Fuego prior to the industrial dynamics.

⁹⁷ An index is a " non-dimensional magnitude that results from the weighted addition, according to the procedure chosen, of different units of measurement" (Palenzuela, 1999:11). The type of index we worked with is synoptic, and seeks to generate a contextual view of a complex issue. Its usefulness is based on the possibilities it offers for comparability, both in time and with respect to other contexts (Soto & Schuschny, 2009).

Chapter 4:

Tierra del Fuego, society, territory and pre-industrial economy. Conditioning factors of the Fuegian urban space occupation before 1972.



The industrialization process initiated with the definition of Tierra del Fuego (TDF) as a Special Economic Zone (SEZ) in the last phase of global capitalism was the main factor of population development (Cao and D'Eramo, 2020) and urbanization of the Isla Grande. Along with this process, new patterns of Uneven Spatial Development (USD) emerged, expressed in the production of regional space as well as in the production of cities and urban inequalities.

However, as we previously mentioned in the theoretical discussions, expansion of capitalism settled over territories with certain characteristics, resulting by both their geographic circumstances and inherited historical spatial configurations (Brenner y Schmid, 2015). In the case of Tierra del Fuego and its cities, recognizing the natural and produced territorial structure, prior to the arrival of industries, is central in the understanding of the urban space production process that took place subsequently. The physical aspects related to its location, as well as those linked to the population process, were decisive in the geopolitical strategies that delimited the territory as an ESZ in 1972.

Therefore, this chapter pursues the objective of understanding the territorial structuring of Tierra del Fuego before its insertion in the last phase of global capitalism, recognizing its topographical characteristics, the historical settlement process, and the unequal emergence and development of cities.

According to Bondel (1985), geography was a first-order determinant in the occupation process and the spatial organization of Tierra del Fuego, so in first place, a description of its most important features will be presented. Afterwards, an interpretation of the historical regional and urban structuring of TDF in USD terms will be done, according to the analysis proposed by Pradilla Cobos (1995) for the Latin American region. As occurs on a macro-regional scale, the overlapping processes of production and occupation of the Fuegian space allows to visualize an "outward" and an "inward"

territorial structuring. This double reading is relevant to address the origins of urban differences. As it will be shown, TDF was already inserted into global capitalism prior to neoliberalism, although more as a space of resource extraction by international actors than as a space of accumulation *per se*. The national state determined the forms of insertion and production of the regional space, as well as the different roles assumed by the urban centers.

Based on the examination of secondary sources, descriptive-explanatory analysis is conducted with the aim of reconstructing the geographical conditions of Tierra del Fuego and its cities while taking into account the historical processes of settlement. Previous local researchers' contributions, such as those made by Urciuolo and Itrurraspe (2000), Coronato (2017) and Roig (1998), resulted in central supplies to the understanding of the physical characteristics of the Fuegian space. Regarding the population process, Bondel (1985) established typologies of occupation of space that are reconstructed in the present chapter. Furthermore, research made by de Imaz (1972), Garnier (1963), and Mastrocello (2008), which examined the relationship between TDF territory and the successive productive activities placed there, are also taken into account. The analysis of historical sources is complemented with information obtained through interviews made to key informants (E.1; E.2; E.9; E.11; E.41; E.42) and also with spatial analysis of the different territorial configurations analyzed.

4.1 Geographic characterization of Tierra del Fuego

4.1.1- Localization and demographic aspects

Tierra del Fuego stands out significantly from the rest of the Argentine national territory due to its unique geographical features related to its position, harsh climate conditions, and diverse landscapes.

The Province of Tierra del Fuego, Antarctica and South Atlantic Islands (T.D.F.A.I.A.S) is located in the Patagonian Region⁹⁸, at the southern tip of the American continent (Figure 4.1). It is integrated by the Isla Grande de Tierra del Fuego (TDF), a large number of smaller islands located in the South Atlantic (which form a complex network of channels shaped in the past by glacial activity) and the Argentine portion of the Antarctic Territory, covering a total area of 1,002,445 km²⁹⁹.

⁹⁸ Patagonia is the portion of Argentine territory that extends south of the Colorado River, bounded to the west by the Andes Mountains and to the east by the Atlantic Ocean. It covers approximately one third of the total area of continental Argentina, encompassing the provinces of Neuquén, Río Negro, Chubut, Santa Cruz and Tierra del Fuego A.I.A.S. The region presents a wide topographic variability, from 4,000 masl to sea level, which causes important climatic and ecological contrasts. The population density is low and is primarily concentrated in urban settlements located on the Atlantic coast and in the Andean foothills.

⁹⁹ Including claimed territories



Figure 4.1: Map of the Province of Tierra del Fuego, Antarctica and South Atlantic Islands Source: National Geographic Institute: National Geographic Institute (IGN)

The Isla Grande de Tierra del Fuego is the only island that shows a stable Argentine population. It is separated from continental Patagonia by the Straits of Magellan, a natural maritime channel that connects the Pacific and Atlantic oceans. Geographic location is the first conditioning factor for many activities, since it makes connectivity with other regions of the country difficult.

With a total size of 21,571 km², this island it is divided politically between Chile and Argentina, belonging the western portion to Chile and the eastern to Argentina (IGN, official website¹⁰⁰). The majority of the population is based in Isla Grande's Argentine sector¹⁰¹, where the two largest cities are Ushuaia, the administrative center of the province, with 56,593 people, and Río Grande, with 66,475 people (INDEC, 2010). Despite being separated by 116 linear km, the topographic conditions cause difficult connectivity between them, as well as shape the configuration of their different landscapes.

At the foot of the Andes Mountain and surrounded by a mountainous landscape, Ushuaia is situated on the southern coast along the Beagle Channel. Río Grande, on the other hand, is located in the steppe sector that dominates the entire northern sector of Isla Grande, on the northern Atlantic coast. The Andes has functioned as a physical barrier between these two cities for a very long time; up until the 1950s, the principal mode of transportation was by boat, or horse. With the completion of

¹⁰⁰ <https://www.ign.gob.ar>

¹⁰¹ In 2010, the Province had a population of 127,205 inhabitants (INDEC, 2010). However, it is estimated that the population grew by more than 16% since the 2010 census (s/Provincial Directorate of Statistics)

National Route No. 3 in 1949, this scenario changed considerably, establishing a new method of supply and development for both cities. The route links TDF (via a passage through Chile) with the rest of the national territory. However, connectivity is still complex, since it is necessary to cross four customs (two Argentinean and two Chilean) to travel from TDF to the nearest province, Santa Cruz. In addition, there are complications associated with weather conditions, particularly during winter months when crossing the mountain range is often interrupted by freezing or avalanches.

The Municipality of Tolhuin, Isla Grande's third and final urban area, is located in the island's center, as well next to Route No. 3, with approximately 2,625 residents (INDEC, 2010). There are also tiny rural communities like San Sebastian and Almanza, ranches, and National Gendarmerie outposts, but none of these have many inhabitants. It should be noted that TDF is the least populated province in Argentina, with the least number of urban centers and, at the same time, the one with the highest concentration of urban population. Ushuaia and Río Grande concentrate more than 97% of the population of Tierra del Fuego (INDEC, 2010). The scarce population, as we will see in depth later, can be attributed to its extreme location, to the harsh climatic conditions that define it and also to the limitations imposed in certain sectors by the landscape conditions (Bondel, 1985).

4.1.2- Characteristics of the landscape and major ecoregions

Landscape of Tierra del Fuego has been shaped by repeated glaciations (Meglioli, 1992, Rabassa et al., 2000). As a result of the action of different factors through time, Isla Grande (Argentinian sector) can be divided into four types of environment: steppe to the north, mountain range to the south, transition (or ecotone) between these two environments and peatlands to the east, in Mitre Peninsula (Iturraspe and Urciuolo, 2000), as shown in Figure 4.2. The latter has unique natural characteristics that have kept it practically unpopulated. The other three regions, mainly the mountain range and the steppe, concentrate the majority of the inhabitants and productive activities. Comparatively, there are notable differences between them that give rise to contrasts in terms of accessibility, land use, productivity and population.



Figure 4.2: Eco-regions of the Argentine sector of the Isla Grande de Tierra del Fuego. Source: Cruzate & Panigatti, 2007

Regarding the general configuration, Bondel (1985) distinguishes ecologically homogeneous areas that define two dominant landscape types. To the north, the landscape of stepped plateaus, coinciding with the steppe. To the south, the mountainous landscape, coinciding with the cordillera region. Both landscapes show marked differences in their predominant climatic, topographic, hydrologic and vegetation conditions. Between them is a transition landscape, corresponding to the ecotone environment.

The steppe region extends from Straits of Magellan to the Grande River and from the border with Chile to the Atlantic coast. It is the most arid zone of the island, and shows a regime of winds of great persistence, which conditions the possible productive activities. The relief takes the form of hills, plains, low hills and depressions, separated from the mountainous relief in the south by the transition zone formed by hills, wide valleys and lake basins (Coronato, 2017). The water network is not very dense, with gentle slopes towards the Atlantic and watercourses of scarce flow -with the exception of the Grande river, the most important on the island-. The vegetation cover is characterized by the lack of forest and the predominance of grassy steppe, with the presence of wetlands known as vegas (Roig, 1998). Surface water reservoirs are limited and, unlike in the Cordillera, there are no glaciers¹⁰².

Within this region, the city of Río Grande is located on the Atlantic coast, at the Grande's river mouth, where an estuary with several wetlands¹⁰³ of great ecological importance is formed.

The mountain range region, on the other hand, comprises the southwestern sector of the island. It borders to the north with the ecotone or transition zone, to the south with the Beagle Channel, to the east with the Mitre Peninsula and to the west with Chile. It shows, unlike the steppe, conditions of high humidity in which rainfall is distributed evenly throughout the year. The topography is mountainous, alternating with large mountain ranges and valleys modeled centuries ago by the action of glaciers¹⁰⁴. The steep mountains with sharp peaks reach an altitude of 1400 meters above sea level, decreasing in height from west to east and from south to north (Oro et al., 2013), being the lowest Andean peaks in Patagonia. The water network is very dense, short, with steep slopes and moderate flow, and the most important rivers in this group are Lasifashaj and Olivia. In the valley bottoms there are peatlands, characteristic wetlands that usually enclose small lagoons and reach depths of up to 10 meters. The predominant vegetation in this area is the *Nothofagus* forest, which covers 35% of the

¹⁰² However, there are lagoon systems that usually dry up in summer, and cause environmental damage to the urban area due to the contribution of dust under the effect of the wind.

¹⁰³ It is a marine-coastal protected area that includes areas of great international relevance for migratory shorebirds (Birdlife, 2009). Given its characteristics and ecological importance, this sector of 220 km. of coast, it was declared Natural Coastal Reserve through the sanction of Provincial Law 415 (1998).

¹⁰⁴ The Fuegian mountain range is the only Andean portion with a W-E strike, from the Magellan Fault (Iturraspe & Urciuolo, 2008) to the Isla de los Estados, in the South Atlantic Ocean.

surface of the Argentinian Isla Grande. Located in the mountain range environment and in the ecotone, these forests constitute an important element of the Andean landscape (Roig, 1998).

Within this region, Ushuaia is located in a bay of the same name, surrounded to the east, north and west by the Fuegian Andes. Figure 4.3 illustrates the main landscapes of the Argentine sector of the Isla Grande de Tierra del Fuego.

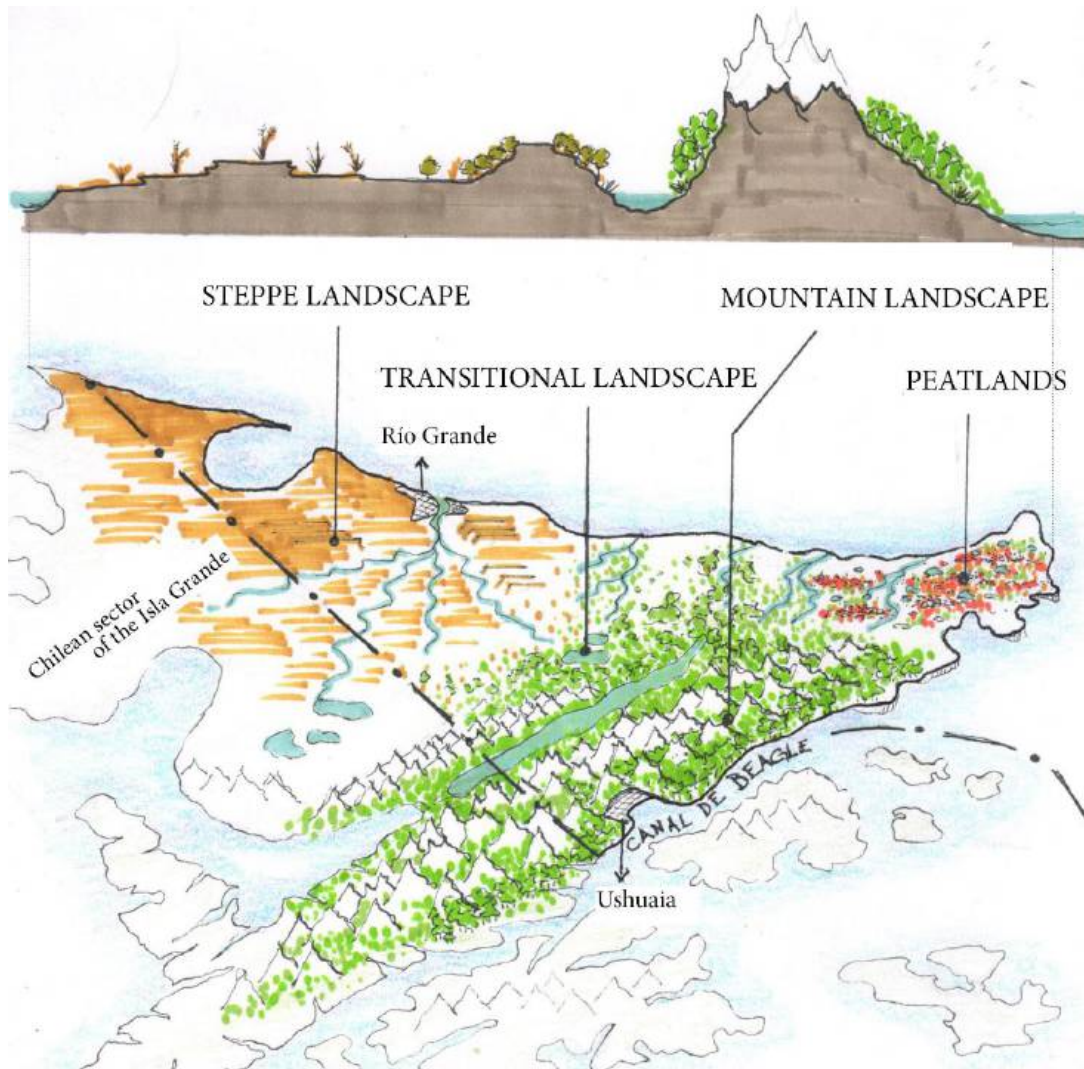


Figure 4.3: Landscapes of the Isla Grande of Tierra del Fuego (Argentine sector). Source: Own elaboration

4.1.3- The climate

Regarding the climate of TDF, it was described by the first European visitors as excessively harsh, almost unfit for human activity¹⁰⁵. The entire Fuegian Archipelago is dominated by the westerly

¹⁰⁵ Following Thornthwaite's classification, the climate type is considered microthermal, humid (B1) in the south, up to Lake Fagnano, changing to sub-humid-humid (C1) and sub-humid-dry (C2) to the north.

wind current and cold fronts, associated with low pressure systems and occasional cold air intrusions from Antarctica (Tuhkanen, 1992). The orography generates different climatic conditions in the different regions of the Isla Grande: frequent precipitation in the mountain range, with significant decreases and more stable weather conditions, greater intensity and frequency of winds (Tuhkanen, 1992)¹⁰⁶ in the northern plains. This results in a cold humid climate with oceanic influence, of moderate daily and seasonal amplitude. Figure 4.4 shows monthly mean temperature variations for Ushuaia and Río Grande. Although they are similar in both cities (5.3° and 5.5° respectively), Río Grande has colder winters and warmer summers, as a result of the lesser oceanic influence.

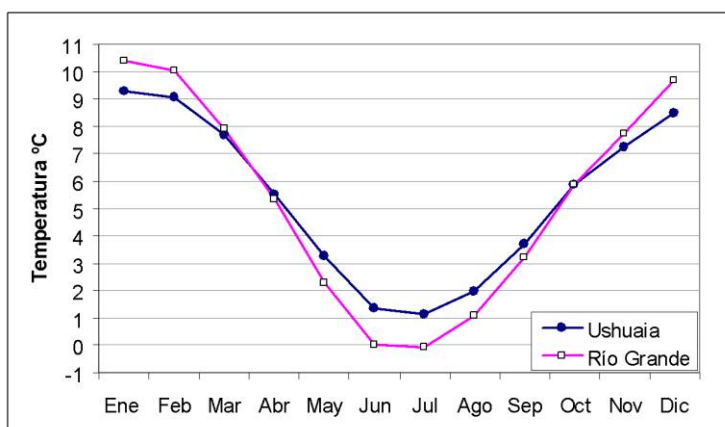


Figure 4.4: Mean annual temperature variation, Ushuaia and Río Grande. Source: Iturraspe & Urciuolo (2008)

While 32% of the days in Río Grande are rainy, 40% of the days in Ushuaia experience rain or snow. Rarely, unusual snowfalls cause traffic problems, forcing the temporary closure of Route 3, and in Ushuaia, causing major accessibility issues in the high districts.

To summarize, it can be noted that both the insular character and the elements of the landscape and climatic conditions described above, define the Isla Grande de Tierra del Fuego as a space of unique characteristics within the Argentine map.

The following text will be dedicated to understanding the particular process of occupation of space in these extreme conditions.

¹⁰⁶ The prevailing winds come from the W quadrant in general and from the SW in particular for the Beagle Channel area. In relation to the maximum winds, gusts of 140 km/h have been observed in both Ushuaia and Río Grande, while the annual average speed is 14 km/h and 23 km/h, respectively (Iturraspe & Urciuolo, 2000). Annual rainfall fluctuates in Ushuaia, with an annual average of 530 mm on the coast of the Beagle Channel and from 800 to 1000 mm in height, while in Río Grande it ranges between 350 and 300 mm.

4.2 Historical characterization of the production of Tierra del Fuego's space

Like the rest of Latin American territory, the settlement and occupation of the Isla Grande Tierra del Fuego might be broadly split into two primary stages. The first one corresponds with the indigenous cultures, who in this case have been present on the land for almost 10,000 years. The second one started with colonization and is marked by the island's (forced) integration into the process of capitalist accumulation, together with the entrance of European cultures. Depending on the resources valued in each of the successive eras of capitalism, various projects of land occupancy were carried out. However, these undertakings were complexly articulated in space, sometimes "sweeping away" previous patterns of habitation, while others, combining or overlapping them.

At least four sub-stages (prior to the arrival of industries) are identified that defined specific forms of occupation of the Fuegian territory, as indicated in Figure 4.5. On some occasions, these forms were more strongly linked to the cultural traits of a certain population, as in the case of native populations. In other moments, the occupation forms were related to economic dynamics, while in others a geopolitical logic predominated.

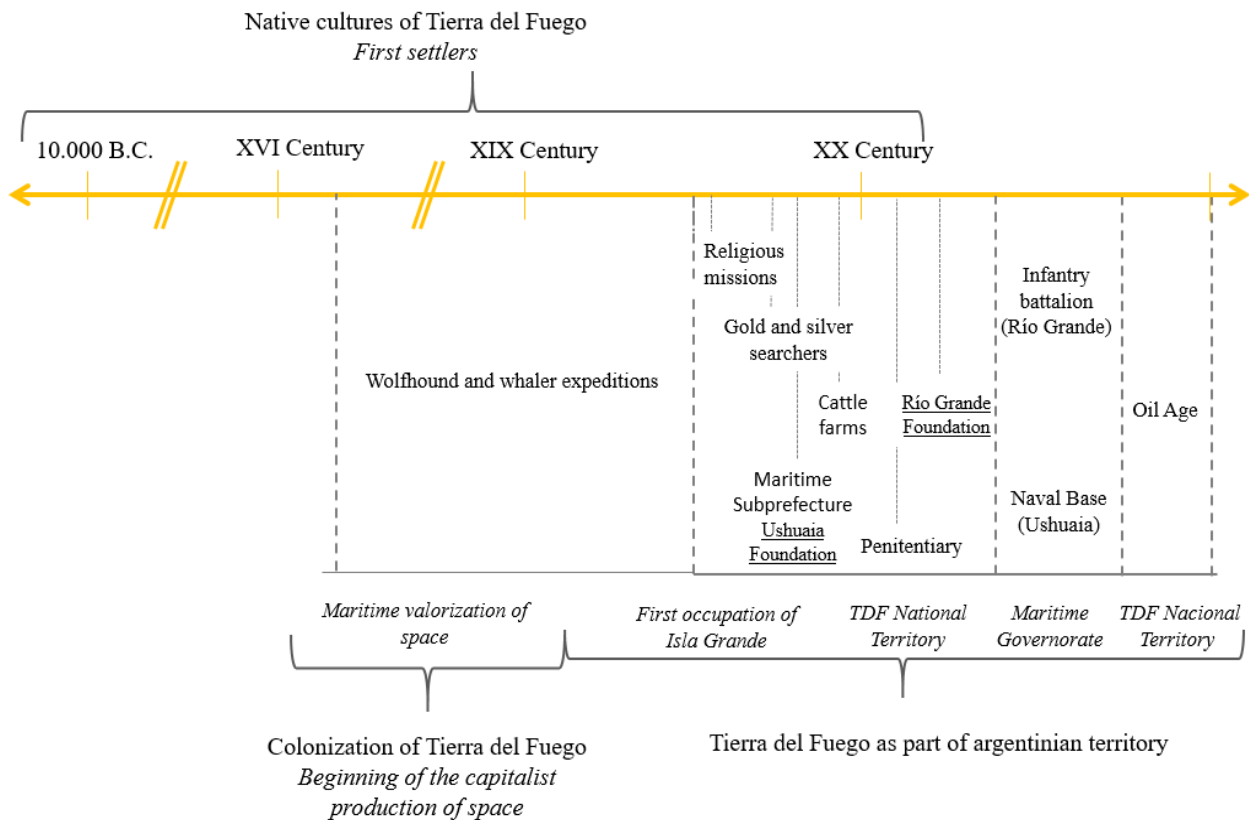


Figure 4.5: Process of occupation and production of the Fuegian space until 1972. Source: Own elaboration

4.2.1- Native peoples of Tierra del Fuego. First settlers

The first settlers who arrived in Tierra del Fuego occupied the Isla Grande when it was still part of a single landmass with the rest of Patagonia. They were nomadic hunters and gatherers dependent on existing terrestrial resources. For centuries, they "lived intimately with nature, as an integral part of the ecosystems they inhabited" (Bondel, 1985:7).

Four different native people inhabited Isla Grande (figura 4.6): the Selk'nam, whom lived in the north and center of the island, in the steppe sector; the Yámanas lived in the south along the Beagle Channel coast; the Alacalufes lived in the west in the area that is now part of Chilean territory; and the Haush lived in the east, actual Mitre Peninsula.

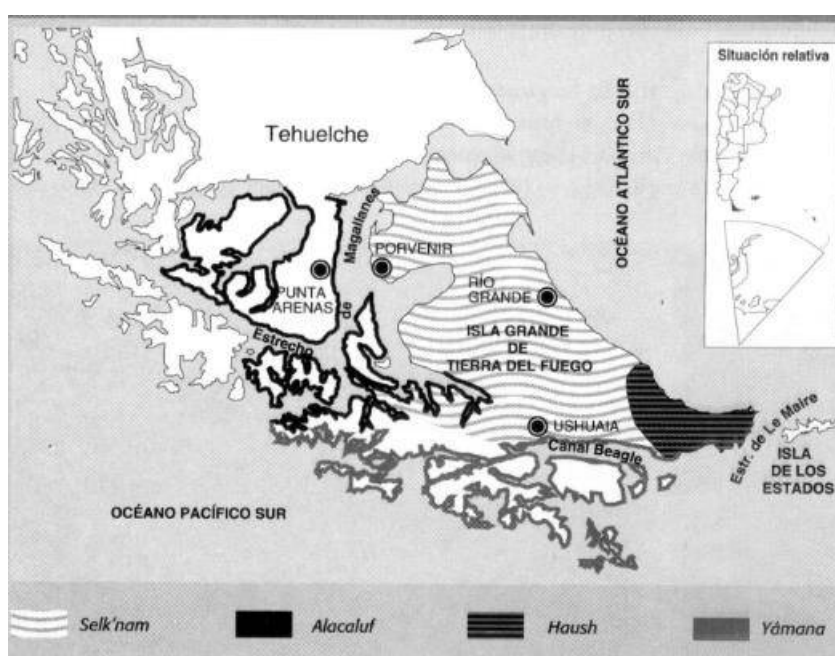


Figure 4.6: Geographical distribution of the native peoples of the Isla Grande de Tierra del Fuego. Source: Anne Chapman in Roberto Barcenas (1990)

The Selk'nam and the Yámanas people are the most known at present, probably due to their greater territorial extension and the coincidence of this with the later western settlement.

The Selk'nam/Haush (also known as Onas) were the most numerous people (between 3,500 and 4,000). They were pedestrian nomads and territorially moved through the area from the southern margin of the Straits of Magellan to the Darwin mountain range in the south of the island¹⁰⁷. Their production system was based on hunting, while their primary source of food (and clothing) was the guanaco (Borrero L. 2001). The idea of reciprocity and equitable access to resources guided their non-

¹⁰⁷ It is believed that the Selk'nam came from the north and must have crossed the Strait of Magellan by some ancient land passage.

hierarchical patrilineal social organization, which was centered on groups formed by families (Chiari, 2014).

Later on, during the seventh millennium BC, societies that were adept at acquiring marine resources settled along the northern Beagle Channel coast (Orquera and Piana 1999a). The Yámanas were a group of "sea people" who lived along the Beagle Channel's shore and on the islands of the Fuegian archipelago as far south as Cape Horn (Orquera and Piana, 1999 a). When they made their first contacts with foreigners in the years 1826–1830, they also had a sizable population of about 3,000 people. In this case, coastal environments and a lack of presence on the mainland influenced their nomadism. They did not enter Isla Grande because of possible conflicts with the Selk'nam (Bondel, 1985) and their productive structure was based on mollusk gathering, although they also hunted sea lions, fish, foxes and occasionally guanacos and birds, in addition to occasionally hunting cetaceans (Orquera and Piana, 1999 b). For food supplies, they traveled in tree bark canoes and used bone-tipped harpoons and wooden handles, and despite the cold, they could dive for shellfish. The basis of their social structure was also the family structure within a non-vertical organization, where several families made up a clan. Regarding territorial organization, they concentrated in transitory settlements located in protected places near the marine fishing areas.

The Alakalufes were a nomadic people who lived on the mainland in what is now Chilean territory up to Yendegaia Bay in the vicinity of the Straits of Magellan, west of Isla Grande. They had no government or organized religion, and when they first encountered Europeans in the 16th century, there were between 2500 and 3000 people living there. On the other hand, the Haush were hunters. Although they have a different origin than the Selk'nam, it is thought that the latter drove them to the eastern end of the Big Island. Additionally, they were a coastal people whose primary subsistence activities included guanaco, penguin, and coastal fishing hunting.

The colonization of Tierra del Fuego was late compared to the rest of the country, but it was relatively abrupt after ten thousand years of development of these local cultures. Luego de diez mil años de desarrollo de estas culturas nativas, la colonización de Tierra del Fuego fue tardía respecto del resto del país, pero muy abrupta. The settlement of the Europeans on Tierra del Fuego lands took place in the middle of the 19th century and the almost complete extinction of these peoples took only 50 years. From 1880 onwards, booming capitalism began to impose itself without moderation and the devices of power towards the native peoples were executed through the joint action of ranchers, religious and state authorities, due to the absence of a transition from a well-defined colonial stage dependent on a European metropolis, to a national one (Casali, 2013). This issue completely transformed the social conformation and territorial structure of the Isla Grande. Casali (2013) states in this regard:

At some point, the original societies were primitive and the space had not yet been altered too much. Suddenly, Tierra del Fuego ceased to be "ecosystemic and biodiverse nature" and became a sublime arena for a typical original accumulation based on savage predation and undisguised violence against human lives and territory. Two aggravating factors of this substantially harmful process of deterritorialization are insularity and hunter/gatherer mobility, key to the agency of the conquered (2013:2).

Depending on the area each group inhabited in, different factors contributed to their rapid extinction. Around the gold mining regions in the north, the earliest interactions with the western people occurred. Later, the cattle colonization policy promoted by the governments of Argentina and Chile had a direct influence on the spatial organization of the Sleknam. The settlement of "estancias" (big ranches) implied the distribution of land among private owners, with its consequent division into plots, fencing, and introduction of sheep, which reduced the population of guanacos, the main source of food for this people. The spatial frontier was gradually shifted along with the distribution of land for cattle ranching, until in 1925 (Decree Law No. 515/1925) only an indigenous reserve area at the head of Lake Fagnano was delineated (which also ended up being occupied by cattle ranches). At the same time, the killings of indigenous people by gold seekers and ranchers over disputes over land and food had a significant impact (Bondel, 1985). During the XVIII and XIX centuries, loboeros and whalers located in the Malvinas Islands cruised the waters of the Beagle in search of wildlife, establishing the first interaction between the Yámanas and the western population (Bondel, 1985). In the case of the Yámanas, the first contact with the western population took place during the XVIII and XIX centuries, with the ships of loboeros and whalers that, based in the Malvinas Islands, sailed the waters of the Beagle in search of animals (Bondel, 1985)¹⁰⁸. However, the settlement of the permanent population with the Anglican mission in 1869, particularly with national population policies, led to the almost complete extinction of this population. Other reasons that contributed to the loss of the majority of the island's original populations included the adoption of new customs, the forcible removal of indigenous (to the Malvinas Islands, Punta Arenas, etc.) the contact with new diseases and the induced isolation in reductions.

4.2.2- The colonization of Tierra del Fuego. Maritime valorization and the beginning of capitalist production.

Since the western population first settled on Isla Grande de Tierra del Fuego in the context of mercantile capitalism and adopting Pradilla Cobos' (1995) interpretation of USD for Latin America, an unequal territorial structuring "outwards" and another "inwards" can be observed. Outwardly, and

¹⁰⁸ The South Atlantic had mammal species such as the fur seal, elephant seal and leopard seal, which for many millennia served as a source of food for the canoe peoples. The arrival of the white man completely altered this balance, bringing some species to the brink of extinction as a result of large-scale hunting as a source of income (Alonso Marchante, 2014).

as is common in all the colonization of Latin American territory, the occupation of TDF acquired traits of belonging to global processes, in this case marked by the consolidation of the Atlantic commercial circuit since the 16th century. However, the particularities in this region differ from the generality, given that until the end of the 19th century there were only situations that could be described as inter-ethnic contact, short term or eventual (De Imaz, 1972).

Although the Spaniards "discovered" Tierra del Fuego with Magallane's expedition at the start of the 16th century, the Spanish crown was unable to establish itself on the Isla Grande as it did in other southern regions (for example, in the Malvinas Islands). For several centuries, the strategic value of the Strait of Magallanes in terms of interoceanic connections was more closely related to the importance of this region than the occupation of the land itself. The sea and the potential for communication and resource extraction, were the first driving forces behind interest in establishing sovereignty in the southern region. In the following three centuries, various English, French and Spanish expeditions followed one after the other to hunt maritime species whose natural habitat was the cold southern seas (Alonso Marchante, 2014), as their fat was used to manufacture oil lamps. Also, expeditions from the United States (now independent) began to head increasingly southward (as they were annihilating the animal colonies). Between 1820 and 1860 these expeditions became a regular activity in areas close to the coastal territory inhabited by the Yamana people, although they did not settle on the Isla Grande¹⁰⁹. Expeditions from Argentina and Chile also started out of Pavón Island and Punta Arenas, respectively, starting in 1870. The Fitz Roy-commanded ship was the one that, between 1826 and 1830, discovered the Beagle Channel, a brand-new maritime strait where Ushuaia would later find settlement.

The spatial organization of the Big Island remained unchanged toward the interior and during these early centuries, despite many actors' attempts to colonize Tierra del Fuego. This spatial organization had been created for 10,000 years by various native peoples who lived in harmony with nature. This began to change towards the end of the 19th century, with the expansion of certain international circuits of capitalist accumulation and the territorial delimitation of the Argentine State.

4.2.3- First occupation of Isla Grande

The "definitive" colonization of Tierra del Fuego began in the middle of the 19th century with the regular explorations of Commander Luis Piedrabuena, who installed a post in Isla de los Estados.

¹⁰⁹ Sea lion hunting would decline until it ended in 1890, due to the almost permanent extinction of the species.

With the independence, the islands of the South Atlantic had become part of the Argentine Republic¹¹⁰, although not without tensions over territorial sovereignty. .

The Patagonian area was still almost entirely populated by natives, who by then averaged 300,000 and were dispersed over the land within the framework of an already established nation-state (Bartolomé, 2004). A brutal process defined by military-institutional action that culminated in the infamous "Conquest of the Desert" in 1878 allowed the national occupation to spread southward under the pretext of defining the territory's internal frontiers (Bartolomé, 2004)¹¹¹. Politically, the conquest was paralleled by the establishment of the Gobernación de la Patagonia (Law N° 954) between 1878 and 1884, which included TDF and had Mercedes de Patagones as its capital. Following the conquest, Law 1532 of 1884 split Patagonia into national territories¹¹², as administrative units with a strong influence from the central power (Cao y D´Eramo, 2019).

This was not the case with TDF, though. Due to its isolation and poor connectivity with the rest of the nation, the national government's presence was minimal at first, consisting mainly of a political-administrative, non-territorialized presence. In this regard, it was not subject to the same State-led campaign of aboriginal extermination as the rest of continental Patagonia; rather, the "de facto" territorial conquest was initiated by parties operating outside the national frontier (De Imaz, 1972, Bondel, 1985). Two significant western population centers that would have a significant impact on the occupation of the Fuegian zone already existed in the area: Punta Arenas in the Chilean province of Magallanes and the Malvinas Islands, which have been occupied by British colonists since 1833.

Two significant territorial structuring "outwards" processes from the Isla Grande of TDF were recognized before the end of the 19th century. The first of these is concerned with the influence of actors outside of the country, or, to put it another way, with the structuring of Tierra del Fuego in the international context, which is primarily characterized by the dynamics of economic accumulation, though it is also important to emphasize those of a political-religious order. The second concerns the geographical organization of Tierra del Fuego in regard to geopolitical dynamics associated with the national government's presence and its goal to permanently hold the country's most southern region.

¹¹⁰ Although in the case of the Malvinas Islands, these were occupied by the British Crown in 1833, a situation that continues to the present day.

¹¹¹ Esta fue una campaña militar llevada a cabo por el gobierno argentino. Consistió en la ocupación de tierras y en el sometimiento cultural de los pueblos nativos, en un proceso que se considera actualmente como un genocidio (Bartolome, 2004). La campaña benefició particularmente a grandes terratenientes y dio lugar a una ocupación europeizante.

¹¹² Los territorios nacionales se crearon en pos de una consolidación de las fronteras nacionales, como una medida de transición en tanto se resolvieran las disputas por el espacio con los pueblos originarios al interior del territorio argentino. Se dividieron en nueve gobernaciones: Misiones, Chacho y Formosa al Norte, mientras que al sur fueron La Pampa, Río Negro, Neuquén, Chubut, Santa Cruz y Tierra del Fuego. Mostraban restricciones en términos de derechos políticos y una menor autonomía, y si bien la ley proponía que la provincialización llegaría cuando alcanzaran una población de 60.000 habitantes, esto sucedió recién hacia la década de 1950, a pesar de que muchos territorios ya contaban con esa población en momentos anteriores.

4.2.4- The occupation of Isla Grande by actors from outside the national territory

Regarding the structuring driven by extra-national actors, the "occidental" civilization's final settlement of the Isla Grande coincided with the introduction of missionary groups to the southern region. Through the American Missionary Society, Anglican pastors settled on Keppel Island (current-day Malvinas territory) in 1855. From there, they undertook several voyages for exploratory objectives¹¹³. The arrival of Bishop Stirling to Ushuaia Bay in 1869 and of Reverend Bridges and his family the following year, meant the first settlement of a European population on the island, creating the headquarters of the Anglican mission and carrying out successive tasks of evangelization, production and research during the following years (Basalo, 1981). The mission recognized Argentine sovereignty¹¹⁴ and functioned as a small village that would be the starting point on which the city of Ushuaia would be founded in later years. Given the natural barrier represented at that time by the Andean mountain range, the Anglicans did not expand territorially to the interior of the island, but concentrated their establishments only on the shores of the Beagle Channel, which they reached by sea (Bondel, 1985). The Anglicans lived together in a relative state of harmony¹¹⁵ Although they had certain colonizing characteristics, the Anglicans coexisted in a state of relative harmony with the native populations of the South, attempting to learn their culture and way of life and frequently defending them from the violence of the ranchers (Canclini, 1989). They eventually left Ushuaia in 1920 and relocated to various islands over the years. Meanwhile, in 1886, after resigning from the mission, Thomas Bridge acquired a 20,000 hectare portion of land granted by the national government to start the Estancia Harberton (currently in existence), the first to introduce sheep and cattle to Isla Grande

The new stage of occidental territorial occupancy was promoted in the northern sector by gold prospectors (who had been concentrating their efforts throughout southern Patagonia), a second religious mission, and subsequently a new class of cattle ranchers and landowners. First, the discovery of gold deposits in 1879 by the Chilean Ramón Serrano Montaner initiated their exploitation, along with the settlement of foreigners, mostly Croatians (Alonso Marchante, 2014). Tierra del Fuego's political and governmental framework had not yet been fully established at the time. The Isla Grande's boundaries between the Argentine and Chilean portions were not set by treaty until 1881, and that

¹¹³ They tried without luck to occupy Picton Island in 1851 and later Navarino Island in 1859, which was rejected by the Yamanas. A key factor in the success of their settlement in Ushuaia was the fact that Thomas Bridges had grown up in the Malvinas among the Yamanas, learning their language and customs.

¹¹⁴ As Basalo (1981) and Bondel (1985) point out, the geopolitical relevance that the installation of this mission meant for England, beyond its evangelizing purposes, cannot be ruled out. In the words of Bondel (1885), "It is unquestionable that the action of the Anglican Mission, with all its share of goodness and heroism, created the most concrete antecedent for organizing the economic expansion from the Falkland Islands." (15-16)

¹¹⁵ Thomas Bridges wrote a Yámana dictionary and conducted two aboriginal censuses. His son Lucas continued the evangelizing legacy.

agreement was not ratified until 1893. Up until that point, the only productive activity had been the hunting of sea lions, penguins, and whales. The Julio Popper-owned “Anónima Lavaderos de Oro del Sud” Company of the South was granted a land concession in 1886 near San Sebastián Bay, in the northern portion of the island, where the Páramo was established as the exploitation's hub. Up until the resource's depletion in the early 1900s, there were three major deposits: Punta Paramo, Sierra Carmen Sylva, and Slodget Bay, each of which yielded more than 600 kilos (Bondel, 1985). As this activity grew, it encouraged the development of technological innovations like the telegraph and the building of ports, which in turn were crucial to the economy at the start of the next century when cattle ranching started to take off. It also entailed a bloody slaughter of the natives (Imaz, 1972).

Subsequently, in 1893, the first mission of the Salesian order was established on the north bank of the Rio Grande River, founded under the name of "La Candelaria" by Monsignor Fagnano.¹¹⁶ Catholic in practice, its main function was to "civilize" the Selk'nam population. The mission carried out agricultural work and evangelization tasks and, as in the case of the Anglican mission, recognized Argentine sovereignty. There was also an attempt, albeit unsuccessful, to protect the native population (Canclini, 1989).

In the case of cattle ranches, these emerged with the formation of the National Territory in 1884, connected to a policy of distributing public properties to significant private owners¹¹⁷ (latifundistas), both for sale and for lease, and were mainly responsible for the economic-spatial development of those years (Bondel, 1985). Sheep farming had begun to grow in Chilean and Argentinean Patagonia, as a result of the influence and productive extension from the Malvinas Islands (Alonso Marchante, 2014) and was fundamental in the process of capitalist valorization of these lands.

Although there was nothing similar to a cattle raising plan for the region at the state level, both the granting of land and the conditions of the agro-export model favored private and foreign businesses, in a context of high international wool prices and high demand for primary goods¹¹⁸ (Mastrocello, 2008). This resulted in the development of large productive units with a concentrated land structure in Tierra del Fuego, as shown in Figure 4.7. A total of 431,000 hectares in the Argentine portion of the Isla Grande were transferred, of which 90% (or around 380,000 ha) were held by four

¹¹⁶ In 1896, after a fire, it was rebuilt again to the north, where it is currently located.

¹¹⁷ The policy of awarding fiscal lands within the framework of Law 817 of 1876, established regimes for the sale and rental of fiscal lands throughout the country for sheep farming. This generated a concentrated ownership structure at the national level, with extensive production and an expansion of sheep production in Tierra del Fuego as well as in the rest of Patagonia.

¹¹⁸ During the process of economic expansion between the end of the 19th century and 1930, once the process of national organization was completed, Argentina was integrated into the world economy through specialization in primary production (Mastrocello, 2008). In this scheme, the agricultural sector grew in the face of an international demand for food, made possible by a context of "openness to foreign trade" (2008: 102). This motivated investment in infrastructure through foreign capital and a significant wave of immigration in response to the need for agricultural labor, modifying the national territorial and demographic structure.

individuals: Alejandro and José Menéndez Behetty, Mauricio Braun, and Sara Braun de Nogueira.(D' Eramo y Cao, 2021).

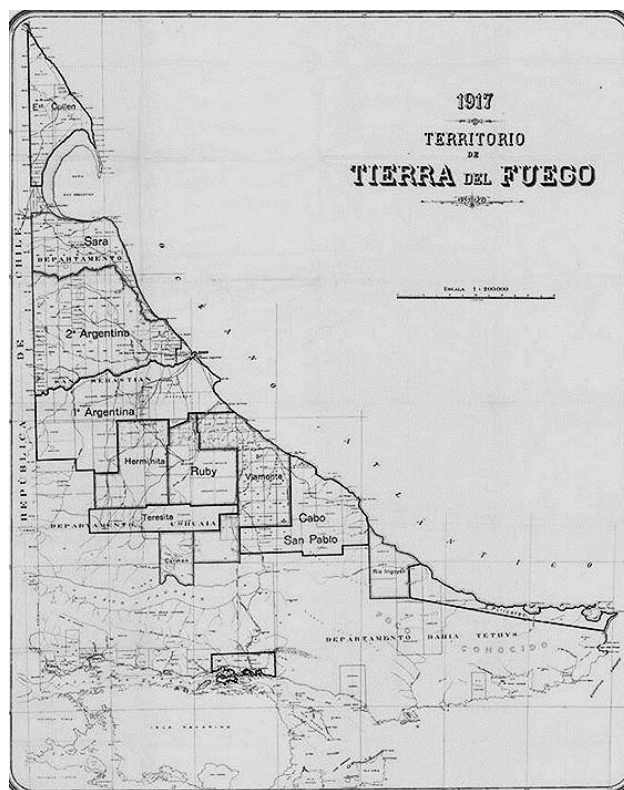


Figure 4.7: Rural cadastre of the Isla Grande de Tierra del Fuego, 1917. Source: Casali & Manzi (2017)

On the other hand, the estancias started to grow as a result of the encouragement the Chilean government gave to the island's cattle exploitation. Since Punta Arenas, Chile, was the center of Southern Patagonia's economic activity at the time, the "Embrace of the Strait" between Chilean and Argentinean presidents (Roca and Errazuriz Echaurren) in 1899 implied the liberation of the flow of goods and capital through the southern limit (Chiari, 2011). Prior to the completion of the Panama Canal in 1914, Punta Arenas, which is situated on the Chilean mainland along the Straits of Magellan, was a port of major significance in South America. The Province of Magallanes was characterized at that time by an occupation of space based on the settlement of foreign capital, mainly English, which in the framework of economic liberalism owned 80% of the land (Bondel, 1985). The Argentine sector of Tierra del Fuego imitated this productive model¹¹⁹ while livestock production used the port infrastructure of Punta Arenas for export¹²⁰, which provided a large part of the labor force. Livestock

¹¹⁹ The big businessmen who expanded the activity to the Island came from Punta Arenas, the most important being Braun (of German origin), Menéndez and Nogueira (of Portuguese origin), etc.

¹²⁰For international distribution, the Export Society of Tierra del Fuego was created in 1893.

(and technology) were imported from the Malvinas, first to Santa Cruz and Magallanes Province, and finally to Isla Grande (Bondel, 1985).

Thus, as stated by Mastrocello (2008), it can be affirmed that until 1943, the year in which the Maritime Governor's Office was created:

Tierra del Fuego was -together with the extreme south of Santa Cruz- the only area of the country where the criterion of "regional integration" prevailed over that of "national integration": Argentine women gave birth in Punta Arenas, where marriages and births were also registered, while the Chilean "carnet" was used to work in the Argentine part of the Island (Mastrocello, 2008:121).

Cattle ranching became the main activity for the takeoff of the regional economy, extending from the north of the island to the south, where it was geographically limited by the mountain range. Due to its importance to the economy and the effects it had on the territorial organization, it fundamentally changed life on the island.

The Selk'nam population decreased as the estancias grew in size, and the Fuegian land suffered what might be described as the most obvious process of accumulation by dispossession (Harvey, 2004; 2007). Casali (2013) provides an excellent summary of the features of TDF's integration into global capitalism:

... the cattle ranchers developed a regional dynamic that exceeded the sovereignty and legal-political interference of state agencies. Based on large estates, sheep farming developed with an enclave character, reinforced by direct communication with the international market (until the opening of the Panama Canal) and the attractive ingredient that Punta Arenas was a customs-free port. The productive capacity and business solvency were enhanced by the very high level of technological and industrial development, the result of English investments and the concentration of capital. In short, between 1880 and 1910, factors came together that had an acute impact on the native communities, especially the Selk'nam, which occupied the territory that would be used for sheep production (Casali, 2013).

The dominance of livestock activities started to decrease by the end of the 1920s for a variety of reasons. On the one hand, trade restrictions with Great Britain throughout those decades caused the global economic crises to have a direct impact on the local economy. The completion of the Panama Canal, a new maritime route that became considerably more strategically important than the Straits of Magellan as a result of its location, was another factor in the city's downfall. This development also caused Punta Arenas to become less important in terms of global trade. Geographical constraints prevented the activity from expanding further once it achieved its pinnacle in terms of productivity. All these issues, together with a greater state presence in the region, led to the devaluation of livestock development.

4.2.5- TDF as National Territory. The national state in the south of the island

While Isla Grande's occupation in the north was closely tied to the advantages this industry provided for capital accumulation (whether through gold mining or cattle ranching), the situation was quite different in the south of the island. Geographically and economically, this sector was cut off from Punta Arenas's regional influence and the dynamics of the cattle-raising industry. By the 1880s, the small Anglican mission community -which acknowledged Argentine sovereignty but reported directly to England through the colony of the Malvinas Islands-, merely served to supplement the native population's existence (for the 1983 Census, the population of Ushuaia was 149 people).

Given the British influence and actions emanating from the Malvinas as well as Chilean activity, the Argentine presence on the Isla Grande during those early colonial times was minimal (Bondel, 1985, Ciccolella, 1989). Due to its insular character, sea transportation served as TDF's primary means of communication with the rest of the nation for a considerable amount of time, which meant lengthy transfer periods and challenges.

The Argentine government began a program of occupation of the island through the building of governmental offices that represented the institutional presence of the nation state after the 1881 Treaty of Limits and as a result of the intense disputes over sovereignty. In 1884, the National Territory of Tierra del Fuego was established¹²¹ and Augusto Lasserre, in charge of the South Atlantic Expeditionary Division, founded in the same year two maritime sub-prefectures, one of them in Isla de los Estados and the other one in the south of Isla Grande, (on the shores of the Beagle Channel where the Anglican mission was already established). The latter constituted the foundational nucleus of the current City of Ushuaia, on October 12 of that same year, and a year later it would be designated as the capital of the National Territory, guaranteeing the presence of the nation state, through military control over the territory.

At the same time, another institution started to take shape that would be crucial for the Argentine settlement of the southern part of the island until the middle of the 20th century. Asserting that "the dominion of the Nation would be established and demonstrated by the most characteristic sign of territorial possession, which is the population, thus contributing to the goals of adventurers to whom the desert and solitude serve as a temptation," President Roca promoted a penal colony in the south of the Republic in 1883 (Roca in Mastrocello, 2008:115). In those days, the jail system served as a tool for the national State to demarcate its territorial presence in sparsely populated areas. The initiative became a reality in the following decade in the form of a penal colony in Ushuaia¹²². It had a strong influence on the socio-demographic, economic, institutional and political structure of the southern region of the island, until its closure in 1947 (Canclini, 1989).

¹²¹ On October 16, 1884, the government issued Law No. 1532 on the Organization of National Territories, by which the vast Patagonian territory was divided, creating the National Territory of Tierra del Fuego, composed of the Argentine sector of the Isla Grande of TDF and the Isla de los Estados.

¹²² Law No. 335 establishes a sentence of hard labor for repeat offenders. In 1896 a decree established the serving of sentences in Ushuaia.

4.2.6- Synthesis of the territorial structuring of Tierra del Fuego "outwards", since its incorporation to capitalism.

The "outward" structuring of the Fuegian territory was closely related to economic and geopolitical processes throughout the initial period of capitalist occupation, which started with colonization and continued with its definition as National Territory. In the first instance, ranchers and gold prospectors who were external to the national territory pushed occupation processes in an effort to amass capital. In the second case, it was the recently consolidated nation state that promoted military and settlement actions (through the installation of the presidio) for the permanent occupation of the territory. Figure 4.8 summarizes the territorial structuring "outward", in relation to the main migratory flows that drove the western occupation process.

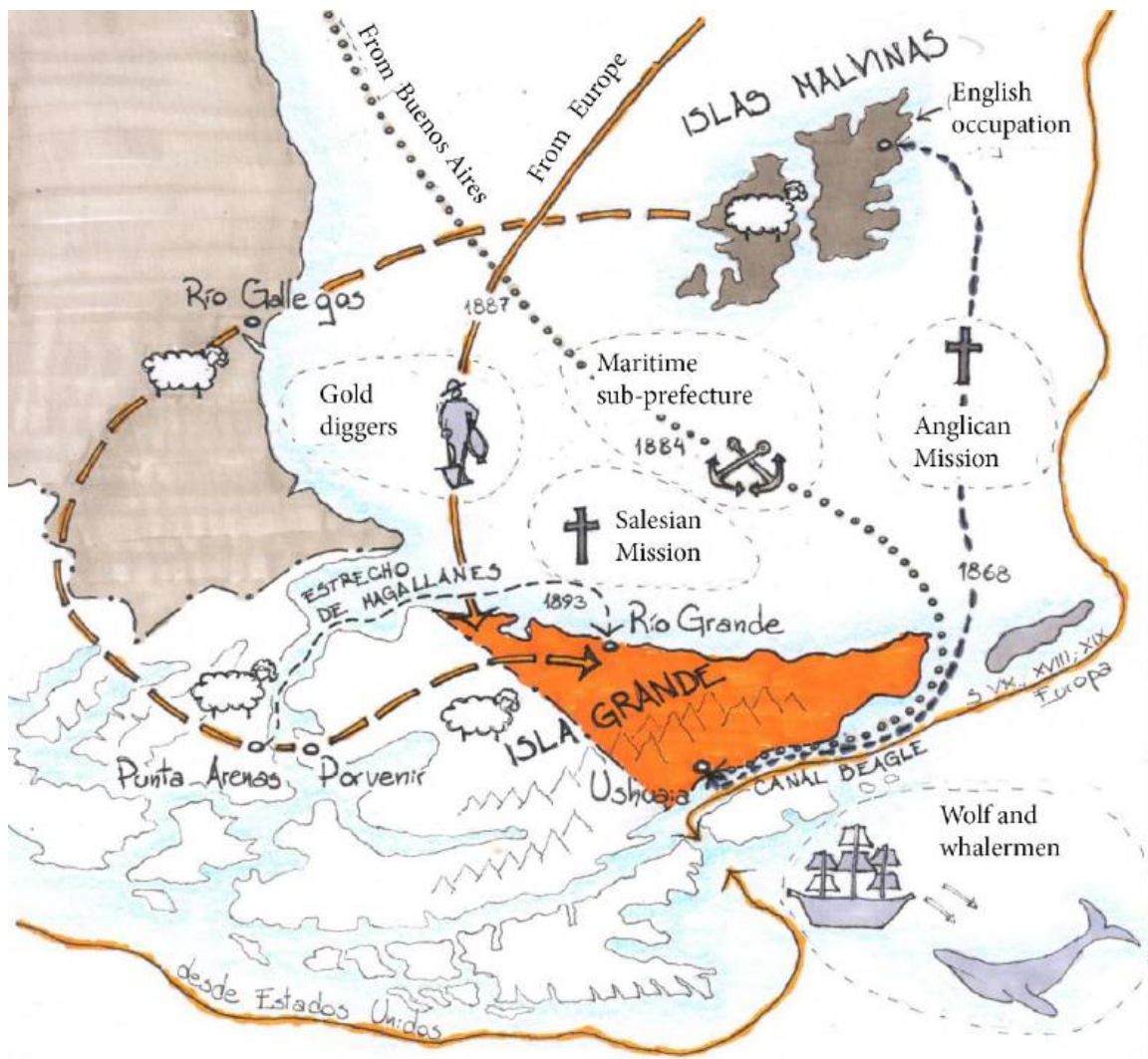


Figure 4.8: Territorial structuring "outwards": migratory flows to TDF. Source: Own elaboration

The national State had a double function: on the one hand, to facilitate the appropriation of the space by foreign cattle ranchers in the north of the Isla Grande, while in the south it imposed its presence through military and prison occupation..

4.2.7- The structuring of the Fuegian territory "inland": first patterns of capitalist occupation of rural and urban space.

According to the "outward" occupation process, the structuring of the territory toward the interior of the Isla Grande was influenced by the force of foreign actors (E.1; E2). The population increased at an average yearly rate of 90.8% during the 1895 and 1914 censuses, significantly faster than the national average annual growth rate of 37.5%. Only 927 of the 2504 people in 1914 were Argentines; the other 1577 were mostly foreigners from Chile and Europe (Bondel, 1985). In contrast to 1895, when only 225 of the 477 total residents lived in urban areas, there were 1,447 urban residents in Ushuaia in 1914. According to the "outward" occupation process, the structuring of the territory toward the interior of the Isla Grande was influenced by the force of foreign actors (E.1; E2). The population increased at an average yearly rate of 90.8% during the 1895 and 1914 censuses, significantly faster than the national average annual growth rate of 37.5%. Only 927 of the 2504 people in 1914 were Argentines; the other 1577 were mostly foreigners from Chile and Europe (Bondel, 1985). In contrast to 1895, when only 225 of the 477 total residents lived in urban areas, there were 1,447 urban residents in Ushuaia in 1914. On the other hand, 90% of the rural population was located in the north, in the departments of Bahía Thetis and San Sebastián (Bondel, 1985).

Given its abundant pastures and proximity to the inter-oceanic route (the Straits of Magellan), the region in the north of the island, which coincided with the steppe landscape and to some extent with the ecotone, was basically organized around private cow ranching (Gaignard, 1963). The fundamental unit of production represented by "functional large landowners" (Imaz, 1972)¹²³, modified in a particularly accelerated manner, in less than 20 years, the pattern of occupation of space. In this regard, Bondel (1985) states(1985):

Livestock, houses, fences, roads, etc., were distributed synchronously throughout the north of the Island, both Argentine and Chilean; and by the Centenary the large estancias in Tierra del Fuego (Sara, Cullen, Primera and Segunda Argentina, etc.) present a solid productive structure, which still maintains its essence (Bondel, 1985:13)

This was made possible due to the weak resistance encountered by the ranchers in terms of previous territorial occupation, considering that the natives were nomads and there were no Creoles

¹²³ The term functional large landowners refers to pioneers with large capital and influence in the international commercial dynamics, who in turn had the support of the nation state to appropriate large tracts of land in Tierra del Fuego.

who had consolidated any kind of settlement. Additionally, due to the national State's function as a promoter of pastoral accumulation¹²⁴ (Bondel, 1985).

The group of estancias (cattle ranches) was connected by a network of rural roads that, in many cases, had previously been trails used by the Selk'nam. The 1st and 2nd Estancias, founded in 1897 and 1898 by Menéndez, on the south and north banks of the Grande River respectively, were the initial points of origin of the present-day city of Río Grande. The growth of cattle raising at the beginning of the 20th century implied the economic expansion towards related areas such as commerce and transportation. In 1908, the cattle-raising businessmen founded the “Sociedad Anónima Importadora y Exportadora de la Patagonia” (known as “La Anónima”¹²⁵), for trade, and in 1916, the “Compañía Frigorífica Argentina”. The new scale of production and the need for commercialization led to the execution of important infrastructure works. Menéndez developed ports on the Río Grande River for the naval connection to Punta Arenas. Estancia 1° came to have its own railway line, while Estancia 2° housed the largest shearing shed in the world, with space for 5,000 sheep and 40 shearers. Later, when the meat packing plant opened in 1918, the business constructed a suspension bridge over the Río Grande that was used for the following 50 years (De Imaz, 1972).

The structure of the rural environment was essentially meaningless in the south due to the physical features and insufficient connection. The fundamentally urban process of occupation that had previously been started by the Anglican mission was perpetuated by the power of the nation state through the presence of military and jail institutions (Bondel, 1985). The presidio's existence was significant in many ways and represented the island's most explicit colonization strategy (Nacach, 2012). It served as the primary driving force for the majority of Ushuaia's infrastructure improvements during the time (E.41). Given the difficulties of land connectivity, the territorial structuring had a strong dependence on maritime connectivity, so the urban space of Ushuaia and the few rural establishments were located in front of the Beagle Channel. Figure 4.9 summarizes the territorial structuring of the interior of the Isla Grande at the beginning of the 20th century.

¹²⁴ In this respect, Bondel says that "The land auctions of 1897 and 1899 demonstrate the clear disposition of the government of Buenos Aires to allow and promote the settlement of important capital and to develop cattle raising free of any state interference" (1985:13). Land concentration was at least slightly modified during the presidency of Hipólito Yrigoyen (1916-1922). The National Land Directorate recovered land from the State, and some was again granted to foreigners, causing some deconcentration of ownership, reaching, in 1950, 55 estancias in Tierra del Fuego (Bonano, 2012).

¹²⁵ La Anónima still exists today as a supermarket company in Patagonia.

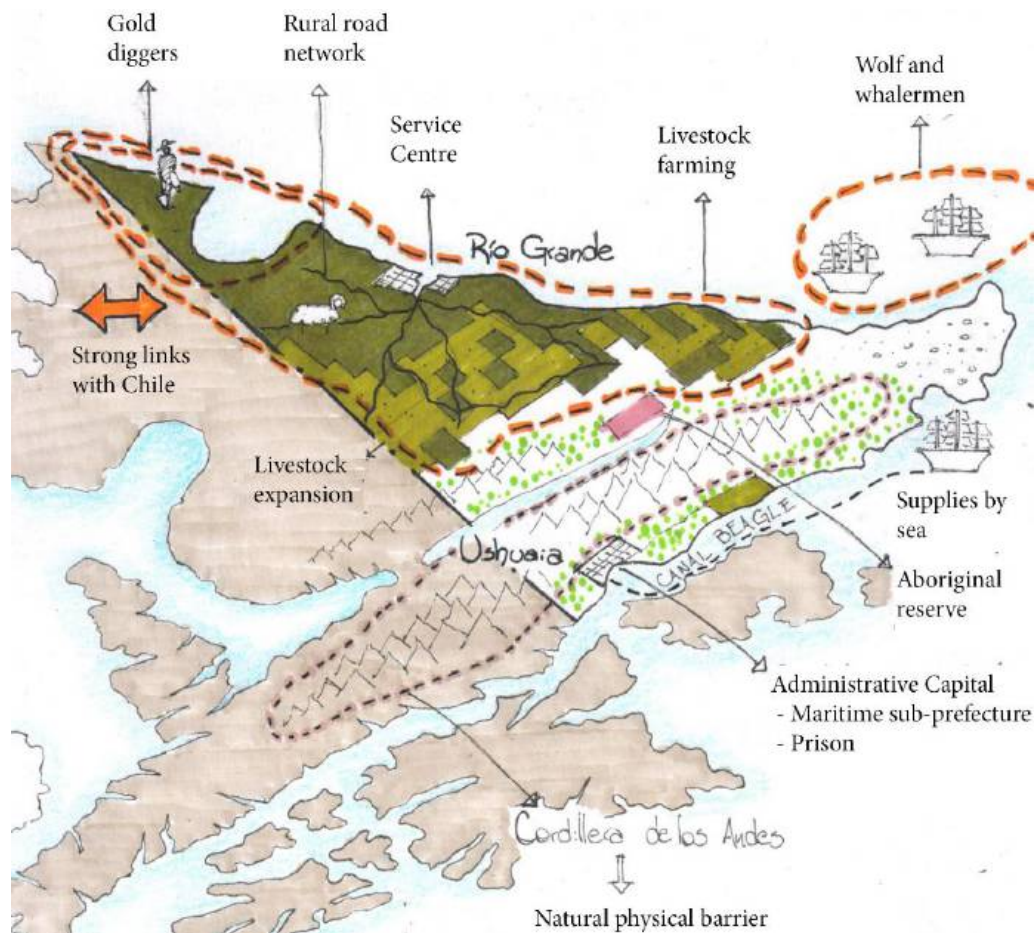


Figure 4.9: Structuring of the Fuegian territory "inwards", beginning of 20th century. Source: Own elaboration

4.2.8- Ushuaia and Río Grande, the origin of the urban nucleus

The only two cities that existed on the Isla Grande until 1972 were Ushuaia and Río Grande, both of which were established during the end of the 19th and the beginning of the 20th centuries. As already mentioned, both arose in relation to the productive and geopolitical dynamics of territorial occupancy. They were established about the same period as the majority of Patagonian cities, though later than other major cities in the nation. Imaz highlights some of their unique characteristics (1972):

The two urban centers of the territory are atypical even in terms of their origin, their form and their origins. Both evolved alongside religious missions [...] For Ushuaia and Río Grande there was no Royal Charter, founding roll or distribution of blocks and squares. Nor fortification, their Indians were inside. No European colony was established in the territory, and if Río Grande can only be assigned a foundation date as an abstraction, Ushuaia, on the other hand, exhibits it with legitimacy (Imaz, 1972: 2).

From the beginning, there were big differences between the two cities. Ushuaia began to grow on public enterprises and policies implemented by the national government. Río Grande, on the other hand, was based on private initiatives, linked to the production of cattle ranches. The relative isolation

between the two towns, as we mentioned above, contributed to the deepening of the differences between them, which were not only related to the economic profile, but also to the demographic profile and the mode of spatial occupation (Bondel, 1985). This issue will be discussed in more detail below.

As we have already mentioned Ushuaia was founded as a result of a geopolitical strategy of the Argentine state¹²⁶, with the installation of a naval sub-prefecture in 1884 on a bay that had previously been inhabited by the Yamanas for thousands of years. The bay was also occupied, on the southern margin, by the Anglican mission since 1969, the first occidental settlement in the archipelago.

The city started to expand with the advent of the naval subprefecture on the northern bank of the Beagle Channel, in a region with gentle slopes, before the massive slopes typical of the mountain's foot (E.41). Geographical factors such as the higher draft along the coast for boat arrivals, the accessibility of fresh water, and the existence of trees for building materials and firewood all played a role in its site (Dirección Provincial de Puertos). Its linear configuration was defined by the limited amount of mild slope that was present between the sea and the pronounced relief of the mountain range. The first urban layout was delineated in 1894 with the survey carried out by researcher Butza. It consisted of a layout of 42 blocks of 14 blocks in the north-south direction and 3 blocks in the east-west direction (Figure 4.10). To the east, this first survey shows a triangle of approximately 15 hectares corresponding to the sub-prefecture, where the prison was installed.

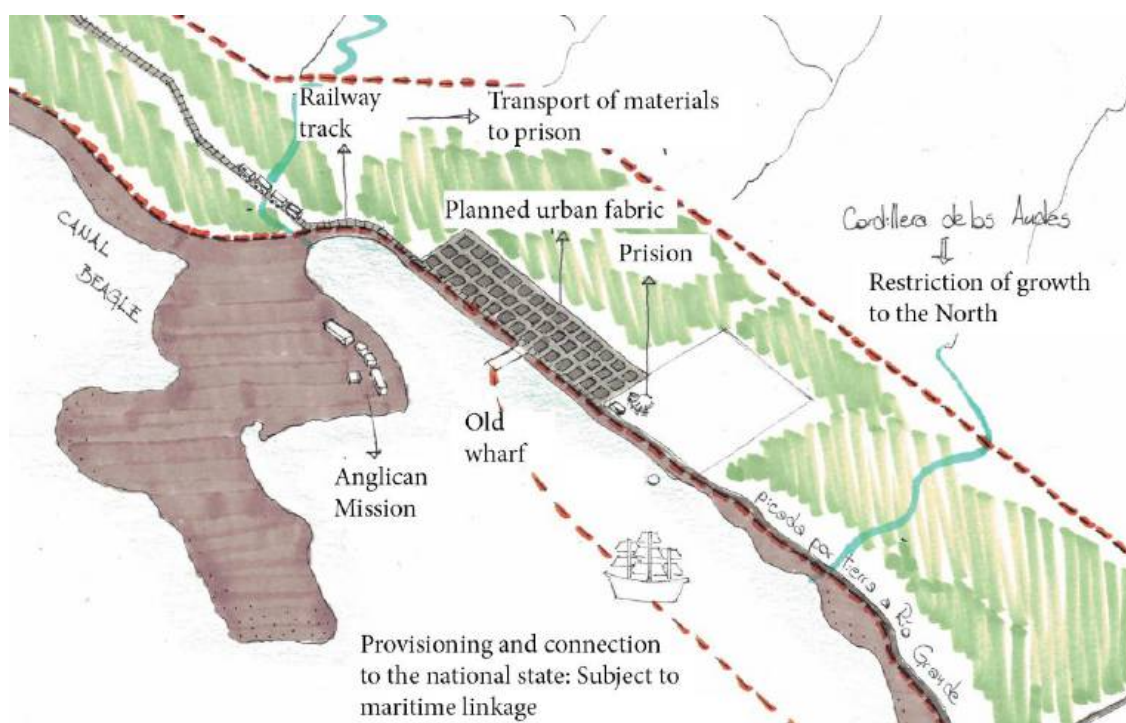


Figure 4.10: Ushuaia space occupation scheme, 1884. Source: Own elaboration

¹²⁶ Regarding its growth linked to public initiatives, Mastrocello argues that "it is also probable that this is the origin of the label 'administrative city' due to its strong dependence on the public sector, which almost a hundred years later the capital still exhibited..." (Mastrocello, 2008:117).

In the beginning, this region was home to indigenous, Anglican settlers, and Argentine sailors (Imaz, 1972). The Yamanas would disappear in a few years as a result of the various factors stated above, while the Anglican mission would carry on for 22 more years before relocating to other South Atlantic islands.

The little town's social and urban structure radically changed when building on the prison got under way in 1896. From its establishment until its closure in 1947, the jail served as the principal employer in the area due to its significance to the nation (Canclini, 1989). In its beginnings, the investments in its construction mobilized the economy of Ushuaia, and meant a great advance in infrastructure. It had electricity and telephones, and also provided medical services, pharmacy and workshops, such as photography, printing and textile. It also boosted the commerce sector, made up of some general stores supplied through the port, with goods brought from Buenos Aires or Punta Arenas. The city of Ushuaia also registered its first industrial establishments around this time, including a state-operated sawmill, a private one with a port and a packing facility for mussels and mussel beds (both private and owned by Luis Figue), as well as the city's first general store in 1888. (Mastrocello, 2008). Most of the homes in the town had family gardens surrounding them for food production, which mostly provided the local populace with fresh food (Molpeceres, 2019).

Río Grande, on the other hand, was founded on a sector that was previously occupied by a Selk'nam harwen, known as K'ásen. This included the territory between the rivers Chico to the north, Grande to the south and Moneta to the west, and the Atlantic Ocean to the east. In 1893, the Salesian missionaries arrived in this territory and built their settlement near the Grande River, which after a fire had to be moved further north. At the northern mouth of the Río Grande, in 1897, a reserve of land was set aside for fiscal use in which a first hamlet was built (Municipality of Río Grande, 2021). The small town was consolidating as the labor force, commercial activities, and cattle rearing increased. In 1905, a grease factory was constructed on the south side of the Grande River; it served as the foundation for the aforementioned meat packing facility. A dock was constructed to transport meat to Punta Arenas along with another one on the north bank of the river with the construction of the meat packing facility, which was created for the use of meat and sheep by-products. The suspension bridge (located to the west in the sector of the lower river bed) completed the linking scheme between the small town and the ranches.

Río Grande was born in this context of consolidation of the productive territorial structure, without an official foundation. However, the Río Grande Agricultural and Livestock Colony is thought to have been founded on July 11, 1921, the day the national Executive Power signed the edict encouraging its establishment.¹²⁷

¹²⁷ In the section corresponding to Tierra del Fuego, this decree mentions the "colony of Río Grande, on the margin of the river of that name".

The first survey of the urban core was conducted in 1926, and it depicts a 96-block checkerboard-shaped urban structure that is divided into two major perpendicular road axes and is situated where the Atlantic Ocean and the Grande River's mouth meet on the river's northern bank. According to the type and scale of agricultural production, the urban checkerboard was first bordered by productive farms and later by chakras (E.42), as seen in Figure 4.11. This structuring of urban and rural environments immediately contrasts sharply with Ushuaia, which did not consider expansive primary production spaces.

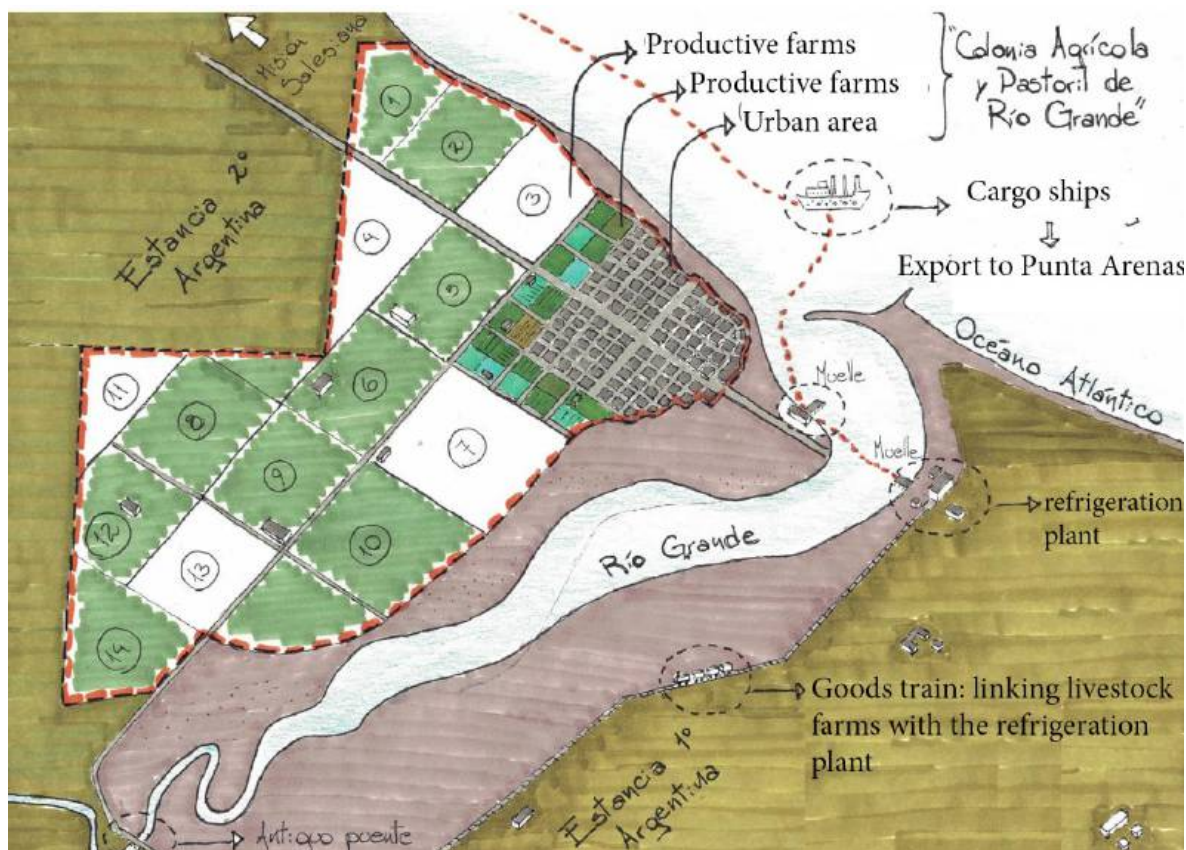


Figure 4.11: Diagram of occupation of the Rio Grande space, 1926. Source: Own elaboration based on original city map.

It can be seen that the cattle-raising heritage had a direct influence on the distribution and possibilities of growth of the urban space, which has influenced to the present day, linked to the possession in the hands of private actors of practically all the land on the perimeter of the central urban area.

4.2.9- The Maritime Governorate

Since the 1930s decade, the structuring of the Fuegian territory "outwardly" acquired completely different features than in previous years and this was mainly related with the new positions of the different actors in the global map. Many European nations chose to close their economies in the context of the global crisis that started in 1914 with the First World War and peaked at the end of the 1920s with the Great Depression, which significantly decreased international trade. The Argentine economy, and in particular that of Tierra del Fuego, was severely destabilized because, up until that point, it had been mostly dependent on exports of agricultural products and animals, which produced the foreign exchange required to pay for consumer goods imports.

With the end of the agro-export model, the national State acquired a much more relevant presence in the country's economy, with a new economic model based on the promotion and protection of national industry, which continued (although with ups and downs) until the 1970s. Industrialization was concentrated (as we will see in more detail in the following chapter) in the central region of the country, while the rest of the territories continued to be dedicated to primary production¹²⁸.

Tierra del Fuego was not the target of new dynamics of productive valorization during the initial years of the ISI because the State was preserving the economy. Mastrocello (2008) refers to this time as "the forgotten island" because no strategies were implemented to support its population or economic growth during this time. A period of stagnant productivity began with the slowdown in cattle activities in the north around 1925. Also the southern part of the island's isolation from the outside world and its economic and social dependency on the prison served as significant barriers to local development. These issues resulted in a stagnation of population growth: between 1924 and 1935 the Fuegian population remained stable at 2,500 inhabitants, of which approximately half were foreigners (Bondel, 1985).

The geopolitical issue once more took center stage in relation to the vision about Patagonia with the coup d'état of 1943. The Isla Grande de Tierra del Fuego was once more regarded as a crucial area of sovereignty because of its close relations to Chile and its location in the South Atlantic. Both issues were also reinforced by the interest in the Antarctic territory, where Argentina had been present since 1904. In this context, between 1943 and 1955 the territory of Tierra del Fuego was transformed into a Maritime Governorate¹²⁹, first under a de facto government and then in coincidence with the

¹²⁸ While most of the population settled in the industrial cities, Patagonia contained only 2.3% of the country's population in 1947, and Tierra del Fuego only 0.03%.

¹²⁹ Decree Law No. 5626, signed by the then de facto President Pedro Pablo Ramírez, established that the governorship of the National Territory of Tierra del Fuego and Isla de los Estados would be exercised by a senior officer of the Navy proposed by the Ministry of the Navy. He would in turn be commander of all the armed forces: area, naval and land forces and also of the police.

first and second governments of Juan Domingo Perón (1945-1951; 1951-1955) at the national level, in both cases, in charge of the Ministry of the Navy. The military's presence was intended to guarantee Argentina's possession of the island and also marked the start of the region's "strategic" organization, which would attract new population (Mastrocello, 2008). In the beginning, new dependencies of the central power were set up in both Ushuaia and Rio Grande, and various actions were done to increase the TDF's significance in terms of geopolitics.¹³⁰ Given that they had historically restricted population growth, economic activity, communications, education, and infrastructure development were among the key sectors for action. Through Decree No. 17,460, the Ministry of the Navy—with the support of the federal government—promoted an industrial development and promotion plan in 1947. However, it was unsuccessful due to the limited size of the local market and the lack of productive integration with the rest of the nation, with the exception of tiny forestry and seafood sectors (Mastrocello, 2008). Another significant government project at the time was the implementation of a public works plan. With this objective a contract was made with an Italian business for construction to be done over a four-year period using funds from the national budget. The planned road, building, and railroad construction projects were not completed (Ciccolella, 1989). But in October 1948, 900 engineers, laborers, and construction workers traveled to the island with their families (Canclini, 1989). Ushuaia, which at the time had fewer than 2000 residents, became home to this population.

During Perón's second government (1951- 1955)¹³¹, the Maritime Governor's Office played a fundamental role in the economic and territorial structuring of the island, activating the execution of public works and a series of actions aimed at improving communication with the mainland¹³², as well as to underpin some basic provisioning issues of urban spaces. In terms of connectivity, National Route No. 3's construction was finished in 1949, and along its path, mail service and a telephone line were installed. For the installation of sawmills, its delineation was also crucial¹³³ in the central part of the Island on the headwaters of Lake Fagnano, since the first ones located on the shore of the Beagle had exhausted in many cases the production of timber. At the western end of the route, the creation of the TDF National Park was promoted, which finally became a reality in 1960. At the same time, improvements were made in air and sea transportation for both cargo and passengers, and the docks

¹³⁰ By means of Decree No. 9,905, the political-administrative dependence of the Argentine Antarctic sector would become part of the maritime government of the National Territory of Tierra del Fuego.

¹³¹ During Perón's government and in search of political integration at the national level (Varela, 2007), all national territories except Tierra del Fuego were provincialized, thus complying with their full incorporation into the federal pact. Tierra del Fuego could not achieve autonomy with the rest of the national territories, because its uniqueness in terms of location and sparse population implied a greater presence of the national state for the defense of sovereignty.

¹³² It was not until the arrival of National Highways -Vialidad Nacional- in 1934 that a connectivity plan for the island began to be devised. The crossing that currently constitutes National Route No. 3 was discovered in 1936.

¹³³ However, as previously mentioned, the timber industry did not take off and its presence continued to be scarce both in economic and spatial terms.

were improved, as well as the mail service and radio telegraphic communication. These works put an end to the dependence on Punta Arenas.

Regarding the "inward" structuring, the decentralization of sheep production and the establishment of government facilities in Ushuaia and Rio Grande started to steadily but hesitantly solidify the island's "urban" occupation. Of the still few 5045 Fuegian residents counted in the census in 1947, 65% were categorized as living in cities. Of these, 1917 people lived in Ushuaia, where the majority of the administrative tasks were concentrated, and 1400 in Rio Grande, which was already known as a service hub for cattle production. Although the population continued to be mostly foreign (2,984 inhabitants), this trend began to reverse with the installation of the Marine Infantry Battalion No. 5 in Río Grande and the Naval Base in Ushuaia, which implied the arrival of a new population from Buenos Aires.

A small elite, made up of landowners and cattle ranchers to the north and some merchants to the south, dominated the social structure at the time and possessed a significant portion of the local economic and political power. Finally, there was a large popular class, primarily in Rio Grande, made up of rural workers and related professions. This was followed by a "middle" class connected to the military and police work. Despite the efforts of the central authorities, Ushuaia and Rio Grande were still tiny towns in the metropolitan setting by the 1940s, where the military presence was noticeable (De Imáz, 1972).

Up to its closing in 1947, the majority of the people of Ushuaia was reliant on the prison either directly or indirectly. A few were involved in the trading of household goods, but the majority were prison guards, police officers, and their families. Due to the continued isolation and the infrequent arrival of supply ships, salaries were low and living expenses were high. Prisoners and non-prisoners coexisted and created space together for almost 50 years. Prisoners built many of the works of the time, such as, for example, the harbor expansion work that started in 1937, while also supplying the entire city with fuel and bread. Ricardo Rojas, who had been in the city, noted that the remainder of the time it appeared that the city:

The image of confinement, absolute for the convicts, casts its shadow over the whole town, which is not free either. The people live on the wages of the prison guards, on the small stores run by the families, on the meat supplies for the prison. Ushuaia lives resigned, quiet, with a bitter aftertaste of what it eats, and with a melancholy that is barely hidden in its silence. The modest building, made entirely of wood, has been formed at random, like the population that inhabits it [...] the coastal street visible from the bay, symbolically stretches from the prison to the cemetery. Parallel to it runs Godoy Street, the only street built on both sidewalks, although there are potholes and vacant lots. From the top to the Beagle descend short cross streets, dangerous snowy traffic. During the day there is no traffic in the capital and at night the neighbors seclude themselves because of the bad light and the uneven sidewalks, apart from other reasons attributable to the weather. The police yawns with an idleness that proves the virtue of the neighborhood. The governor's house is always closed, the parish church, usually without worshippers, the dock and the bay without ships.... (Rojas, 1947, en: Bonano, 2012: 22)

With the closing of the prison in 1947, social life began to revolve around the new military institutions, the Maritime Governor's Office and the Naval Base, although without major changes in terms of growth and/or urban attractions for the population.

The scenario was different in Río Grande. Since its inception, it has had a robust economy based on the raising of sheep. The meat packing industry was notable at the time as a source of employment and resources; it became reliant on the Federación Argentina de Carnes in 1941 and didn't start to deteriorate until the 1950s. Due to its location and active economic dynamics, Río Grande had superior phone and road infrastructure conditions than Ushuaia. This was made possible by the network of country roads that connected the estancias (ranches) to Ushuaia. According to this, the port of the city began to receive more traffic than Ushuaia, which at the time only saw navy boats every few months (E.11). Since the operation was seasonal, the meatpacking industry also provided migratory work between 1940 and 1980, which inspired a significant movement of Chilean employees. While the town only had 500 residents in 1940, it had more than tripled in size by 1947. Strong population growth was also related with the frigorific work, which contributed to the economic dynamism.

During the years of the Maritime Government, some important infrastructure works and construction of public facilities took place in both Ushuaia and Río Grande. The construction of new neighborhoods and airstrips stands out¹³⁴. Additionally, the establishment of kindergartens and, in the case of Ushuaia, the construction of the water treatment plant in the early 1950s (E.9). Fiscal lands, which belonged to both the Navy and Vialidad Nacional, were created in both cities. In the case of Ushuaia, the Naval Base was built to the east, next to the urban area, establishing an area that was roughly 125 hectares larger than the 75 hectares that were afterwards urbanized. In the instance of Río Grande, the Marine Infantry Battalion 5 (BIM 5) was established in 1947 and occupied 45 hectares of territory, with the city's urban area measuring 78 hectares at the time. The Navy still possesses these lands as well as some that are smaller in size.

With the establishment of the marine government in Ushuaia, a sizable influx of Italian immigrants who worked as construction laborers sparked the city's initial westward urban growth. New communities were created in this regard as well to house the military who arrived with the establishment of the Maritime Governorate. The northern peninsula, where the airport was located, was connected to the metropolitan area at the same time by the construction of a road on the Beagle Channel, creating the well-known Bahía Encerrada (Enclosed Bay). There were a few military residences on either side of the bay.

The government gave newly arrived immigrants rural properties for rural businesses on the road to the National Park. The Preto ranch, which is situated in the Monte Susana sector, stands out

¹³⁴ Particularly in Ushuaia, two of the city's historical neighborhoods: Barrio Solier y Barrio Almirante Brown.

among them due to its vastness. The estancia was originally 8,000 hectares, but after 18,000 hectares were enclosed, the State ultimately granted the land to the resident after many years (E.9). The Naval Base's property served as the expansion's eastern boundary.

In the case of Río Grande, the Navy brought in 900 personnel, and new neighborhoods were developed to the north, next to the area where BIM 5 was located. BIM 5 was responsible for giving the neighbors access to electricity, water for drinking, and fuel for heating. Due to its provision of food, dental and medical treatment, and other social services, it also became a crucial institution in the city's social life (Ministerio de Defensa, Armada Argentina, website) (E.11).

Even though the Maritime Governorate resulted in the geopolitical valuation of Fuegian territory and a significant improvement in cities infrastructure, the absence of other productive activities besides declining cattle raising and the implementation of public works failed to reverse the country's economic stagnation. Up until 1958, state activity—the latter the outcome of initiatives by the central government—was 70% focused on livestock and relatively poor, productive activity. The local market's small size and the lack of territorial integration with the rest of the nation were major barriers to the productive structure's metamorphosis into the industrial sector, as was the case in other regions of the nation. The Maritime Government came to this end in 1955, with the creation of the Province of Patagonia (Law No. 14,408) which would unify the territories of TDF and Santa Cruz.¹³⁵

The economic solution would come with a new process of space valorization, driven once again by an "outward" territorial structuring in which both national government decisions and external actors intervened.

4.2.10- The era of oil and imports: 1958-1980

Argentina was still in its greatest period of the ISI under Perón's administration at the end of World War II and in an international context marked by a significant role of the States in national economies. From 1955 on, the Peronist-Anti-Peronist conflict's political crises—which would last for a long time and even after Perón's death—would give rise to more than 30 years of continuous alternation between democratic and de facto governments.

Regarding the economic dynamics, a constant problem was the external restriction, as a result of the imbalance between imports (necessary as inputs for industry) and exports, followed by a consequent shortage of dollars. In the energy field, this situation was clear, since Argentina imported most of the oil it consumed. When Arturo Frondizi took office as President of the Nation in 1958, the "battle for oil" began with the aim of achieving energy self-sufficiency. This generated strong

¹³⁵ This decision by Perón took place after the beginning of the conflicts between his government and the Navy. With Aramburu's government, the following year, Tierra del Fuego was again constituted as a National Territory, and the Navy would again exercise power, albeit indirectly, until 1983.

controversies¹³⁶, to the extent that it meant the signing of contracts with American companies for the exploitation of hydrocarbons, since YPF did not have sufficient capacities to achieve the proposed objective. The contracts were signed with three companies and promoted the exploitation of different territories: Panamerican in Comodoro Rivadavia, Banca Loeb in Mendoza and finally the company Tenesse in Tierra del Fuego.

Oil had already been discovered in the Isla Grande in 1945 in the Chilean sector, and YPF's 1949 drilling of the first well in the Argentine part to the north proved its presence. Hydrocarbons were first systematically exploited starting in 1958, which resulted in a significant change in Tierra del Fuego's economic structure.

On the other hand, and in light of the historical diagnosis of the necessity to populate the Tierra del Fuego region, a promotional free zone regime consisting of exemption from customs charges and import duties was established for the Isla Grande of Tierra del Fuego in 1957¹³⁷. The regime coincided with the new definition of TDF as a national territory, and allowed it to have extra advantages over other Patagonian provinces¹³⁸ (Decreto Ley 9924/57). Businessmen committed to trading with goods that lacked legal protection in the rest of the nation started to settle on the island during this time¹³⁹ (Mastrocello, 2008).

The national government supported measures that successfully managed to revitalize Tierra del Fuego's economy and offered a more than positive prognosis for regional development. These policies included both the exploitation of hydrocarbons and the economic advantages provided by the free zone designation. However, oil was the most valuable resource at the time since, for the first time in the territory, it started to create its own resources through the royalties earned from its extraction, which drastically altered the island's economic circumstances. In reference to this, Gignard stated in 1963:

Tierra del Fuego seems to be about to experience a significant transformation. Oil is the revealing and transforming magician once more. Today, it is feasible to combat isolation by

¹³⁶ Previously, when Frondizi was a congressman, he had openly opposed the contracts that Perón had signed with oil companies, arguing that YPF did not need external capital to achieve energy self-sufficiency. This contradiction generated rejection in different sectors of society, such as unions, students and even members of his own government.

¹³⁷ The Patagonian region, due to its scarce population, had been the object of different promotions, among which Decree 3824/45, which established preferential duties for the South of parallel 42 (integrating the provinces of Chubut, Santa Cruz and the then National Territory of Tierra del Fuego) and then Decree Law 10.991/56, which delimited this same sector as a free trade zone, stand out.

¹³⁸ . The approval of Decree-Law No. 2191 in 1957 granted Tierra del Fuego the status of National Territory again, separating it from the former Patagonian Province and integrating it together with Antarctica and the South Atlantic Islands. This norm established a new political and institutional structure for the jurisdiction, while the executive authorities continued to be appointed by the central government. After Tierra del Fuego became a National Territory again, the advantages of the 42nd Parallel Law were nullified and replaced by a special regime for Tierra del Fuego.

¹³⁹ In particular, import businesses that were previously located in other cities in southern Patagonia, such as Puerto Madryn and Trelew, were relocated

balancing a budget, establishing an administration, and launching planning initiatives. It might enable the dismantling of an outdated pastoral structure based on monopoly and a small population. (Gaignard, 1963:1)

Regarding the "inland" structuring, the northern section was directly impacted by the construction of the oil camp (read: urban center) located close to Río Grande, although the repercussions extended to the entire island.

The productive transformations were territorially channeled by the administration of Governor Ernesto Manuel Campos, a military man who had previously worked in Tierra del Fuego as assistant secretary of the Maritime Governor's Office Campos. He served as governor for three consecutive terms, from 1958 to 1963 and had for the first time in history an integral and strategic vision in territorial terms of Tierra del Fuego. His project encompassed the different territorial potentialities offered by the Isla Grande, both in its internal and external projection (Ciccollella, 1988). On the one hand, it was intended to enhance the exploitation of hydrocarbons while taking connection and logistical difficulties into mind. On the other hand, the island was emphasized as a vital location for domestic and international tourism, and actions were encouraged to increase already productive industries including agriculture, forestry, and fishing. (Mastrocello 2008).

As a result, significant local and regional infrastructure projects, such as the completion of the deepwater port (which will eventually link Ushuaia to the rest of the island economically), began to take shape. These projects were carried out while under Governor Campos' regional-territorial administration in an emerging economic autonomy environment (Bondel, 1985). Gas distribution in the cities was established (natural gas in Río Grande and piped gas in Ushuaia)¹⁴⁰, the installation of generators, fuel storage tanks, and running water in some communities, as well as public lighting and generators in Ushuaia. Additionally, significant architectural projects including the construction of public schools, gymnasiums, and other facilities as well as regional hospitals. Together with the Banco Hipotecario Nacional, measures for habitat access were promoted at the same time through the distribution of land, the building of homes, and through credits (National Mortgage Bank). (Bondel, 1985, Ciccollella, 1989; Mastrocello, 2008).

Figure 4.12 illustrates the territorial structuring of the Big Island according to the location of the main productive activities and urban centers around 1970.

¹⁴⁰ Hasta aquel momento la calefacción se proveía con leña.

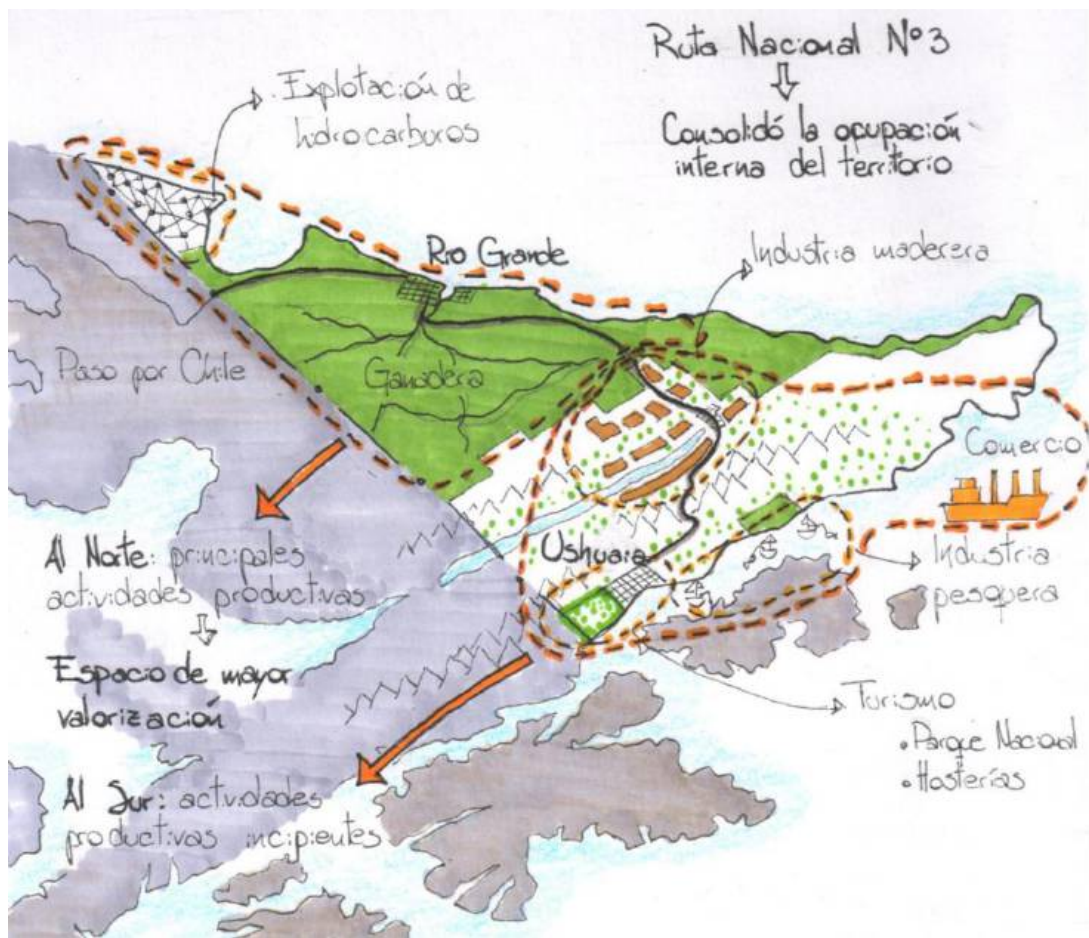


Figura 4.12: Territorial structuring of the Big Island, 1970. Source: Own elaboration

Regarding tourism, hotels were built by state initiative, located in different points of high scenic value of the island: the Albatros Hotel in Ushuaia, the Alakush Inn in Lapataia Bay to the south, the Kaikén and Petrel inns in Lake Fagnano and Escondido, respectively, and the Cabo San Pablo Inn to the north. The works were accompanied by the creation of the Tierra de Fuego National Park in the southern sector of the island of 63,000 hectares, as well as by a campaign of information and tourist diffusion that ended up attracting important personalities of the national and international scope (Bondel, 1985). The growth in construction stimulated other industries, such the timber industry, although these did not take off and only catered to the home market.

Other sorts of policies were used in conjunction with the works to strengthen the institutional and cultural framework of the region. The Federal Sanitary Delegation, the Chamber of Forestry Industries, the National Institute of Agricultural Technology (INTA), the Revenue Department, and the Tax Code were all encouraged after its inception in 1958. (Law No. 15,263).

On the basis of the altered production character of the region, the cities entered a new stage of differentiation. Since that time, Rio Grande has developed into a major city that offers the logistical support required for hydrocarbon production. As a result, neighborhoods were built for its employees.

On the other hand, due to its unique position as a deep water port, Ushuaia started to consolidate as a major import hub. The urban centers shared the feature of being composed of smaller urban centers that had historically grown slowly. The Argentine Navy's grounds were located next to the core lands in both, and they eventually served as barriers to the expansion before becoming urban voids up until the present. Up until that point, occupation had been reasonably orderly and gradual, with urban design that, up until 1970, was consistent with the size of the people (Bondel, 1985). The efforts to extract hydrocarbons have resulted in significant infrastructure improvements in both cities. These would be finished in the 1970s with the establishment of the Provincial Energy Directorate, the Territorial Housing Institute, and the water treatment facility in Ushuaia, among other things (Ciccolella, 1989). During the 1960s, the population grew in both urban centers, and an incipient process of urban expansion began, in which some structural differences regarding the possibilities of growth would become visible, which would be central in the following decades.

Ushuaia's geographic location and significant maritime connection enabled the city to start expanding in an east-west orientation along the Beagle Channel. By 1972, the only land entry to the city, the former National Route No. 3 (now known as Maipú Avenue), consisted of a tiny, low-density urban plant covering 200 hectares on the Beagle Channel shore. As seen in Figure 4.13, it then comprised of the downtown region on the bay, where the political, administrative, and commercial activities were centered, and a first growth sector dating from the Maritime Governorate's era to the west. Adjacent to the historic center to the east were the lands of the Argentine Navy, mostly empty, except for the construction of the Naval Base, the former Presidio¹⁴¹ and the YPF storage tanks. The port and the airport located to the south, on the other side of the bay, completed the urban scheme. The relief would continue to be a determining factor in the extended linear configuration of the city in later times.

¹⁴¹ La mayor parte de estos terrenos constituyen sin embargo hasta la actualidad uno de los mayores vacíos urbanos de la ciudad y eran en esa época el límite de la mancha urbana hacia el noreste.



Figure 4.13: Diagram of the occupation of the space of Rio Grande, 1972. Source: Own elaboration based on the Ushuaia Urban Plan. (2003)

Although there were no physical boundaries to growth in the case of Rio Grande, the city started to spread over the profitable farmland once the "urban" blocks were finished. In 1972, the urban plan was made up of a 400 hectare low-density tiny town, similar to Ushuaia, which was situated on the north bank of the same-named river, close to the Atlantic Ocean. It was made up of the historic core, which housed administrative, political, economic, and residential operations, and a first continuous residential development toward the west, as depicted in Figure 4.14. The airport to the northwest, the racetrack to the west and a meat packing plant on the south bank of the river were the three large urban facilities that extended outside the urban area. To the north, the limit of the urbanization was constituted by the route of National Route N° 3 and the lands of the Argentine Navy, where BIM 5 was installed. The route entered the city from Ushuaia after skirting the southern bank of the Río Grande and crossing over a bridge to the northern bank, and then continued along the sea. The Salesian mission community was located a few kilometers to the north.

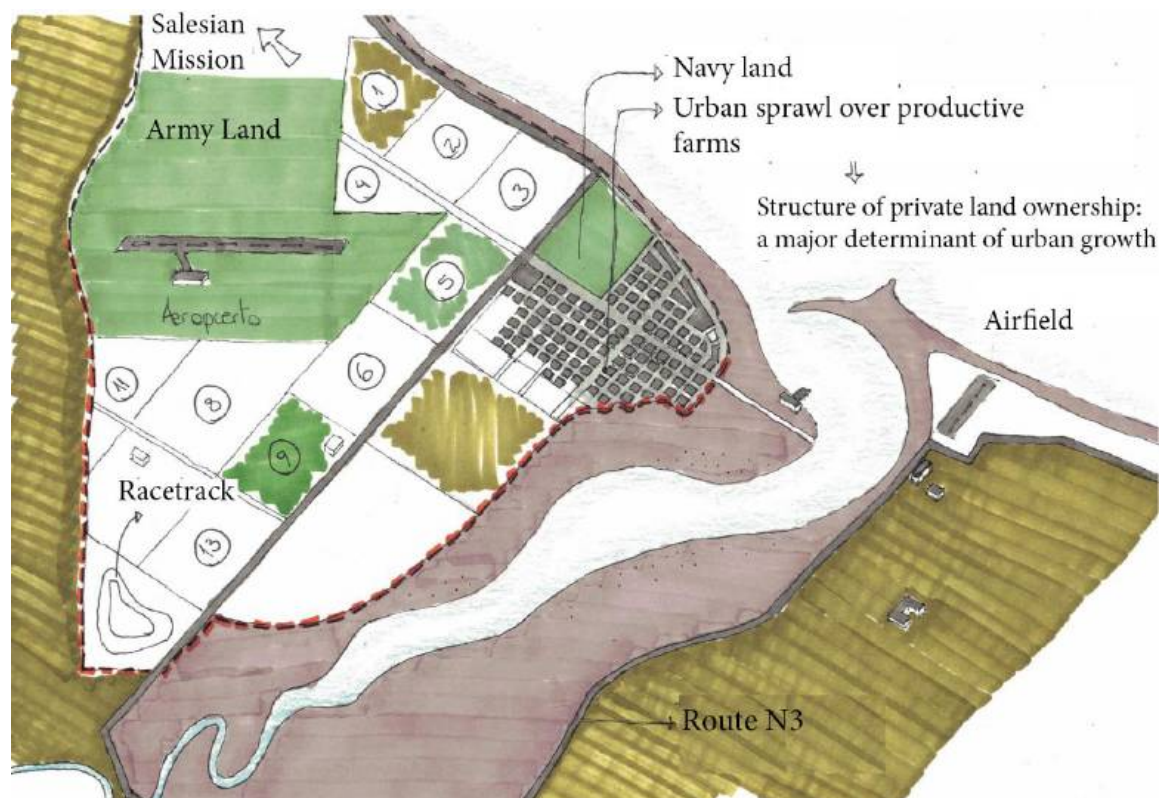


Figura 4.14: Esquema de ocupación del espacio de Río Grande, 1972. Fuente: Elaboración propia en base Bondel (1985)

Over the years, the potential for the city's expansion would be significantly influenced by the rural structure of the region, which was left over from the land's allocation for cattle-raising. While Ushuaia had large extensions of public lands, Río Grande was surrounded by land belonging to private landowners, dedicated to rural activities.. Both the relief and the land ownership situation would be, for 1972 in both cases, two major differential conditioning variables of the course of the cities' subsequent growth.

Tierra del Fuego's population was still relatively small in 1972, despite the advances brought about by oil in terms of territorial consolidation and productive development. The type of activities, both the exploitation of hydrocarbons and trade associated with imports did not require larger numbers of workers, so that growth reached its limit. At the same time, the non-renewable nature of hydrocarbons represented a restriction on the territorial economy in the long term, considering that two thirds of the economy depended entirely on primary sources. For all of these reasons and despite the advancements made, Tierra del Fuego's promise of growth appeared impossible once more at the start of the 1970s.

4.3 Considerations of Uneven Spatial Development in the structuring of the Fuegian territory, prior to industrialization.

In this chapter we have described and analyzed the factors and processes that influenced the occupation of Tierra del Fuego, particularly Isla Grande and its cities, Ushuaia and Río Grande, until the beginning of the industrialization cycle with its definition as a Special Economic Zone in 1972.

In the first place, we examine its natural geographic features. We can state with certainty that its location in the extreme south of the continent, its insularity, as well as its climatic conditions, categorically distinguish it from the rest of the Argentine geography and historically imposed strong restrictions for population settlement. Additionally, there are significant internal distinctions between the northern steppe and the southern Cordillera that have over time led to different occupation options and restrictions.

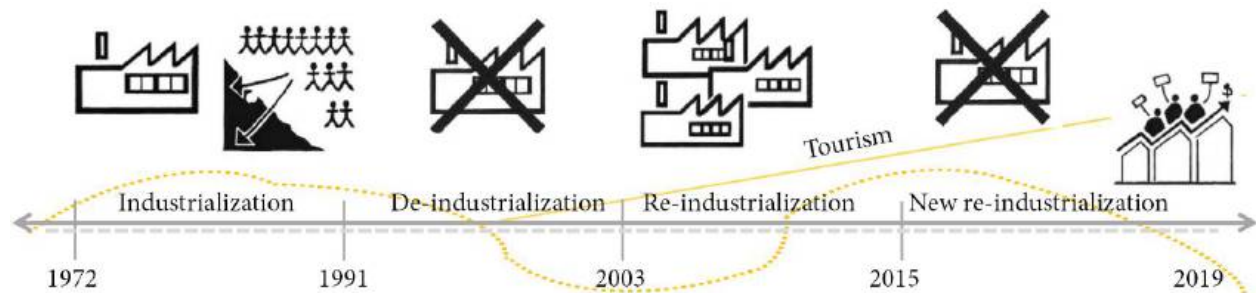
We have examined the pre-capitalist occupation of the area, which lasted more than 10,000 years and saw the development of several local groups who lived in peace with their surroundings. Subsequently, we have examined the many stages of capitalist valorization that have occurred since the final settlement of the western population in relation to the territorial structuring of the Isla Grande of TDF and its cities. The first one of maritime valorization, followed by a second one of gold and cattle valorization to the north and military occupation to the south, in which the urban centers of Ushuaia and Río Grande were founded. The third of Maritime Government, and the fourth of oil valorization. From this we can say that Ushuaia and Río Grande have developed unequally, not only because of their geography but also because of the different positions they occupied in each stage.

The Argentine State employed a variety of territorial occupation strategies throughout the 20th century to generate the settlement of the island, an issue that historically was stronger in Ushuaia due to its greater relative isolation. This pressure from international actors was particularly intense because of the proximity to Chile and the British military occupation of the Malvinas Islands. However, the definitive settlement by the Argentine population continued to be a pending task in the early 1970s.

We will present in the next chapter with the implementation of Law No. 19,640 as a strategy for territorial occupation in a context of geopolitical boundary conflicts with Chile, and we will look specifically at the impacts of this law on the Isla Grande and each city, both in terms of population and in terms of the productive profile and production of space.

Chapter 5:

Tierra del Fuego special economic zone and industrialization process. Productive, demographic and territorial transformations (1972 - 2019).



As we have pointed out, capitalism in its expansion is the main producer of geographical differences at multiple scales (Smith, 2020; 1996), insofar as it incorporates new territories through dynamics of equalization and differentiation, which thereby alter the patterns of socio-spatial organization. The productive dynamics and the actions of the State (at its different levels) have a central place in the definition of the patterns of Uneven Spatial Development (USD) and in its transformations in the last phase of capitalism, recognized as neoliberalism.

In the case of Tierra del Fuego, its delimitation as a SEZ by the national state in the early 1970s was a key issue for the promotion of new activities and, specifically, for the establishment of manufacturing industries. This gave rise to new dynamics of equalization and differentiation that completely redefined the forms of occupation, use and production of regional-provincial and urban space. Industry is recognized as an equalizing dynamic, to the extent that in a context of productive restructuring it incorporated the territory of Tierra del Fuego and its cities into the pattern of global accumulation. On the side of differentiation, different aspects related to the implications of industrialization are recognized, both at the national, regional and urban scales. In this chapter, and taking up the second particular objective of this thesis, we will concentrate on understanding the dynamics of the regional scale (in dialogue with the national and global scales), with the implications at the urban scale being the subject of the following chapters.

In particular, the aim is to unravel the temporal plot of the productive cycles of the capital crises and their impacts on the socio-spatial structure of Tierra del Fuego. It will take into account the interurban differences that began to develop in relation to the different insertions that each city had with respect to the process of productive homogenization generated by the industry. This issue will be expanded in the following chapters and will be fundamental to recognize the patterns of DED at the

intra-urban level, as well as the specific forms that urban inequalities acquired and their relationship with the rhythms of capital (Smith, 2012).

First, we will investigate those elements of the regional, national and global context that made possible the productive transformation of the territory under study, moving from a matrix anchored in primary activities to an industrial base. Some interpretative keys for its approach will be geopolitics, as a determining factor of the transformations that took place, and the production of regionality resulting from the incorporation of TDF into global capitalism.

Subsequently, the historical cycles of the productive dynamics will be analyzed, associated with the cycles of industrial activity, understanding that this did not have a linear growth or decrease over time. The identification of cycles will make it possible to delimit periods of industrialization and deindustrialization, which will be fundamental for the understanding of DED patterns and the analysis of urban inequalities. Based on their identification, the main aspects of demographic dynamics will be analyzed, as well as central aspects of territorial dynamics, in relation to the ups and downs of productive dynamics.

Methodologically, the historical approach to productive dynamics consisted of different instances in which quantitative and qualitative strategies were combined, based on the use of primary and secondary sources. Firstly, we worked with data series from official sources at regional, national and local level -Economic Commission for Latin America and the Caribbean (ECLAC); National Institute of Statistics and Census (INDEC); Provincial Institute of Statistics and Census (IPIEC)-, which provided conclusive information regarding the relevance of the different productive activities in the period analyzed, particularly through GGP (Gross Geographic Product), employment and industry data series. The temporal systematization of productive data was complemented with the bibliographic analysis of research and technical reports that address different moments of industrial dynamics (Azpiazu, 1987; Nochteff, 1984, 1992; Kosaccof, 1993; Filadoro, 2007; Schorr, 2014; CFI, 2018). The works of Ciccolella (1989), Donato (2007) and Sánchez (2018) were fundamental to interpret the productive dynamics in a spatial key. In parallel, demographic aspects were addressed through the analysis of historical data from the National Census of Population, Households and Housing and the Provincial Directorate of Statistics and Census, and complemented with bibliographic analysis (Cao and D'Eramo, 2019, 2021). The analysis and systematization of secondary sources allowed us to define a first profile of the productive cycles in Tierra del Fuego (and the associated migratory dynamics) in the study period, delimiting four subperiods, characterized by their dynamics of industrialization or deindustrialization, as the case may be. The sources are listed in Annex 1.

Secondly, interviews with key actors were a central input for the identification and understanding of the industrial cycles. The actors selected were officials and former officials who participated directly in the creation and evolution of the special tax and customs regime, researchers who have studied its impacts over time, union actors and representatives of industrial companies

(Table 5.1). We worked with semi-structured interviews, focusing on the validation of the sub-periods identified around the industrial dynamics, its main features and crises, as well as its spatial behavior (Annex 3). On this last point it was important to recognize differences and similarities between Ushuaia and Río Grande. The interviews were conducted between May 2018 and June 2019.

Table 5.1: Actors interviewed for the study of economic dynamics in TDF

<i>Public Sector</i>	<p>Former Director of the Provincial Institute of Statistics and Census.</p> <p>Former Ministers of Economy of the province (2): 1970s, 1980s and 2010s.</p> <p>Former Director of Industry and Commerce</p> <p>Former Secretary of Small and Medium Enterprises.</p>
<i>Private Sector</i>	<p>MIRGOR Group Managers</p> <p>Manager of NewSan</p> <p>Manager and Director of BGH</p> <p>Renacer Cooperative Manager</p> <p>Representative of the Argentine Chamber of National Industry</p> <p>Representatives of the Chamber of Commerce of Ushuaia</p> <p>Representative of the Chamber of Commerce and Industry of Río Grande</p>
<i>Labor union sector</i>	<p>Representative of the UOM Union in the 1990's.</p>
<i>Academy</i>	<p>UNTDF Research Professors (4) in Economics, Sociology and Political Science.</p>

Source: own elaboration

The specificity of the consumer electronics industry, a central activity in Tierra del Fuego, as we shall see, was complemented with interviews and visits to industrial plants, located both in Ushuaia and Río Grande. In the first case, visits were made to Newsan, the largest industry with the most workers in the province, and Renacer, an industry recovered by the workers and which adopted the form of a cooperative. In the case of Río Grande, Mirgor and BGH, the largest consumer electronics business groups in the city, were visited.

Finally, the territorial aspects presented at the regional scale were approached both through secondary sources and through the elaboration of primary sources for spatial analysis and complemented with interviews.

5.1 Construction of a Special Economic Zone at the end of the world. Industrialization process in Tierra del Fuego. A multiscale perspective

The modification and emergence of new DED patterns in the province of Tierra del Fuego in the last phase of neoliberal capitalism is strongly linked to the transformations of the productive structure in Tierra del Fuego that took place in the 1970s and 1980s. The reasons for this transformation can only be explained through the analysis of a series of factors, processes and political and economic decisions that were taking place during those years both in TDF and in the national and global space. We will now proceed to a multiscale analysis of them

5.1.1- Definition of Tierra del Fuego as a Special Economic Zone (regional-provincial scale)

At the sub-regional-provincial scale, a defining issue in the economic-spatial transformation was the application in 1972 of a policy by the national State that delimited the then National Territory of Tierra del Fuego as a Special Economic Zone by means of a special fiscal and customs regime. As established in the prologue of National Law 19.640, which gave rise to this new regime;

For the Isla Grande de la Tierra del Fuego a new statute is established, also technically known as a "special customs territory or area", which implies the application of a very low tariff and restrictions, different from the common geographic promotion regimes, since it is much more intense and is at an intermediate level between these and the "free areas", given that the degree of economic activity to be promoted is also intermediate and there are other notorious disadvantages. (1972: 1).

Among the factors that motivated the promotion of this promotional regime for this geographically remote territory are mainly geopolitical issues based on the need to establish sovereignty through the "definitive" settlement of the territory. Tierra del Fuego possesses, as we saw above, a strategic value in relation to its location south of the Atlantic Ocean, globally recognized for its natural resources (including maritime and hydrocarbon resources) and for its location in relation to the Antarctic continent. Gonzalo Pérez Álvarez (2017: n/d) described regarding the intentions that motivated the process of populating Manaus, linked to the establishment of the EEZ:

Four key ideas seem central in this occupation process and in the works that analyze the subject: Amazonia as an empty and unknown territory, Amazonia as a frontier land, Amazonia as a land to be conquered and Amazonia as a territory always explored from the outside.

These four ideas were also present in the various strategies promoted by different national governments during the twentieth century for the occupation of the TDF, and, particularly, behind its definition as an EEZ. As highlighted in the previous chapter, the successive attempts to populate the

southernmost territory of the country had proved insufficient for that purpose. The distance to the main national urban centers, the relative geographic isolation, the precarious transportation and connectivity infrastructure, added to the adverse weather conditions, were enough factors to understand the scarce population in 1970, which was only 13,527 inhabitants, distributed 5,677 in Ushuaia and 7,754 in Río Grande (INDEC, 2010).

The island was peripherally integrated to the national economy through wool and oil production, and its insertion was even weaker than that of the rest of Patagonia. Its economy was based on external demands, both extra-national and extra-regional, which was and still is a strong conditioning factor for local development, even more so than climatic conditions. It was a dependent economy, insofar as the accumulation capacities of external actors on the Fuegian social product were always superior to the internal ones (Ciccolella, 1989).

These issues, added to the conflictive nature of the border with Chile in those years, were decisive in confirming the national interest in promoting the development of Tierra del Fuego in pursuit of a "reduction of relative inequalities" (Preface, Law 19.640), with measures that would induce internal migrations to the region (Mastrocello, 2008). Figure 5.1 summarizes the main aspects considered in the delimitation of the TDF as an EEZ.

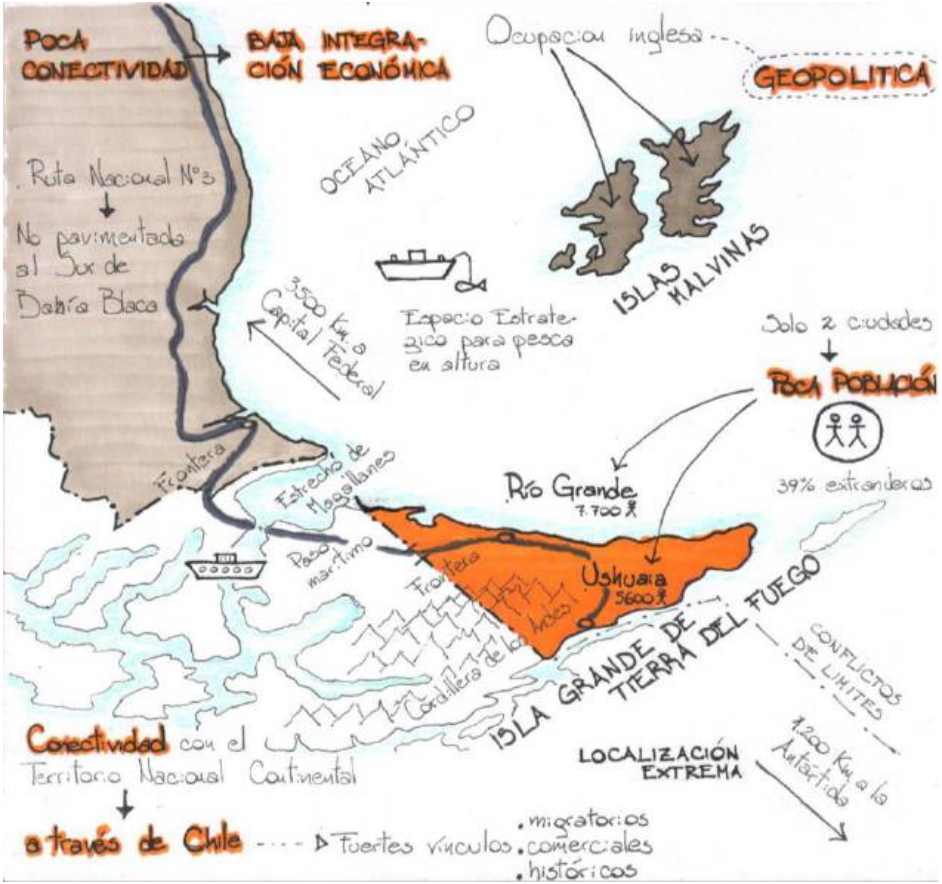


Figure 5.1: Spatial analysis of the factors that promoted TDF as an SEZ. Source: own elaboration

The end of the free zone in 1970, without further ado and due to fiscal issues, was a key point for the Government of the Territory of TDF, with the support of the Armed Forces, to begin negotiations with the national government to generate new forms of incentives for the settlement of the island.

Within this framework, Law 19.640 proposed a new fiscal and customs regime of economic promotion, based on the exemption of national taxes combined with tariff exemptions, delimiting the different geographical portions that make up the Tierra del Fuego territory as an EEZ. Although the immediate purpose of the law was the expansion of economic activity, its strategic objective was the establishment of a permanent population in the region.

Unlike the regime of the mid-1950s, which delimited the territory as a free zone, the new instrument established mechanisms to grant tax benefits to activities developed within the scope of the Fuegian jurisdiction, and not only to commercial operations.

It defined three geographical areas for this purpose:

- Special Customs Area (AAE), which comprises exclusively the Isla Grande de Tierra del Fuego.
- Free Trade Area (AF), which includes the entire jurisdiction of Tierra del Fuego (Antarctica and South Atlantic Islands), except for the Isla Grande.
- National Continental Territory (TCN), which includes the rest of the country, except for the Territory of Tierra del Fuego, Antarctica and South Atlantic Islands.

The commercial circulation with the Malvinas Islands was incorporated in the design of the law, among the movements allowed between the AAE and the AF.

For the AAE, a series of incentives were defined to be granted to the activities that could prove to have been carried out in the territory in question, grouped in three main groups: exemption from all national taxes; exemption or reduction of all customs taxes; possibility of exporting to the rest of the country. In order to compensate for the additional transportation costs associated with the geographical location, it was established that sales destined for the EPA would be assimilated to exports abroad, with which they would benefit from tax reimbursements (E.5, 19/6/19). The regime not only sought to facilitate the import of raw materials, but also to promote the export of products manufactured in the EPA.

These SEZ conditions were fundamental for the success of the policy applied in terms of productive growth and, as we shall see, they will provide a favorable framework for the establishment of industries. In this regard, Mastrocello states:

It was this possibility given to the promoted industry to sell throughout the national territory, which the previous regimes had not contemplated, which would eventually allow the economy of Tierra del Fuego to take the step that had been impossible until then, reversing the

chronic regional backwardness and drastically changing its traditionally primary sectoral structure. Thus, the industrial activity of Tierra del Fuego could finally access the main markets of the country, reaching larger scales of production -something unthinkable when it was only about supplying the very small domestic market of the island- and generating a demand for labor that would exceed the existing supply in the area, so that workers would have to move from other parts of the country. This sequence was the key to the promotional system, and its fulfillment in practice was what made it possible to achieve the demographic growth goals that gave rise to it (2008: 168, 169). (2008: 168, 169)

As for the productive profile, and as a former director of Industry and Commerce (who was in office for 25 years) related, the original purpose of the regime was to promote sub-regional territorial development. This was based on the use of local resources to obtain products that could then be exported to the mainland market. The government of TDF then considered a series of options to encourage local production, as indicated in an interview by the Minister of Economy at that time:

What do I have in Tierra del Fuego? Fishing. Good. It would be to be able to set up the industrialization of fishing. In other words, whatever you caught at sea, you could industrialize it here. First alternative. Second alternative: what do I have? Wood. Agglomerated wood plant, process it and bring laminates. The wood was local, so the final product was purely from Tierra del Fuego. [There was the possibility of a tannery, there was the possibility of a wool washing plant. You did not have the amount of wool to install a large weaving mill, I bring wool from the rest of Patagonia, if you had it at your fingertips. [...] So, then, what was next? Meat, it was an honestly local product. Why? Because we had it. At the same time this allowed us to have relations with the Malvineros at that time, because the Malvineros did not have meat packing plants and we had a meat packing plant here, in Río Grande, and that meat packing plant was ours, it belonged to the local producers. So we started relationships that had nothing to do with politics. So they were willing to bring the animals from Malvinas to fraction them here, to industrialize them here. This was another activity." (E.3, 13/12/18)

As we will see, none of these local development options will be the one that effectively grew favored by the benefits of the EEZ. The incentives provided by the law, including withholding the value of Value Added Tax (VAT) on sales to the TCN, coupled with the requirement of a minimum percentage of local value added to the final value of production, were key issues for the establishment of extra-regional capital seeking to increase their international profit rate. It will be particularly the manufacturing industries, mainly the consumer electronics branches followed by textiles, which will find in the regime the greatest benefits for the installation of plants for the supply of final products for the Argentine market. In order to understand this issue, we will now go into the processes that were taking place at the national level.

We can affirm, as we will see in more depth in the following sections, that the regime fulfilled (at least partially) its objectives, having been the main factor in the economic and population development of the territory of Tierra del Fuego up to the present day.

5.1.2- Promotional regimes and a new map of industrial geography in Argentina (national scale)

The political and productive dynamics that emerged in the 1970s on a national scale, particularly the industrial ones, had great relevance in the transformation of industrial location patterns during those years and, thus, in DED patterns. Their analysis is important for understanding some of the elements that made possible the success of TDF as an SEZ with an industrial profile.

The manufacturing industry had played a central role in the Argentine economy between 1930 and 1970, within the framework of import substitution industrialization (ISI), both in terms of employment generation and capital accumulation (Kosacoff, 1993). It was characterized by a diversified and oligopolistic production oriented to the domestic market, with an important presence of the national state as regulator of social conflicts and promoter of economic incentives for the sector. Towards the end of the 1950s, the industry could be considered the "engine of the economy", and continued to grow, together with the wage level and the progressive (although limited) increase in exports.

However, and as indicated by Pradilla (2014) in the analysis presented in Chapter 1, regarding the unequal structuring of the Latin American territory, the industrial development of the ISI did not have a homogeneous distribution throughout the national territory. The activity was mainly based in the central region, associated with its location advantages for production (available labor) and for trade and logistics activities. In this sense, infrastructure (Harvey, 2006), as well as networks (Brenner, 2009b), played a fundamental role in the structuring of the uneven national spatial development of that time. The economic and population concentration around the port of Buenos Aires and the extension of the railway systems were key issues for the definition of the first and main industrial region in the suburbs of the Federal Capital, in the region known as the Metropolitan Area of Buenos Aires (AMBA). The latter grew rapidly, although not without strong socio-spatial contrasts, given the scarce availability of housing and infrastructure (Oszlak, 1991). Subsequently, industry also expanded to the provinces of Santa Fe and Córdoba, consolidating the central region as the one with the greatest economic activity and population density.

Figure 5.2 shows that by 1963, there was a first industrial region composed of the Federal Capital, Conurbano Bonaerense, Córdoba, Santa Fe, which centralized the main industries (metal-mechanic, automotive, manufacturing, chemical); a second cordon with industries of lesser weight composed of Mendoza (agri-food industry), Rawson and Viedma in Chubut and a third cordon composed of a much weaker sugar industry in Tucumán. The concentration of the main productive activities, as well as of investments and resources, consolidated the fan country scheme proposed by Bunge thirty years before (Rapaport, 2000).

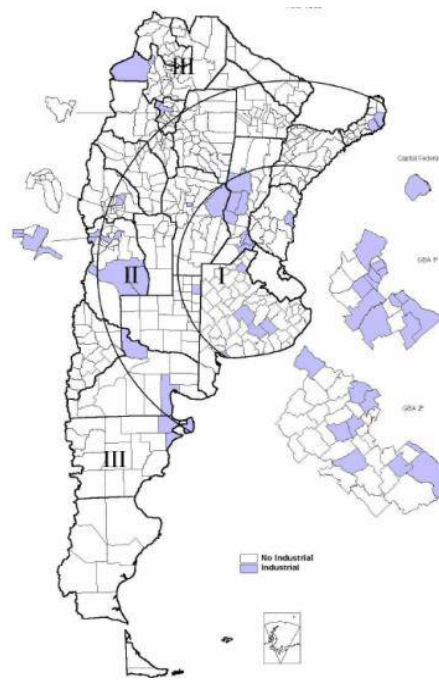


Figure 5.2: Industrial departments in 1963. Source: Donato, 2007

This inequitable territorial distribution defined strong patterns of inequality between industrialized and non-industrialized territories in Argentina. The former had most of the infrastructure of services and connectivity, had better quality of life indicators as well as the presence of skilled labor. In addition, these territories, which are now considered "old industrialized", contained 80% of the industrial labor force in those years (Cao, 2006), coinciding with the highest population concentration. The rest of the country showed, on the contrary, territories of very low population density (such as the Patagonian region), strongly dependent on the national State, and peripheral territories (such as the Northern provinces) that depended almost exclusively on regional economies (oriented to the production of agri-food under a mono-production scheme) and with high indicators of social deterioration (Cao, 2006).

The end of the ISI in the early 1970s took place in a context of great political and economic instability (Kosacoff, 1993). This industrialization model was already showing strong limitations associated with the external restrictions caused by the unresolved need to import inputs and capital goods. In spite of the technological accumulation generated and an incipient greater local integration, the scarce development of its own technological processes and of a capital goods industry resulted in a greater distance in the productive frontier with the developed countries, as well as in greater dependence on them (Rapaport, 2000). The need to implement long-term industrial policies that would promote the consolidation of the sector became an even more distant objective in the following years.

Neoliberalism, introduced in Argentina by the last civil-military dictatorship (1976-1983), brought with it external openness together with the liberalization of markets and the reduction of state regulations in the economy, which led to a severe crisis in the manufacturing industry. Industrial output fell by 20%, followed by the closure of large establishments and a fall in wages in the sector (Kosacoff, 1993), at the same time that the financial sector began to grow. It should be noted that some companies and economic groups were favored in this context by the articulation of privileged relations with the State, mainly through tariff protection measures, which contrasted sharply with the general situation of the productive framework.

Deindustrialization mainly affected the territories of "old industrialization", the Federal Capital and GBA, Cordoba and Santa Fe. These areas experienced a sharp increase in unemployment and poverty, accompanied by strong measures of repression and disciplining of trade union organizations. They were also the ones that suffered the most strongly from the actions of State terrorism.

At the same time, concerns about the inequity in the economic and population territorial distribution between the central region and the rest of Argentina led to the application of policies for the definition of EEZs based on promotional regimes, among which is the Tierra del Fuego regime. The promotional regimes applied since the 1970s were in several cases regional in nature, as opposed to the traditional sectoral ones, and were the policy that had the greatest impact on the national industrial profile during those years (Azpiazu, 1988). Among their main objectives -similar to what was analyzed in Chapter 2 with respect to the Chihuahua and Manaus SEZs- were the territorial decentralization of the economy and the geographic deconcentration of the manufacturing industry. To this end, they generated incentives for activities carried out in regions considered economically disintegrated, peripheral, border or sparsely populated regions (Ozslak, 1991; Dontato, 2007). In productive terms, they encouraged the migration (and merger) of manufacturing companies to newly industrialized territories, the concentration of markets, and with this, the development of a small proportion of large national capital firms. At the same time, they provided a framework of favorable conditions for the establishment of transnational companies that articulated with the large national capitals (Kosacoff, 1993). In this sense, following Harvey (2007a), they were policies that produced regionality, insofar as they favored specific territories within the national map and, particularly, the large companies and economic elites that were able to adapt their strategy to the deindustrialization process that was taking place on a national scale.

Thus, the promotion policy defined a new DED map by promoting new industrialized territories, among which the provinces of San Luis, San Juan, La Rioja, Catamarca and Tierra del Fuego stand out, as shown in Figure 5.3. Although, due to their scale, they did not manage to reverse the process of deindustrialization unleashed at the national level, it can be affirmed that they were the only territories that showed growth in relation to this activity during the 1970s and 1980s.

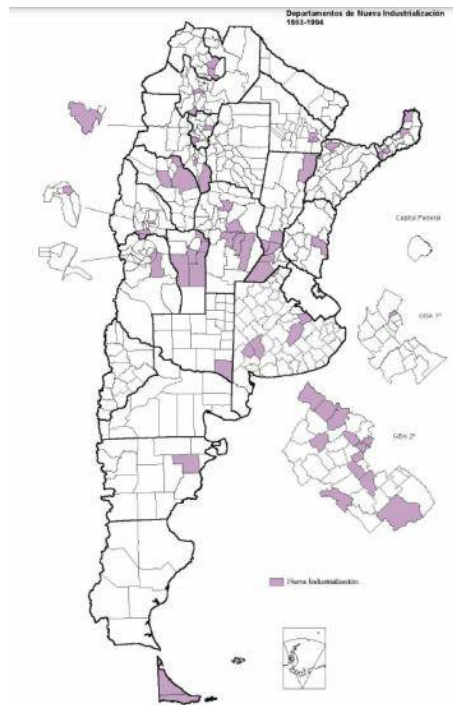


Figure 5.3: Departments of new industrialization. 1994. Source: Donato, 2007

Over the years, the central region regained industrial volume due to its natural conditions in relation to its large population and its location advantages in relation to the world and national markets. By the 1990s, the historical territorial inequalities between the central region and the rest of the country deepened again in most cases. The Convertibility plan of that decade, in a new liberal context, eliminated a large part of the promotional incentives, to the same extent that the privatization of highways and dismantling of railroad lines implied higher production and trade costs to produce in any place other than the main consumption centers. The role of the state again played a central role in the "growing regional heterogeneity" (Rappaport, 2000: 840) that followed.

5.1.3- Productive restructuring in the expansion of capitalism (global scale)

On the global scale, the process of productive restructuring described above affected both the process of global accumulation and the geographical division of labor. The development of transport, communications and new processes of automation in the industrial sector allowed the geographical fragmentation of the productive process while speeding up the circulation of goods. Thus, companies began to expand their profit margins by taking advantage of lower wages in certain territories, lower costs of industrial inputs (e.g. energy), access to protected markets, and the use of tax advantages in the periphery (De la Garza Toledo, 2001).

This gave rise to a new international division of labor that modified the territorial distribution of productive activities, generating new dynamics of spatial competition and new DED patterns

(Harvey, 2007a). Processes of lower complexity were relocated to peripheral territories, to the same extent that processes of greater complexity were concentrated in the central countries of former industrialization (De la Garza Toledo, 2001). In this way, new geographic spaces were incorporated into the process of global accumulation, as we saw earlier in the case of Ciudad Juarez and Manaus, in what we could consider a dynamic of equalization within the DED. To the same extent, it also produced dynamics of differentiation within nation states, as we have just seen in the Argentine case.

We could say that the transformation of the productive matrix in Tierra del Fuego depended both on regional factors and on its possibilities of insertion in the global accumulation process (and its restructuring), also mediated by the role of the national State and the productive policies derived from it.

Following, and starting from its definition as an SEZ, different periods related to the economic-regional dynamics in the TDF (and specifically with the dynamic industrial activity) will be presented, which will have their direct expression in the DED patterns within the region and within the cities.

5.2 Historical trajectory of the productive dynamics of Tierra del Fuego since its constitution as an EEZ.

5.2.1- First years of the regime and emergence of new DED patterns (1972 - 1979)

During the first years following the creation of the EEZ, neither the economy nor the population seemed to be as dynamic as expected in Tierra del Fuego. Between 1964 and 1974 industrial activity remained stagnant. In 1973 it occupied only 7% of the Gross Geographic Product of the island which, by then, had only 60 industrial establishments and a total of 581 employees, and was oriented to the transformation of local primary resources (Schvarzer, 1987). Until 1978, only a few projects linked to timber extraction were established in TDF, but they did not produce the expected economic and population leap.

From that moment on, the regime began to show its effects with the establishment of industrial companies with national capital, mainly linked to the industrial manufacturing sector. Although the SEZ posed exceptional conditions for all activities, the conditions of free import of inputs and protection of the final product made in the EPA (as an "export" good to the TNC), were fundamental for the requirements of this type of industry, particularly the consumer electronics branch. The latter began to grow strongly from 1978 onwards, and this was influenced both by the transformations of the industry at the global level and by the national conditions of accumulation.

In the international context, the restructuring of production particularly affected the consumer electronics industry. Advances in transportation and communications led to the standardization of rules and production processes, allowing the delocalization and geographical fragmentation of the

activity (Sanchez, 2018) . This enabled the participation of transnational capitals in various products or productive phases in different areas without major difficulties, while the establishment of industries in spaces where they obtained higher profit rates.

On a national scale, Resolution 292/76 left the import prohibitions of the ISI without effect and provoked the opening to international markets, in the face of which national capitals located in the former territories of industrialization found strong limitations of competitiveness. At the same time, the need to import electronic inputs in the context of the transition from black and white television to color television was an important issue to position TDF as a favorable environment for the new conditions of production and accumulation. The incentives proposed by the promotional regime laid the groundwork for the settling of capitals of national origin previously located in the TCN, which found in this instrument a framework to deal with external competition, through the import of parts without tariffs and their subsequent assembly. Sánchez (2018) expands on this point:

Only in this context did the promotion regime represent a concrete possibility for those capitals that could continue producing (the terminals), given the impossibility of reproducing themselves under the previous conditions in the TCN and the possibility of obtaining an advantage for their valorization by relocating to the TDF within the framework of the production scheme. (23)

It should be noted that the capitals that survived this migration were the larger ones, which managed to readapt to the new productive conditions of the branch at the global level in the final manufacturing phase. Thus, as the electronics industry began to grow in Tierra del Fuego, it practically disappeared in the Buenos Aires metropolitan area.

Regarding the characteristics of the industry, Roitter (1987) highlights the loss of complexity and integration of the productive processes that began to be carried out in TDF with respect to those previously developed in the mainland. Up to that time, the national electronics industry was locally integrated, with a skilled labor force. The industrial capitals that were located in TDF focused, on the other hand, on the final phase of the production of electronic equipment, under the CKD and SKD systems, mainly in the assembly of parts and pieces (Nochteff, 1984). The national companies readapted their production processes and thus became final manufacturing suppliers of global brands. Figure 5.4 illustrates the scalar articulation underlying the industrialization process in Tierra del Fuego.



Figure 5.4: Scalar articulation in the special fiscal and customs regime of TDF. Source: own elaboration

The productive scheme of Tierra del Fuego was adapted to global conditions, subject to the requirements of leading international companies. It was inserted only in the final phase of production, with little capacity for design and development, with high levels of imports of capital goods and inputs and at some point at the cost of a strong loss of industrial capacity in the sector at the national level (Schvarzer, 1985).

We observe, then, that the expansion of transnational capital in this case, as a result of the productive restructuring of consumer electronics, generated strong differences within the national territory, directly affecting DED patterns. While TDF began to industrialize as a peripheral part of the global process, design and development capacities gained during the ISI were lost in the country, fundamental issues for the valorization of the activity, also causing losses of qualified employment and industrial establishments. The role of the national State, within the framework of a dictatorial State, played a fundamental role both in the deindustrialization of the TCN and in the production of regionality, constituting the TDF as a privileged environment for certain companies that managed to successfully insert themselves into the new accumulation scheme.

Figure 5.5 summarizes the DED patterns emerging from the industrialization process in Tierra del Fuego in relation to the national scale.



Figure 5.5: New DED patterns with the industrialization of Tierra del Fuego. Source: own elaboration

5.2.2- Expansion of industry and the first migratory flood (1980 - 1991)

a- Transformations in the productive structure

With the establishment of industries, an expansive process of the economy of the Big Island took place, expressed in an increase of the industrial sector of 4,170.9% in the period 1974-1984, while for the same period the national manufacturing sector showed, according to Ciccolella (1988), a negative growth of -5.6%. Industrialization in Tierra del Fuego was reflected in the growth of the sector's establishments by more than 150% (from 60 to 158) and an increase in the number of employees from 581 to 6,331 for the same period (Ciccolella, 1988). Industrial workers then represented half of the population living on the Isla Grande of TDF in 1970, while this tripled by 1985 (Schvarzer, 1987), as we will see below, thus fulfilling the population objectives of industrial promotion.

As Figure 5.6 shows, industrial activity replaced oil as the main contributor to the composition of the Gross Geographic Product (GGP), rising from less than 10% in 1980 to 60% in 1984. Although there is no quantitative data available, the bibliographic analysis shows that industrial activity continued to increase until 1989, with the period 87-89 being the period of greatest industrial establishment (Filadoro, 2007; Mastrocello, 2008).

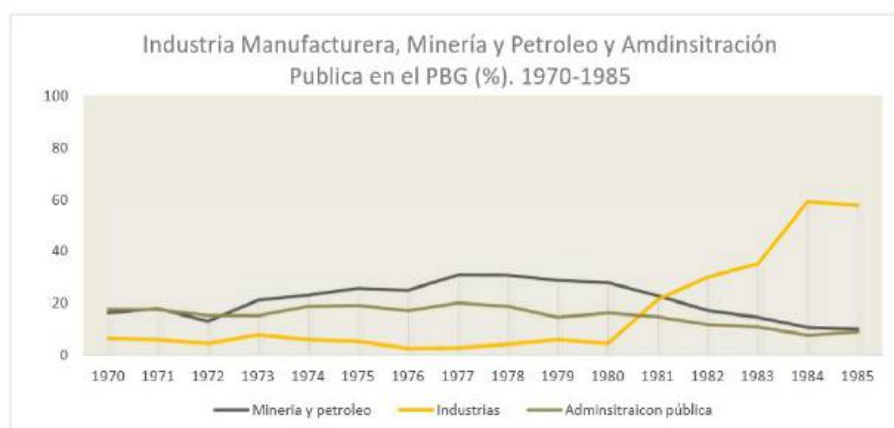


Figure 5.6: Gross geographic product according to main productive activities (1970-1985) expressed as a percentage. Source: own elaboration based on "Estructura socio-económica argentina". GGP TDF (1990)

Within the industrial sector of Tierra del Fuego, Ciccollela (1989) distinguishes important modifications in the sectoral structure between the 1970s and the 1980s, from wood being the main industrial product in terms of establishments, employed personnel, salaries, production value and the one with the highest added value, to machinery and equipment. Within the branches, the growth of consumer electronics stands out, followed by the textile, chemical and plastic industries, as shown in Table 5.2.

Table 5.2: Sectoral structure by activity in TDF. 1984

<i>Activity</i>	<i>% Establishments</i>	<i>% Employ staff</i>	<i>% Salaries</i>	<i>% Production value</i>	<i>% Added value</i>
Spinning, weaving and finishing of textiles	7,4	4,3	4,7	10,4	8,4
Made-up articles of textile materials, other than apparel	3,4	2,8	2,2	3,0	2,5
Knitting and cordage factories	6,1	5,1	3,3	2,6	2,5
Garment manufacturing	5,4	2,8	2,2	1,9	1,7
Sawmills and other workshops for wood preparation	8,1	5,4	2,5	2,4	3,1
Manufacture of plastics, chemicals and petroleum products	8,1	4,7	5,2	5	4,5
Construction of radio, television and communications equipment and apparatus	15,5	55,2	73,9	71,2	74

Manufacture of refrigerators, washing machines, air-conditioners and related products: manufacture of electrical household appliances	3,4	1,9	2	1,6	1,7
Others	42,6	7,8	4	1,9	1,6
Total	100	100	100	100	100

Source: Ciccolella, 1989

The protectionist measures applied at the national level with the return of democracy under the presidency of Raúl Alfonsín (1983-1989), although they did not alleviate the economic crisis at the national level, did enhance the advantages for the establishment of industrial companies in TDF. Thus, while by the end of the 1980s Argentina was going through a strong loss of capacity of the industrial sector as an engine of employment and economic growth, Tierra del Fuego was going through the moment of maximum development of its industry up to the present, reversing the DED patterns that had historically positioned it in a situation of great fragility.

We see, however, that the industrialization process that took place was not linked to local resources in pursuit of the development of Tierra del Fuego, as had been intended in the spirit of the promotional regime. As we have argued previously, the national capital companies, mostly representing international firms in the field of consumer electronics, carried out tasks with little integration and participation of the local economy (Kosacoff, 1993). Ciccolella (1989) characterizes the industrial boom of the late 1980s:

An accelerated process of production of industrial urban space such as the one currently taking place in Tierra del Fuego can be visualized - rather than as an experience of "regional promotion" - as a fuller and more direct incorporation of the area into the economic space of the large transnational corporations and the capitalist mode of production, which is evident in the intensification of the forms of production proper to it (higher degree of wage labor, greater incorporation of capital and technology, more capital-intensive productive forms, deepening of the technical and social division of labor, etc.); while the traditional productive structure is "swept away" or "jibarized" (19).

For this reason, the economy, as well as the socio-demographic structure and its territorial implications, were subordinated to the changes in the national State's perspective on industrial policy, defined in turn according to the different insertions in the process of global accumulation. The main "winners" were, meanwhile, the large national companies that took advantage of the fiscal benefits of the promotional regime (Azpiazu and Nochteff, 1987; Nochteff, 1984 and 1992; Rabinovich, 2017).

b- Spatial configuration of the industry at the regional scale.

Regarding their spatial behavior, industries in TDF settled since the late 1970s in the existing cities at that time, Ushuaia and Río Grande (Tolhuin had been recently created in 1972). Ushuaia showed strategic conditions for the entry of inputs through the port, which came from central countries, but formally entered the country through the port of Buenos Aires. Río Grande, on the other hand, showed better conditions for the entry of national inputs and for the exit of finished products by land to the TCN, as well as less difficulties (and costs) than Ushuaia for the construction of industrial plants and infrastructure works due to its steppe geography. During the 1980s, the place that industry began to occupy, as well as its economic and territorial impacts, were different in each case. Río Grande, historically anchored in cattle raising and with an important hydrocarbon profile, was transformed in a few years into the industrial capital of the island, and consumer electronics became the main source of employment (Ciccolella, 1989). Ushuaia, with a profile historically anchored in its political-administrative role as the capital of the national territory and later of the province, also incorporated industry as one of its main activities in its beginnings. However, the service sector continued to predominate among those occupying the largest number of jobs, as shown in Table 5.3. In any case, the importance of the port of Ushuaia kept it linked to industry.

Table 5.3: Economically active migrant population according to branch of activity (% of total). 1985

<i>Activity</i>	<i>Río Grande</i>	<i>Ushuaia</i>	<i>Total</i>
Industry	29,9	25,2	27,8
Commerce	12,1	11,5	11,8
Construction	9,7	9,4	9,6
Services	18,00	34,7	25,6
Transport	4,5	5,7	5,1
Other activities	4,3	4,1	4,2
No specification	9,9	2,3	6,4
Unemployed	11,6	7,1	9,5
Total	100	100	100

Source: Ciccolella, 1989

Between 1974 and 1984, according to Ciccolella (1989), in Ushuaia industrial settlements grew by 76% and employment by 540%, while in the city of Río Grande they grew by 197% and 1,534% respectively, the latter accounting for three quarters of the value of the island's production and value

added (Ciccolella, 1989). This initial difference was due to the greater ease that Río Grande offered in terms of flat relief for the construction of industries and infrastructure works, as well as a better relative positioning for the land logistics of manufacturing production.

The decade of the 80's was the turning point of an original starting point between both cities. From then on, Río Grande would progressively gain a greater productive and urban industrial profile than Ushuaia, turning the former into the industrial head of the Special Economic Zone of Tierra del Fuego.

c- Impacts on the sociodemographic structure

Until the industrial promotion law, the Isla Grande of Tierra del Fuego showed a demographic structure that according to Cao and D' Eramo (2021) could be described as underpopulated, that is to say that it had not yet managed to "consolidate the critical mass of population necessary to trigger economic, social and political processes similar to those occurring in the rest of Patagonia" (2021: 247). Among its particularities, there was a population pyramid composed of a high number of young males, non-native population and seasonal migration, linked to the forms of work required in the main activities carried out up to that time (oil, military and livestock).

The industry promoted since 1972, on the other hand, was characterized by a high number of workers, which was a requirement of the EEZ, as well as the condition that they should be of Argentine origin.

Given the small population of Tierra del Fuego, specific measures were introduced to promote work on the island, such as high wage levels compared to other areas of the country and the collection of an unfavorable zone bonus, applicable to all activities. The high industrial salaries were initially subject to the same industrial promotion regime, since in order for companies to be able to prove the origin of the merchandise in the EPA they had to incorporate a local expense equivalent to 25% of the final value (Law 19,640). Despite the extreme characteristics of the geography and climate, these favorable employment conditions were the basis for the effective migration of workers from other regions of the country (E.2, 11/14/18).

As happened in Ciudad Juarez and Manaus, industrialization was reflected in significant population growth. The population of TDF doubled between 1970 and 1980, reaching 27,358 inhabitants (INDEC, 1980), which represents a percentage variation of 102%. During the following decade and with the industrialization boom, the population grew even more rapidly, reaching 69,369 inhabitants by 1991, with a percentage variation of 153% (INDEC, 2010).

Regarding its composition, the urban population, which represented 85% in 1970, rose to 98% in 1991. While in 1970 58% of the population was Argentine and 42% foreign (mostly from rural areas of Chile), since the establishment of the EEZ, migrants were mostly of Argentine origin, reversing the

historical trend. By 1987, the Chilean population represented 18.3% of the migrants settled on the island, while 82% came from the Argentine mainland (Ciccolella, 1989), mostly from the provinces of Buenos Aires, Santa Fe, Córdoba and Entre Ríos (23.4% from the Federal Capital and GBA and 27.2% from the rest of Buenos Aires, Santa Fe and Córdoba).

Ushuaia and Río Grande were the only two cities in Tierra del Fuego that were affected by the establishment of industries, and with this, the two that directly suffered a demographic explosion due to the growth of labor demand in the industrial sector. Table 5.5 shows that by 1987, only 25% and 26.2% of the population of Ushuaia and Río Grande, respectively, were born in TDF. Regarding the immigrant population, it is worth noting that the Chilean population was 21.5% in Río Grande versus 9.1% in Ushuaia, probably due to its greater proximity to the border crossing, and also, due to the labor inheritance of the agricultural activity.

Table 5.5: Ushuaia and Río Grande. Population according to place of birth (as % of total). 1987

<i>Birth place</i>	<i>Río Grande</i>	<i>Ushuaia</i>	<i>Total</i>
Cap. Fed y GBA	11,4	16,5	13,7
Resto B.A., S. Fe, CBA y E Ríos	16,6	23,0	19,4
Cuyo	5,6	6,1	5,9
NEA	3,8	6,8	5,0
NOA	6,0	6,8	6,2
T. del Fuego	26,2	25,1	25,7
Patag- Comahue	8,2	4,5	6,6
Chile	21,5	9,1	16,0
Others	0,7	2,1	1,5
Total	100	200,1	100

Source: Ciccolella, (1989 based on data from the Pilot Survey [May 1987] of the EPH).

We can see that although between 1970 and 1980 the cities grew in a similar way, Figure 5.7 indicates that Río Grande had a greater proportional growth than Ushuaia between 1980 and 1991, probably linked to a greater industrial settlement.

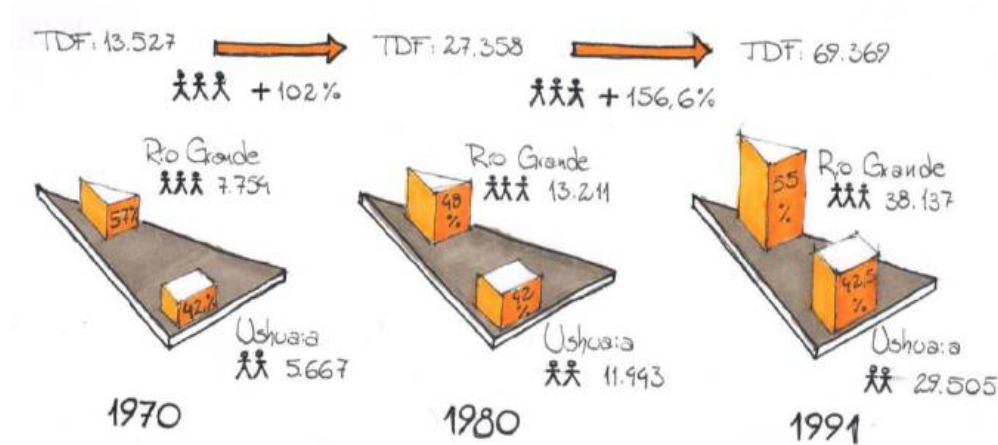


Figure 5.7: Analysis of the demographic evolution in TDF and its cities 1970-1991. Source: own elaboration based on national censuses 1970, 1980 and 1991.

In summary, we can affirm that since the definition of TDF as an EEZ and throughout the 1980s, the productive structure of Tierra del Fuego underwent strong transformations associated with the sustained growth of industrial activity, especially consumer electronics, both in economic terms and in terms of employment. In this sense, we see that the promotional regime, promoted as a geopolitical strategy, initiated a process, according to Harvey (2007a), of producing regionality in the Isla Grande of TDF, with particular DED dynamics. The geographic expansion of industrial activity functioned as a differentiation dynamic on a national scale, and at the same time as an equalization dynamic on a sub-regional scale. The transformation of the productive matrix brought about strong changes in the socio-demographic structure, which resulted in a significant increase in the urban population of the cities of Ushuaia and Río Grande, both of which were directly affected by the establishment of industries. In this sense, the process was very similar to that previously studied in Manaus and Ciudad Juárez. However, at the urban scale, processes of differentiation began to develop, linked to the relationship that each city established with industrial activity, predominant in Río Grande thanks to its better geographical conditions.

5.2.3- The 1990s and the generalized industrial crisis (1991 - 2002)

a- New transformations in the productive structure: consolidation of the neoliberal State

Starting in 1989, and coinciding with the beginning of Carlos Menem's presidency (1989-1999), the application of neoliberal economic measures, such as the dollarization of the economy and the opening of imports, led to a strong economic restructuring in favor of the accumulation of private capital. Law No. 23,696 of State Reform (which granted more powers to the Executive Branch) and

Law No. 23,697 of Economic Emergency, allowed the privatization of public companies on the grounds of "efficiency", dismantling a large part of the national economic-productive infrastructure.

The nineties saw the consolidation of the structural reforms of the neoliberal State, through policies that favored the unrestricted opening of the economy to international markets, coinciding with a strong loss of State interference in distributive policies. The financial accumulation model was imposed on the productive valuation model, having as main instruments the issuance of foreign debt and unemployment (Basualdo, 2006; Deluca, 2019). Law No. 24,013 (1991) on Labor Flexibilization was a key instrument in the loss of labor stability and rights acquired by workers in previous decades.

In this context, the industrial sector suffered heavily from the onslaught of neoliberal reforms: most of the protectionist measures were annulled, among other things, all industrial promotion regimes in the country were suspended (with the exception of TDF) and more than 300,000 jobs were lost in the sector at the national level (Rapoport, 2000). Those who suffered the most were mainly the small and medium-sized industries, as well as many workers who had been employed as employees up to that time. This deindustrializing scenario was accompanied by strong social conflicts and mobilizations, both of trade unions and of new social movements made up of the new mass of unemployed population, teachers' movements, movements around access to land and piquetero movements (Svampa and Pereyra, 2003).

At the sub-national level, although the regime in Tierra del Fuego was the only one of the productive-regional regimes that survived, TDF was particularly affected by the new economic model. Promotional benefits were cut and the installation of new projects was suspended, which resulted in the stagnation of industrial activity (Mastrocello, 2008). The opening of imports played a fundamental role in the decrease in demand for electronic products manufactured in the EPA, given the impossibility of competing with international market prices.

This period coincided with the beginning of the provincialization of the TDF territory in 1991, which demanded a different bureaucratic and administrative organization (Subsecretaría de Planificación territorial de la Inversión Pública, 2016). In this line, the provincial authorities were able to manage the extension of the industrial promotion regime until 2013 (which until then ended in 2003) which although it did not allow the expansion of the activity, it was an important contingency measure to avoid the definitive closure of factories and with it, abrupt and massive unemployment. Later, other measures such as National Decree 479/95, which set very strict conditions for the substitution of products, together with the extension of the regime, served as protection for the companies located in the province and helped to stabilize the activity. However, and in spite of the containment measures, the accelerated decline of the industry caused social upheavals that led to the murder of a metal worker during a demonstration in 1995, the first death in democracy during social protests. Subsequently, the high competitiveness with foreign goods led to a reduction in personnel in order to reduce costs, so that although activity returned to relative growth between 1995 and 1997

(Figure 5.8), the workforce decreased and labor conditions in the sector deteriorated. Many industries closed and others, while maintaining their formal existence and physical infrastructure, laid off most of their employees (Mastrocello, 2008).

Considering the data presented in Figure 5.6, it can be inferred that the industry decreased from 60% of the GGP it received in 1985, to 30% in 1995, and then remained relatively stable with small fluctuations of growth and decrease.

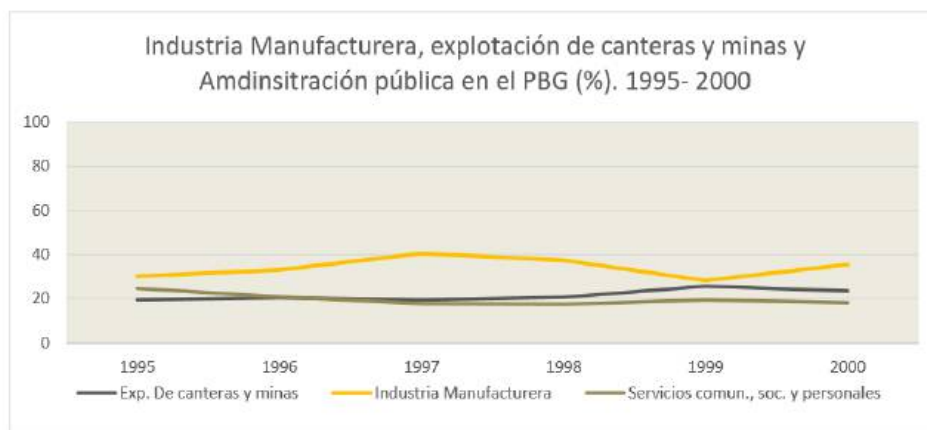


Figure 5.8: GGP (%) for main productive activities. Period 1995-2000. Source: Prepared by the authors based on Laveglia and Mastrocello (2002).

Regarding industrial jobs, the National Economic Census of 1994 indicates that in 1993 there were 5,706 employees in the manufacturing industry in TDF, which dropped to less than 3,500 in 1996, reaching its lowest peak in 2002 -in the context of economic, political and institutional crisis at the national level-, with 2,002 people in this task (IPIEC, 2010).

Within this socioeconomic framework, employment found refuge in the growing demand for jobs in the state sector and construction, since the provincial public administration was growing due to the recent provincialization process of Tierra del Fuego initiated in 1991. At the same time, the tourism sector, centralized in the city of Ushuaia, was emerging as an economic activity demanding employment.

b- Spatial configuration of productive dynamics in Tierra del Fuego. Tourism: differences between Ushuaia and Río Grande

Tourism began to grow during the 1990s in TDF, and particularly in Ushuaia, boosted by the new dynamism that this activity acquired worldwide and the open-minded economic profile of Carlos Menem's government, already described. However, there were previous antecedents for its promotion.

The first Fuegian leader who began to outline the profile of the tourist activity in the territory in question was Ernesto Manuel Campos, governor of the then National Territory of Tierra del Fuego,

Antarctica and South Atlantic Islands between 1958 and 1963. During his administration, the Tierra del Fuego National Park was created (only 12 km from the city of Ushuaia), a basic infrastructure was consolidated and state hotel projects were implemented in different strategic points of the Big Island due to its high landscape value. Campos and his team had the idea that Ushuaia would be the tourist city, while Río Grande would develop through the consolidation of hydrocarbon activity. The industrial manufacturing boom of the 1980s, however, directed resources and political efforts towards this sector of greater accumulation.

In the following decade, the transformations of the activity in the midst of neoliberalism led to a "new model of global tourism", modifying the forms of organization, commercialization and consumption, transforming its historical spatial patterns and incorporating new territories (Bertoncello, 2002; García Pascual, 2017). The State at different levels and private companies began to promote actions in pursuit of the enhancement of certain natural spaces, an issue also made possible by the progress in communication and transportation technologies. Thus, local development processes took place in parallel with the incorporation of national and international capital, generating new DED patterns, both within the new spaces favored by tourism and between these and the territories that were not incorporated into its logic.

Linked to the imaginary of "end of the world" and "gateway to Antarctica" as a marketing strategy, Ushuaia managed to insert itself into the Patagonian tourist corridor along with other cities such as Puerto Madryn and Calafate (Artesi, 2003). New institutional and infrastructure actions were implemented by the State, such as the creation of the Instituto Fueguino de Turismo (INFUETUR), the expansion of the port and the international airport (1997), and the provision of urban and periurban land for the development of medium and large-scale hotel enterprises.

From the private sector, the incorporation of Ushuaia to the tourist circuits of international companies, as well as the creation of the Cerro Castor winter center, and the commercialization of excursions to Antarctica from the port of Ushuaia, the construction of high quality hotels attending the type of emerging demand, were some of the most relevant actions for the definitive insertion of the city to global tourism. Río Grande, on the other hand, remained on the fringes of the tourist circuit.

Table 5.6 shows the increase in the number of passengers arriving in Ushuaia during the summer seasons between 1992 and 2003, showing an increase of 352% by the end of the period.

Table 5.6: Evolution of demand in high season. Period 1992- 2003.

Temporada	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03
Pasajeros	35 822	34 653	44 944	47 564	47 968	69 776	96 781	94 906	104 633	94 662	126 107

Source: Artesi, 2003

With respect to the origin of passengers, Table 5.7 shows that, coinciding with the globalization of tourism activity, since 1995 foreigners have been the most frequent visitors, more than doubling the number of domestic visitors. The modes of arrival were by air, sea and, to a lesser extent, land.

Table 5.7: Origin of passengers in high season.

Temporada	1993/4	1995/6	1996/7	1997/8	1998/9	1999/00	2000/1	2001/2	2002/3
Pasajeros	34 653	47 744	47 566	63 619	87 372	88 968	101 416	91 662	126 107
Nacionales	20 445	15 869	15 634	20 485	26 823	27 809	31 291	22 747	36 690
Extranjeros	14 208	31 875	31 932	43 134	60 549	61 159	70 125	68 915	89 417

Source: Artesi, 2003

Both tourism and the fact that Ushuaia became the provincial capital and housed a large part of the administrative offices also began to influence the DED patterns in Tierra del Fuego, which began to differentiate distinctive profiles between Ushuaia and Río Grande. Ushuaia was able to at least partially contain the economic onslaught of the deindustrialization process, while Río Grande suffered a strong stagnation due to the centrality that industry had acquired in previous years for the city. In any case, both cities, like the rest of the Argentine cities, suffered heavily from the economic crisis of the second half of the 1990s and early 2000s, which led to a social explosion in 2001, producing the most politically and economically destabilizing scenario since the return to democracy. A heterogeneous social eruption against the management of the then Alianza government, in a context of deep economic recession, with half of the population below the poverty line and 25% unemployment were the prelude to the resignation and new early departure of a president in Argentina, Fernando de la Rúa (Deluca and Novelle, 2018).

Regarding the demographic issue, although the population continued to grow to 101,079 inhabitants at the provincial level in 2001 (INDEC, 2010), the growth rate between 1991 and 2001 decreased relatively compared to its own historical parameters, a product of the stagnation of industrial activity. Ushuaia reached 45,430 inhabitants in 2001, while Río Grande reached 52,681, which implies a growth of 54% and 38%, respectively. At regional level the variation was 17.3% and at national level 11.2%. Tierra del Fuego was the Patagonian province that most reduced its population growth between 1991 and 2001 of all the Patagonian region: 45 percentage points less than in the previous census period. In other words, although TDF maintained a high growth rate in relative terms with respect to the Patagonian region and the country in general, it decreased its migratory intensity as a result of its own economic processes.

5.2.4- Industrial recovery (2003-2015)

a- Transformations in the production structure

Under the government of Néstor Kirchner, a new phase at the national level began in 2003. It was characterized by increased State intervention in the capital accumulation model and the execution of a number of programs aimed at the population's socioeconomic rebalancing (Deluca and Novelle, 2018). The restoration to the productive valorization logic, as opposed to the financial valorization paradigm that was used until 2002, is a crucial concern of this stage (Basualdo, 2020). To assist the national industry for domestic consumption, with its potential and limitations, numerous policies were created up till 2015. (Kulfas, 2019; Schorr, 2015; Deluca and Novelle, 2018).

With the implementation of new protectionist policies and revisions that provided the Exclusive Economic Zone (EEZ) additional impetus as of 2003, we can identify the start of a new period of economic boom in Tierra del Fuego under this national direction (Schorr and Porcelli, 2014; Jovanovich, 2016). The first measure was Decree No. 490/03, which enabled the reopening of the regime for new products and capital that were not being produced in the TNC, in principle until 2005. Subsequently, the PEN Decree (1234/07) extended the regime until December 31, 2023, matching it with the extension of the benefits of the Manaus free trade zone (Decree 1234/07), thus seeking to avoid negative impacts on the activity developed in TDF.

The extension of the regime provided a predictable scenario for the establishment of industries and new production lines. In this sense, as shown in Figure 5.9, a new stage of incipient growth of industrial activity can be observed between 2004 and 2007, which reached greater dynamism as of 2009, with the manufacturing industry accounting for more than half of the provincial GDP between 2011 and 2014.

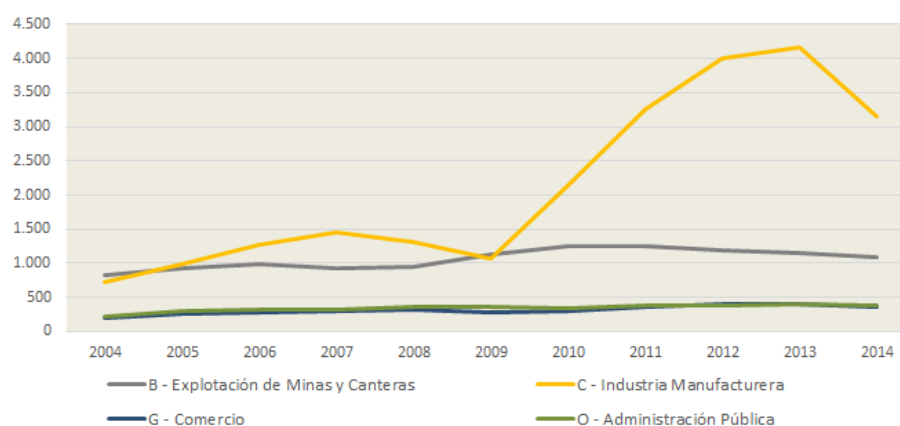


Figure 5.9: GDP (%) for main productive activities. Period 2004- 2014 (Value added at 2004 prices). Source: Prepared by the authors based on Secretariat of Small and Medium Enterprises of the Province of Tierra del Fuego, 2020.

There are various causes for this sudden expansion. The emergence of multipolarity and the globalization of cellular telephony and Internet use were key factors in the information and communication technology revolution on a global scale. This led to a new scenario in terms of production methods and consumer goods, which had an immediate impact on the global electronics market. New goods started to emerge, including digital cameras, then cell phones that subsequently evolved into smartphones, tablets, laptops, and netbooks. (Rabinovich, 2018). With them, the consumption of electronic equipment also increased in Argentina, benefited by low-interest rate consumer loans thanks to government subsidies or national financial policies.

At the national level, in order to strengthen again the productive model, Law No. 26539 (2009) established the increase of internal taxes on imports of electronic products from third countries. Following this, PEN Decrees No. 916/2010, 39/2011, 26/2012, and 2623/2012 were passed, specifically for the TDF SEZ, allowing the production of new production processes by exception (since the regime remained closed to the establishment of new industries) for the production of tablets, laptops, and e-book readers. The final impulse of this policy was given in its articulation with the national plan for technological literacy and digital inclusion called Plan “Conectar Igualdad” (connect equality), under which more than 5,000,000 netbooks and notebooks were distributed to students and teachers throughout the country¹⁴².

This set of measures directly affected electronics production in the AAE, which grew significantly from 2009 onwards, as shown in Figure 5.10 below.

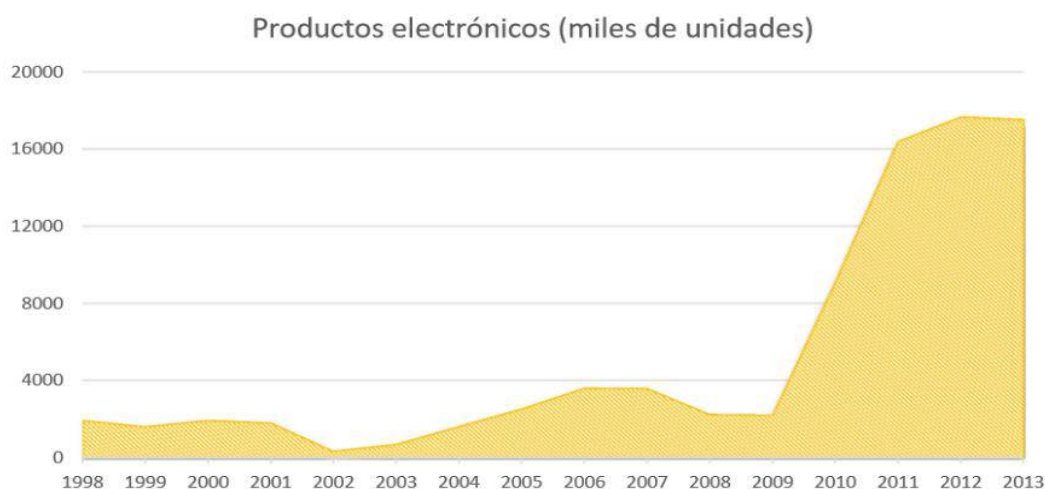


Figure 5.10: Electronic products made in Tierra del Fuego. Source: own elaboration based on National Directorate of Economic Relations with the Provinces (DINREP)

¹⁴² The Conectar Igualdad Plan was created by Decree 459/10, in 2010, and was aimed at promoting the use of ICTs through the delivery of a computer to all students and teachers of public secondary schools, special education and teacher training institutes throughout the country, together with the training of teachers in its use. By mid-2015, approximately 5 million netbooks had been delivered, making it one of the most massive laptop delivery plans in the world. (Deluca y Novelle, 2018). In 2013, 1,400,000 notebooks were produced in Tierra del Fuego. (IPIEC, 2020)

The main products manufactured were cell phones , air conditioners, televisions and laptops, which accounted for approximately 95% of production in 2014 (Ministry of Finance, Secretariat of Industry of the Province of Tierra del Fuego). In these cases and thanks to the measures implemented, a practically full import substitution was achieved (CFI, 2018).

We will now take a closer look at some of the main aspects of the processes and dynamics of consumer electronics manufacturing developed in Tierra del Fuego. These are: the productive process, the characteristics of the mercantile process (logistics and infrastructure), the industrial enterprises (regionality production) and aspects related to labor. We are interested in their analysis, since they are differentiating dynamics of USD patterns at the regional scale.

Production process: development and assembly

The production process is an important issue to be taken into account, insofar as it provides a glimpse of the sine qua non scalar articulation of the industry in Tierra del Fuego, as well as the need for labor it generates.

The types of tasks developed at the end of 2015 in the TDF electronic industries, which were primarily focused on assembly jobs, were not much different from those created in the 1980s. However, it can be seen that starting in 2013, significant efforts to increase vertical integration on a national scale started to be made¹⁴³.

A CFI study states that the initial task developed in TDF is organizing inputs arriving at the AAE in warehouses in accordance with the product that will later be used as part of the manufacturing line. Ships from the central countries transport the majority of foreign inputs (parts, pieces, and components) to Buenos Aires¹⁴⁴. There are also some inputs coming from inside the TCN for labeling and packaging tasks, as well as some other more complex parts, such as remote controls, air conditioning motors, memory boards and cables.

Production lines then start with the assembly operations, which involve sorting and organizing the parts, inserting the plates manually or automatically, assembling, testing the result for quality, and packaging. Some items, such air conditioners, involve additional tasks, while larger businesses may also incorporate welding duties. Depending on the size of the companies, different factories have

¹⁴³ To this end, some parts produced in the continent for the manufacture of air conditioners and cellular equipment were incorporated, and some of the tasks performed were expanded.

¹⁴⁴ Except for cell phone kits, which arrive by air. Regarding the origin of imports, it is worth noting that China has grown in recent years, consolidating its position as the main supplier of components, parts and pieces as well as final products, displacing Brazil as the main supplier (Ministry of Finance, 2015).

different levels of manufacturing process automation¹⁴⁵. The ones with more automated processes are the bigger ones.

After assembly, the production is packaged and finally transported to Buenos Aires to be inserted into the domestic market through distribution and marketing. Figure 5.11 illustrates the production process, taking into account the different stages, the characteristics of the suppliers (national, imported), the inputs and the finished products.

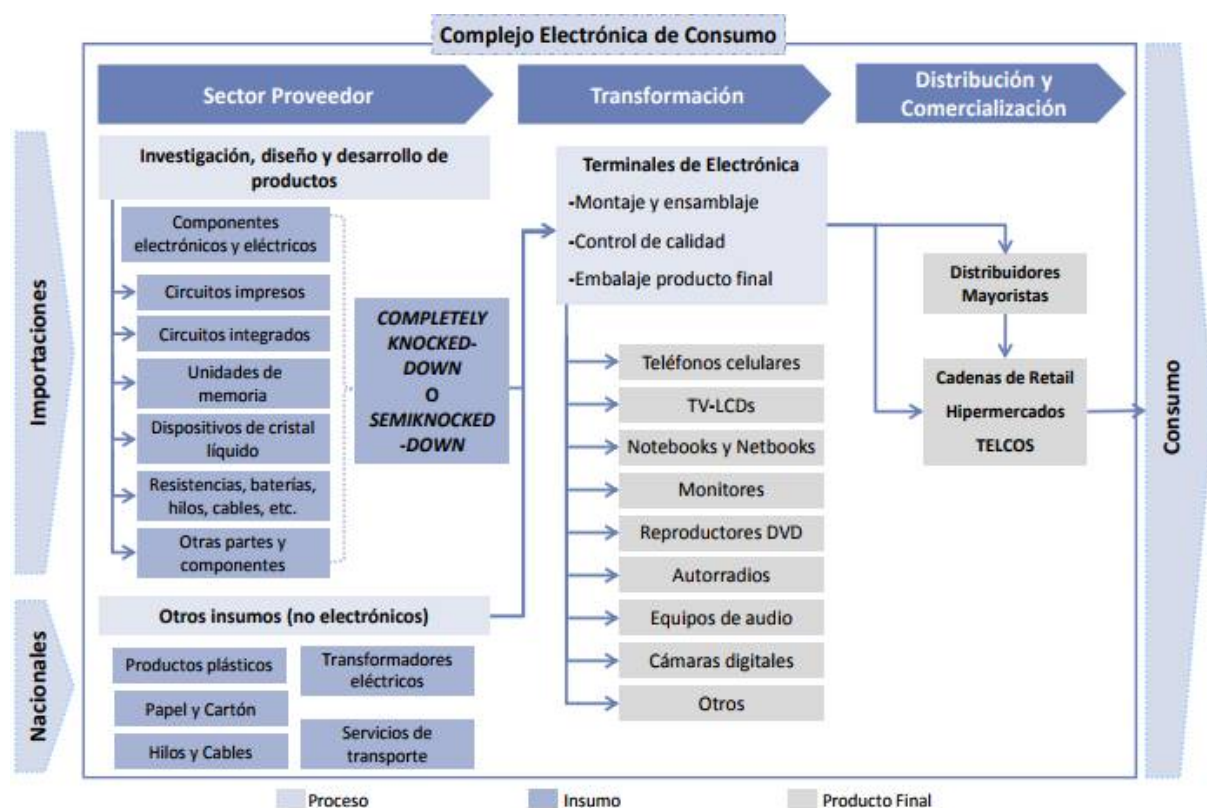


Figure 5.11: Main characteristics of the production and distribution process of electronic products. Source: Ministry of Finance

Characteristics of the commercial process: logistics and infrastructure

Logistics represents an important and complex issue, given the geographic location of the AAE. According to a CFI report (2018), it involves approximately 9% over the total cost, with the most expensive being the larger products (air conditioners)¹⁴⁶. Regarding its spatial dynamics, 76% of the inputs entering the island for 2016-2017 did so through Río Grande, while only 24% entered through

¹⁴⁵ The greatest difference between companies is in relation to the level of modernization of machinery and the level of standardization of production processes. In all cases, product testing activities are still manual in nature.

¹⁴⁶ Costs are also increased by complex supply chains, as many input suppliers are located in Asia and can take 70 to 90 days to arrive. (CIPPEC, Afarte: 2014).

Ushuaia, with 11% being transferred to Río Grande again. The lack of a port in Río Grande represents a structural problem for industrial activity¹⁴⁷, insofar as the transfers from Ushuaia to Río Grande imply large extra costs, in addition to possible complications.

In Río Grande, almost 100% of the inputs and goods enter by truck, while in Ushuaia 68% enter by ship, 30% by truck and 2% by air. Although trucks take less time to transport, their costs are higher, as shown in Table 5.8. Ushuaia's port infrastructure shows some complications and delays in the departure of vessels due to the time required for customs procedures.

Tabla 5.8: Logistics costs and times per route used (in U\$S)

<i>Destiny</i>	<i>Route</i>	<i>Estimated time</i>	<i>Cost (U\$S)</i>	<i>Current difference between truck and ship U\$S</i>
Buenos Aires- RG (insumos)	1. truck	3/5 days	4.440	507
	2. ship + truck	10 days + 3/4 hours	3.933	
Buenos Aires- USHU (insumos)	1. truck	3/5	5.090	1807
	2. ship	10 until 25 (by tourism)	3.283	
Isla- Buenos Aires (producto terminado)	1. truck	5/7 days	sd	Sd

Source: Master Logistics Plan of Tierra del Fuego Province, CFI

In a survey made by the Secretariat of Industry of the Province of TDF to industrial companies in 2017, it was observed that 96.6% of the inputs of national origin enter by land (since they imply less transfer time), while in the case of imported ones only 48% do so by this route and the rest by sea. In 90% of cases, products are sent back to the continent by land and also by air. For the exit of products, and since Argentina does not have its own maritime passage through the Strait of Magellan, the transports must cross the Chilean border twice. The first time, to cross to the Chilean part of the Isla Grande de TDF from where they access the maritime transfer to the continent, and then again to re-enter Argentina and retake National Route No. 3 at the Santa Cruz province, as shown in Figure 5.12. The transfer of both inputs and finished products from Ushuaia to Río Grande is done by land¹⁴⁸.

¹⁴⁷ Although the first attempts to build a port in Río Grande date back to 1988 with the first project planned south of Cape Domingo, no work has been carried out to date.

¹⁴⁸ This posed serious difficulties at the beginning of the promotion, due to the precarious conditions of National Route No. 3, considering that it is necessary to cross the Cordillera to go from one city to the other.

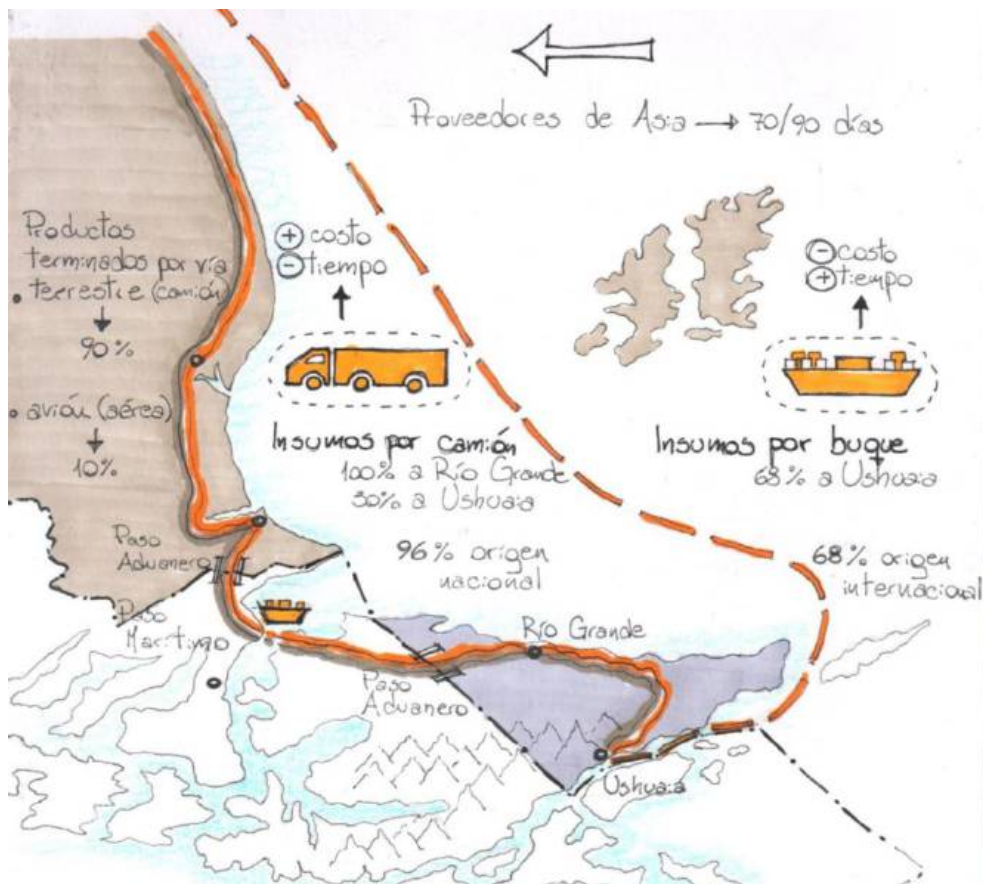


Figure 5.12: Logistics scheme of the industry in Tierra del Fuego. Source: own elaboration

This complex logistical scheme has remained in force up to the present day, and demonstrates at some point the difficulty implied by the productive scheme proposed. It also provides a glimpse of the multi-scalarity of the productive process in Tierra del Fuego.

Empresas industriales: nichos y beneficios

As we've shown above, industrial businesses have historically gained the greatest rewards from the Isla Grande of TDF's designation as an AAE. Following the 2001 financial crisis, many of them were transferred to foreign ownership on a national basis, but certain economic groups were able to consolidate by filling specific local needs. In a context of high competition with imported electronic products, Law 26539 in conjunction with Decree 252/09 (which reduced the internal tax rate for consumer electronics goods produced in TDF), benefited considerably the companies located in the AAE. The Law was widely supported by these companies, grouped in the Association of Electrical Terminal Factories (Afarte), while it generated a strong opposition from the assembly companies in the TCN. The new benefits also brought to light the complications that new companies had in locating in

the TDF, due to logistical and infrastructure complications, and also due to the slowness in the processing of approvals for new projects¹⁴⁹.

In this framework, some (few) companies managed in this period to increase their turnover, generating a privileged environment of accumulation thanks to their links with the State (Castellani, 2009). According to the CFI (2018), of the 30 electronic companies based in 2014 in TDF, four business groups concentrated 70% of employment in the sector: New San, IATEC, BGH and Birghtstar (the first three of national capitals). New San, main industry in Ushuaia, and Mirgor-Caputo¹⁵⁰, main company in Rio Grande, went from occupying in the ranking of companies with the highest turnover in Argentina, the 769th and 407th positions in 2002, to 76th and 86th respectively in 2014 (Rabinovich, 2018).

In this way, an oligopolistic industrial business sector was formed, which was far from the original local development project. In this sense, the promotional regime was a fundamental policy that made possible the privileged accumulation of certain companies, none of them locally based.

Employment: growth, flexibility and precariousness

The growth of the industrial sector was reflected in an increase in industrial employment from 21.5% in 2003 to 35% in 2014, according to the Ministry of Economy, and had its peak in 2013 with more than 14,000 employees (Figure 5.13), with salaries well above the national average for the item (25,000 pesos vs. 13,000 pesos).

¹⁴⁹ According to Rabinovich (2018), of the 48 company location requests approved in 2005, only 13 were actually operating, most of them being companies located in earlier times, such as. Newsan, BGH, Iatec, etc.

¹⁵⁰ Among the main industrial companies that benefited from the 2013 tax regime were Mirgor and NewSan. Mirgor was born in 1983 associated with the automotive industry, specializing in the manufacture of heat exchangers. In 2002, it began to diversify its production by incorporating boards for Volkswagen and later entering the consumer electronics industry. In 2008, Mirgor acquired Industria Austral de Tecnología S.A. (Iatec S.A.), located in TDF, which enjoyed the benefits of the regime for the production of electronics (televisions, microwave ovens, cell phones, etc.). Through an agreement generated with Nokia in 2010, the company consolidated itself as a producer of cell phones and in 2011, through links with LG and Whirlpool, in the production of microwave ovens. NewSan, on the other hand, was born from the merger of Sansei and Sanelco (manufacturer for the Japanese brand Sanyo) in 1991, both based in TDF since the 80's and aimed at the production of electronic items. In 1999 it also incorporated the company Noblex Argentina S.A. and as from 2004, it started a process of productive diversification. It was first inserted in the construction sector aimed at high-income sectors, and then, from 2011, expanded through its brand New San Food to the production of food, particularly products for export (Rabinovich, 2018). Since 2011 it also increased its number of electronic industry plants in Tierra del Fuego, incorporating new products such as cell phones and notebooks (manufactured among others for brands such as LG, Motorola, Huawei; Compaq). By the end of 2018 they would also start the production of *bitcoins*.



Figure 5.13: Employed personnel in the manufacturing industry. Period 2007- 2015. Source: own elaboration based on General Directorate of Statistics and Census.

Figure 5.14 shows the primacy of industry over other activities in terms of employment generation, and how it grew until 2014, doubling the number of workers compared to the second most important activity.

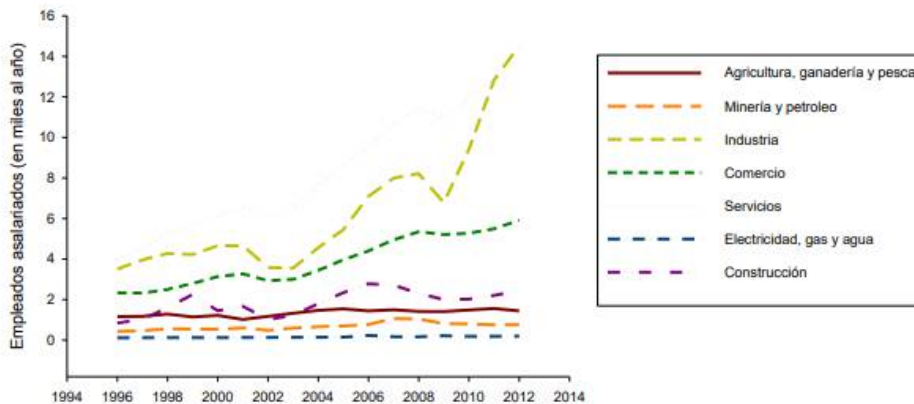


Figure 5.14: Average salaried employees in thousands of people. Period 1996- 2012. Source: Ministry of Industry of the Nation

A fundamental issue has to do with the new forms of flexible hiring acquired by the electronics industry. In 2012 (through agreements between unions and AFARTE, the body in charge of regulating industrial companies), three work modalities were established: permanent personnel, contracted personnel and discontinuous personnel (PPD). In the latter, only four months of work per year had to be completed, which was very similar to what was proposed in the swallow work modalities. This created a state of great vulnerability for the workers, insofar as the companies could choose not to renew the contracts after the four months and then resume them if they were needed, without the obligation to pay compensation and without major reprisals. At the same time, workers were considered "active", even in the months in which they did not receive a monthly income, making it

impossible for them to access certain economic assistance that was only available to the unemployed. It is therefore a precarious form of work, despite being institutionalized.

Regarding the industrial dynamics in its last boom period, we can say that the policies promoted since 2003 were key to the growth of the activity, as well as to the definition of the productive specialization in Tierra del Fuego. The type of production process carried out around the consumer electronics industry entailed the need for a large amount of labor for assembly tasks, which were central in TDF. The growth of industrial employment was accompanied by conditions of labor flexibilization very different from those of industrial employees in the eighties. At the other end of the labor pyramid, the main industrial companies grew considerably, as they concentrated and expanded their accumulation margin.

Service activities: tourism as a state policy

With respect to tourism, since 2003 there has been a strong growth in the activity. At the national level, the devaluation of the peso in 2001 created a particularly favorable economic scenario for foreign tourism. The enactment of National Law No. 25,997 declared the activity strategic for economic development, and within this framework, tourism boomed in several provinces as a result of specific policies for its development.

On a regional scale, the completion of important infrastructure works initiated in the 1990s, the consolidation of professional knowledge and the promotion of policies such as the Tourism Development Plan of the City of Ushuaia (2007) and later the Strategic Plan for Sustainable Tourism of the Province of Tierra del Fuego (2010), provided a framework for the sustained increase of the activity. Figure 5.15 shows that traveler arrivals practically doubled between 2004 and 2015 during January (the peak month for tourists). Overnight stays also grew by 40%, concentrated mainly in the city of Ushuaia.

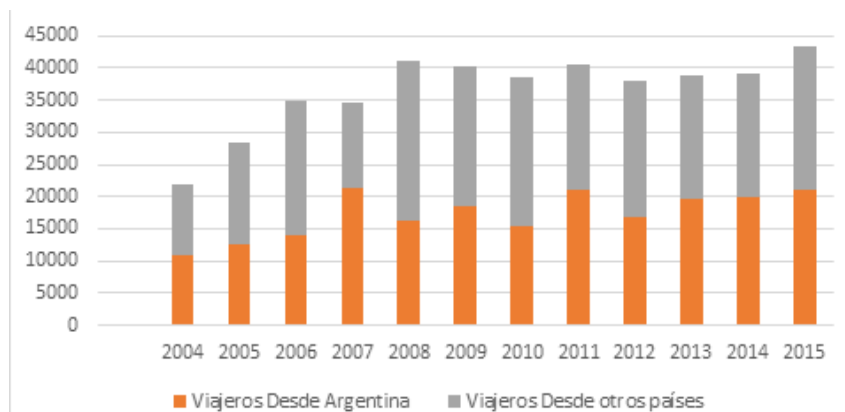


Figure 5.15: Income of travelers to the Province of Tierra del Fuego for the month of January. Period 2004- 2015. Source: own elaboration based on data provided by the Provincial Directorate of Statistics and Censuses (2021).

Despite the sustained growth of tourism in the period 2003-2015, the manufacturing industry and, particularly, consumer electronics became the main activity (as it happened in the 1980s) due to its economic contribution and the volume of employment generated, both in Ushuaia and Río Grande.

b- Impacts on the sociodemographic structure.

Beginning in 2003, a new significant migration to TDF was caused by the most recent industrialisation phase (and tourism to a lesser extent). According to the National Household and Housing Population Census (INDEC, 2010), there were 127,505 people living in Fuegian in 2010. This is a population increase of 25.8% from 2001 and 940% from 1970, when the AAE was established. Although there are no more up-to-date census data, a provincial report from 2016 indicated that by 2015, and during the last industrial peak, the population grew rapidly again, rising to 175,466 inhabitants, which represented a new increase of 37.9%. (Undersecretary of Territorial Planning of Public Investment, 2016). Table 5.9 summarizes the aspects of population growth at the provincial level until 2015, of which the cities of Ushuaia and Río Grande represent 97% of the total population.

Table 5.9: Population growth in Tierra del Fuego. Period 1970-2015.

Tierra del Fuego		
	Total population (habitants)	Percentage change (%)
1970	13527	
1980	27358	102,2
1991	69369	153,6
2001	101079	45,7
2010	127205	25,8
2015	175466	37,9

Source: Own elaboration based on information from the Provincial Directorate of Statistics and Censuses of the Province of Tierra del Fuego (2016).

Figure 5.16, which displays the findings of the most recent National Census of Population, Homes, and Housing (INDEC, 2010), demonstrates that TDF had the greatest employment rate and the highest proportion of people who were born outside of the province in 2010. According to several authors, the main driver of population growth in Tierra del Fuego has been the promotion of productive activities, which later spread to other industries (Mastrocello, 2008; Schorr, 2014; Hermida, 2018).

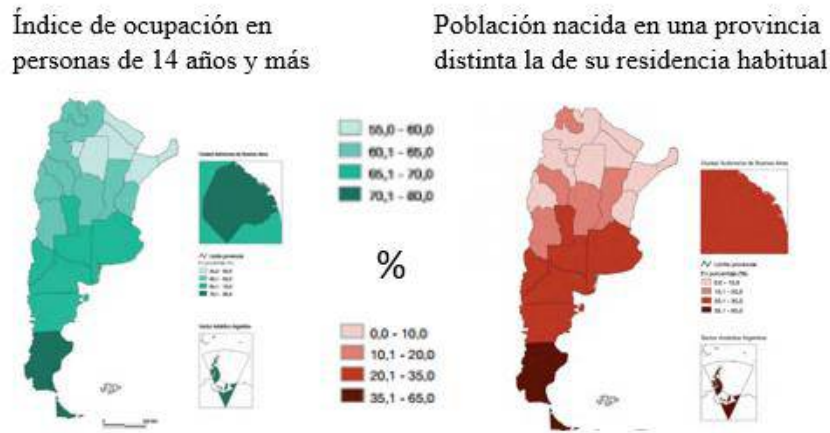


Figure 5.16: Employment rate in persons aged 14 and over (left) and population born in a province other than that of their usual residence (right). Source: National Population, Household and Housing Census (2010).

In terms of composition, the urban population represented approximately 98.5%, the highest in Argentina. Foreigners accounted for 8.9% of the total, a percentage which, although still relatively high compared to the national average, indicates that the trend continues to decline from the 1980s onwards. The population, as shown in Figure 5.17, increased in greater proportion in Río Grande than in Ushuaia, probably due to the greater settlement of industries.

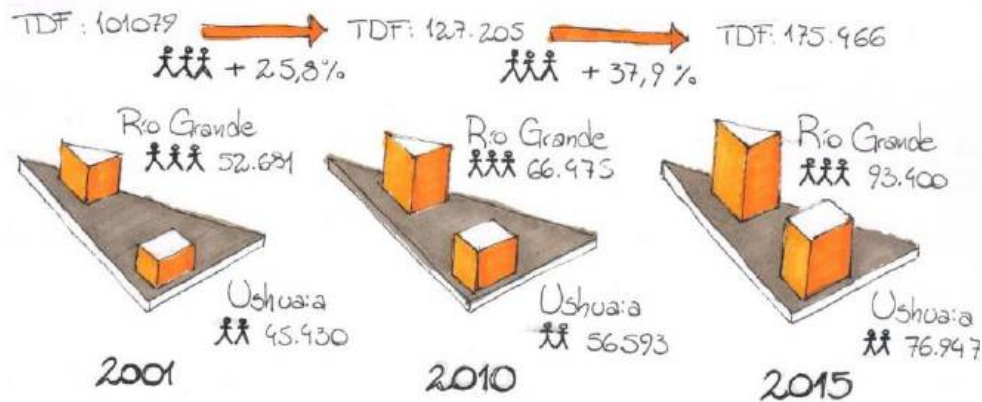


Figure 5.17: Analysis of the demographic evolution in TDF and its cities. Period 2001-2015. Source: own elaboration

c- Spatial configuration of production dynamics in Tierra del Fuego

By 2015, the main productive activities crystallized in a certain pattern of occupation of the Fuegian space, linked to the centrality they acquired in the different geographies of the Big Island. This pattern is still in force today.

Regarding the manufacturing industry, particularly consumer electronics, it is mostly located in the city of Río Grande, as evidenced by the fact that in 2014, its gross production value was four times

higher than that of Ushuaia (this relationship remained similar in the following years). Only 14 of the total number of industrial businesses on the Island in 2018 were in Ushuaia, compared to 42 in Río Grande. However, the industry with the most workers was situated in Ushuaia: NewSan, which had almost 3,000 jobs at its peak in 2013 (E. 38, 13/12/18). Figure 5.18 illustrates how the cities have different specialties; although televisions and notebooks were the two primary items produced in Ushuaia, cell phones and televisions were the two primary items produced in Río Grande.

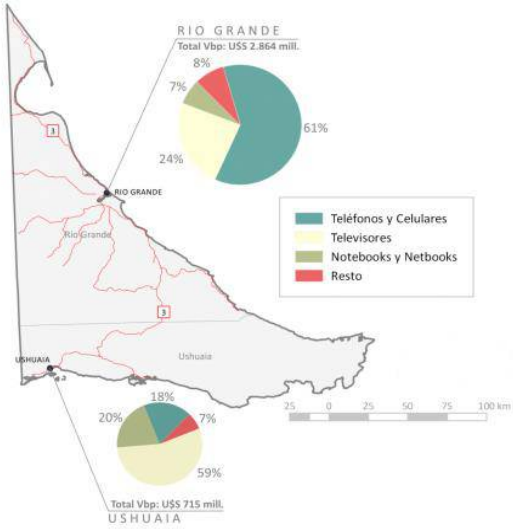


Figure 5.18: Gross value of production and products in Ushuaia and Río Grande. 2014. Source: Undersecretary of Microeconomic Programming, 2017

As we have seen in recent years, the tourism industry has grown significantly south of the Isla Grande, in the mountain range region of the Patagonian forests, home to Tierra del Fuego National Park. Figure 5.19 demonstrates that the majority of hotel rooms, tourist arrivals, as well as the majority of the service infrastructure and excursion commerce, were centered in the city of Ushuaia, which is near to the park.

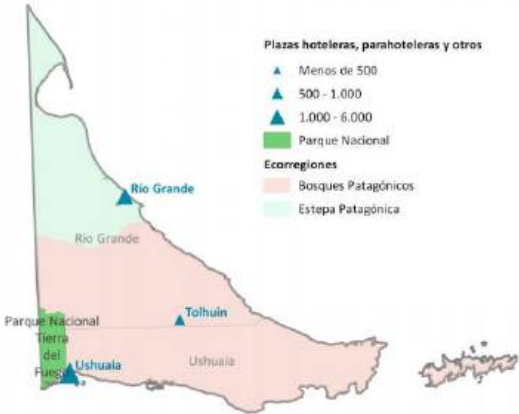


Figure 5.19: Tourism activity in TDF. 2015. Source: Undersecretariat of Microeconomic Programming, 2017

Hydrocarbon activity is located to the north of the Isla Grande, in the southern basin, as shown in Figure 5.20. Offshore exploitation predominates in this activity. Although it represents an important contribution in terms of Gross Geographic Product, the type of process developed has not generated an important impact in terms of employment and, therefore, has had little impact on the cities. In any case, Río Grande functions as a center of complementary services to this activity.

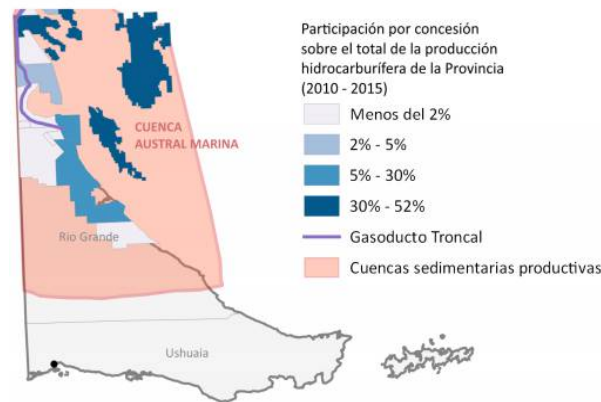


Figure 5.20: Hydrocarbon basin in TDF. Period 2010- 2015. Source: Undersecretariat of Microeconomic Programming, 2017

As a conclusion, we can state that the years 2003 to 2015 were characterized by a strong process of reindustrialization in TDF as a result of new incentives given to the AAE, which once again influenced a process of migration to the area.

Although reindustrialization had a strong impact on both Ushuaia and Río Grande, it had different implications for the USD process in each of them. In Río Grande, industry once again positioned itself as the central activity of the city, mainly due to better location and logistical conditions (or, as Harvey, 2007a, argues, due to the greater ease of mercantile movements). Ushuaia, on the other hand, began to establish itself (in addition to its role as administrative capital) as the provincial tourist capital. Despite this unequal distribution, the largest electronics company (NewSan) is located in Ushuaia, and is the one that condenses the greatest amount of industrial employment. The industrial project, however, once again favored large national and international firms, rather than the emergence of new local projects (E.6, 10/12/18), constituting the sub-regional scale as a space of extra-territorial accumulation (Brenner, 2009a). In this sense, it consolidated the formation of new monopolies, as Harvey (2007a) pointed out, and the dependence of the provincial economy on the political decisions of the nation state (Brenner, 2009a).

5.2.5- Last years of the special tax and customs regime.

a- New deindustrialization trends and SEZ limitations.

Between 2015 and 2019, under the presidency of Mauricio Macri, new policies of structural adjustment, indebtedness and a new model of accumulation by financial valorization, reconfigured a scenario of economic (particularly industrial) and social crisis at the national level.

The industry in Tierra del Fuego was severely affected by measures such as Decree 117/17, which reduced import tariffs and once again posed a highly unfavorable scenario in competitive terms for local production.

Despite the fact that no industries closed, the CFI (2018) estimated that by 2016 industrial employment had decreased by 26% from its 2013 peak and production had decreased by 30%. Data for 2017 also showed a similar fall. In this context, Figure 5.21 illustrates the decline in private employment in TDF and the nation between 2016 and 2019, which was proportionally higher in TDF.



Figure 5.21: Monthly evolution of registered private employment in the province. Seasonally adjusted series. In thousands. Source: Ministry of Labor, Employment and Social Security of the Nation (2019).

According to data published in the Permanent Household Survey (INDEC, 2019), TDF, que había mostrado el mayor índice de ocupación en el censo de 2010, se transformó en la provincia con mayor desempleo a nivel nacional en el primer trimestre de 2019, con un 13% sobre una media nacional del 10%, lo cual significó los niveles más altos desde 2005.

In relation to industrial employment, Figure 5.22 allows us to observe that it was the electronics industry the main employer in the province between 2001 and 2020, and also where the largest number of jobs were lost between 2015 and 2020¹⁵¹.

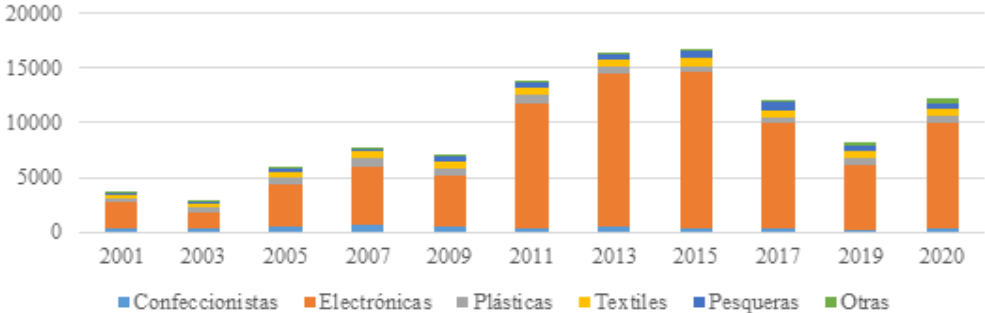


Figure 5.22: Personnel in industrial establishments, provincial total. Period 2001- 2015 (November). Source: own elaboration based on data from Provincial Directorate of Statistics and Censuses.

According to the aforementioned (although due to its temporal proximity, the analysis may be less precise than in earlier stages), the time frame from late 2015 to late 2019 can be described as one of new deindustrialization in TDF (E.5, 19/6/19), demonstrating once more the industry's volatility and significant dependence on national policy.

Río Grande has once again suffered more from this deindustrialization process, despite the fact that it is still challenging to assess its scale. The measures of industrial employment reflect this problem; although they declined 4.4% in Ushuaia between 2015 and 2018, they declined 7.8% in Ro Grande over the same time period. Ushuaia was once again able to sustain itself thanks to public employment and tourism, which grew, mainly international tourism, favored by the devaluation of the Argentine peso.

5.3 Synthesis of the productive cycles in Tierra del Fuego

As we have seen, the delimitation of TDF as an EEZ brought with it the beginning of an industrializing process, linked to national and global political and economic dynamics that made its growth possible, particularly around consumer electronics. This process altered USD patterns on multiple scales and longitudinally, in the time since the establishment of the AAE. At the national level, it transformed the industrial location map in the 1970s and 1980s. At the regional level, the homogenizing process generated by the industry implied processes of differentiation between the cities of Ushuaia and Río Grande, as well as strong processes of capital concentration and

¹⁵¹ Unemployment particularly affected employees hired under the PPD modality.

precariousness of employment. The migrations associated with the industrial dynamics also generated other dynamics of differentiation within urban spaces, which will be analyzed in the following chapter.

From a temporal perspective, we identified four periods that were defined in accordance with the features acquired by industrial dynamics and had a direct impact on USD patterns: the industrialization period (1972-1991); the deindustrialization period (1991-2002); the reindustrialization period (2003-2015) and, finally, a new deindustrialization cycle until 2019. These periods are delimited by successive economic crises and also by changes and alternations in national economic, productive or financial models. Tierra del Fuego's production of regionality and changes in industrial sign were directly impacted by external policies in each case, leading to a significant reliance on broader national and supranational dynamics. As stated by Ciccolella more than 30 years ago::

Tierra del Fuego has been to date a space of continuous "conquest", settlement and valorization. It is a peripheral area [...], the social forces coming from outside (and which generally maintained their habitual place of residence outside the island), always surpassed the local ones in their capacity to appropriate the greater part of the social product of Tierra del Fuego (Ciccolella, 1988: 21).

Figure 5.23 shows the periods identified in relation to the industrial cycles and their relationship with the global economic dynamics and national policies that were decisive in their definition.

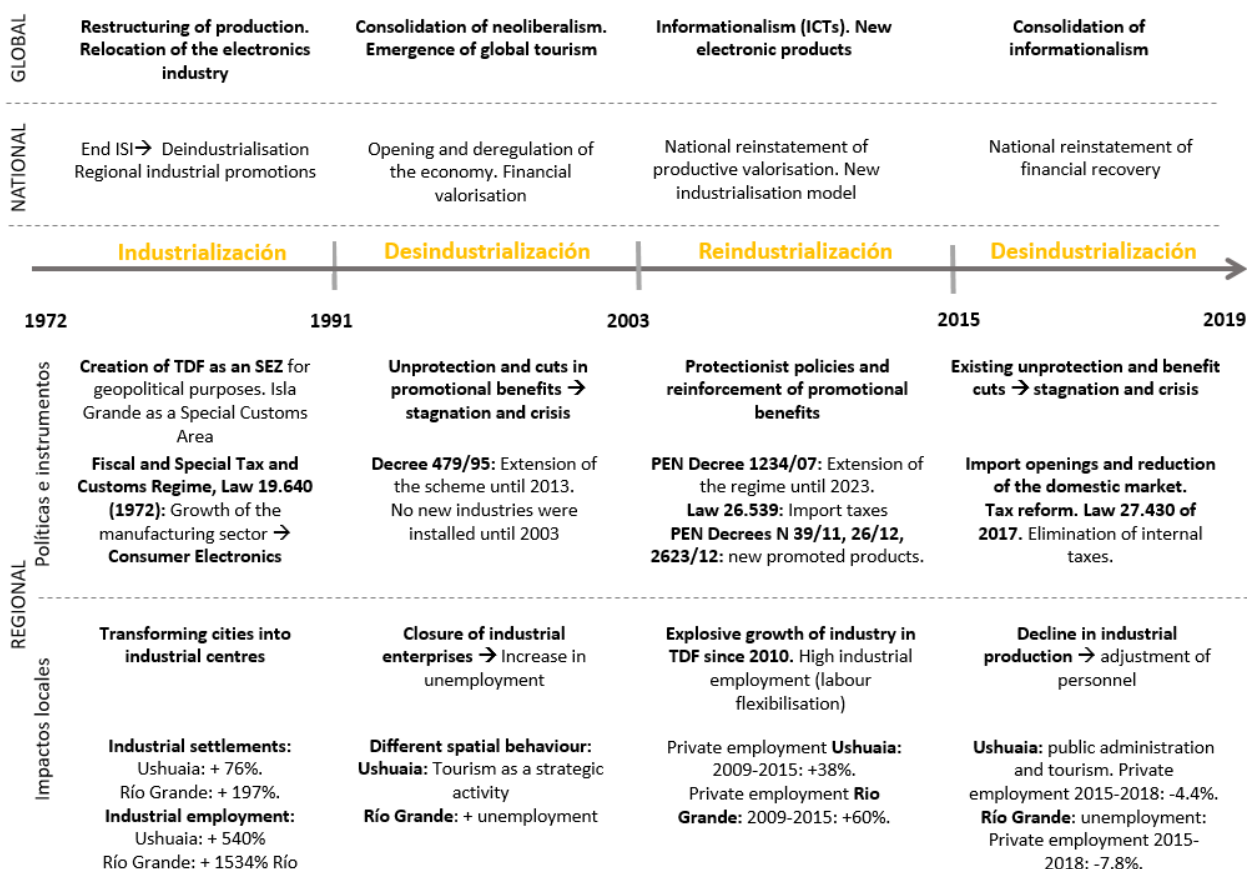


Figure 5.23: Analysis of industrial cycles in TDF, their link with national and global dynamics and their local impacts. Source: own elaboration

The regime is still in force, extended for the last time until 2023¹⁵². The electronics industry, which has been at the center of Tierra del Fuego's production dynamics since 1980, exhibits extreme fragility due to both its heavy reliance on national accumulation cycles and promotional benefits and the fact that it solely supplies the domestic market. In turn, the high fiscal costs, as well as the logistic difficulties associated with the geographical location of TDF with respect to the large consumption centers, generate strong limitations for the growth of the activity.

Given these circumstances, the decision to maintain the special tax and customs regime more than 40 years after the promotion's inception started to generate discussions in which several points of view were established. At the federal level, a number of stakeholders—including non-special regime provinces, businesspeople from other industries, and anti-industrialist journalists—agreed that the tax advantages of TDF should not be extended above their 2023 expiration date. This is based on data that in some way illustrates the deficit created by a productive process that relies solely on state incentives, has little vertical integration, and eventually continues to favour some corporate groupings above all others.

The situation is entirely different when looking at the local stakeholders' perspective. They do not disagree with the efficiency/deficiency arguments made, but they believe that the continuation of the benefits is unquestionable and will always be a geopolitical issue because a sizable portion of the population (and their jobs) depends on it. Although the population's settlement purposes have been met, it is a population that can only be considered stable to the extent that some type of benefit continues to be sustained. From this position, it is believed that the discussion should not revolve around the regime and the SEZ per se, but rather on the type of industry promoted, local development and local R&D (research and development) capabilities, as well as productive integration with other regions of the country.

Mariano Viaña, who was Minister of Economy of Tierra del Fuego on four occasions, particularly between 1969 and 1973, the period when the EEZ began, remarked in an interview on the place of industry in the promotion of the Tierra del Fuego region:

The most important thing is the regime. The industrial part is an important part, as far as employment is concerned, and what was developed was not what was thought, but what was developed was what the circumstances allowed at the time [...] due to the high import tariffs that had been imposed [...]. They speak of a sub-regime, because of the amount of occupation, because of the socioeconomic consequences that exist. [...]. That this is the problem that is today in the dilemma. [...]. The law was born in my 1972, we are going to be 50 years old. [...]. And it was not made for a transitory circumstance, but to balance a geopolitical position. This was made... it had a Malvinas concept, which nobody mentions, it had a Chile concept. Those of us who lived here, you were not born, but those of us who lived here in '78, we had a war practically

¹⁵² Up to and including 2019, its benefits could only be accessed by acquiring a company.

started with Chile and in '82 we had the Malvinas conflict. So, those of us who lived here lived in a different way. But the installation of this regime, which is an economic promotion regime, is not an industrial promotion regime. That is the difference, industrial promotion is dedicated purely and exclusively to industry. The general economic promotion is a regime for everybody [...], the concept was "to fight isolation and distance". So, there are differences in concept. Today the regime we have is a regime of industrial plants, we do not advance in technology. That is to say, we did not give this regime the possibility of technological investment, which today would allow us to have independence for industrial subsistence. Why? Because the activity was not the genuine activity. The genuine activity was timber, meat, peat (E.13, 13/12/18)

5.4 Uneven spatial development and productive dynamics: the case of Tierra del Fuego.

The delimitation of TDF as an SEZ implied its full incorporation into the latest phase of global capitalism and opened a new chapter in the production of space and USD on the Isla Grande. At the regional-provincial scale, a process of "equalization", as Smith points out, of the conditions of production is verified, based on a geopolitical strategy (occupation of a space to the detriment of others) and on the production of regionality (caused by the sanction of National Law No. 19,640 and the definition of TDF as an SEZ). This crystallized in the industrialization of Ushuaia and Río Grande from the 1970s onwards and had a direct impact on the socio-demographic and spatial structure of the territory of Tierra del Fuego. Figure 5.24 summarizes the main dynamics of the extra-urban USD, which influenced the production of space and inequalities in TDF since its definition as an SEZ.

The development of both transportation and communication networks, as well as new forms of global production, made it possible for industry to grow in the extreme south of the world, with the same characteristics as it would do elsewhere (although limited in scale). Territoriality (Brenner, 2009a), that is, the territorial structure of the nation state, played a fundamental role in defining the conditions of production and occupation of the TDF space.

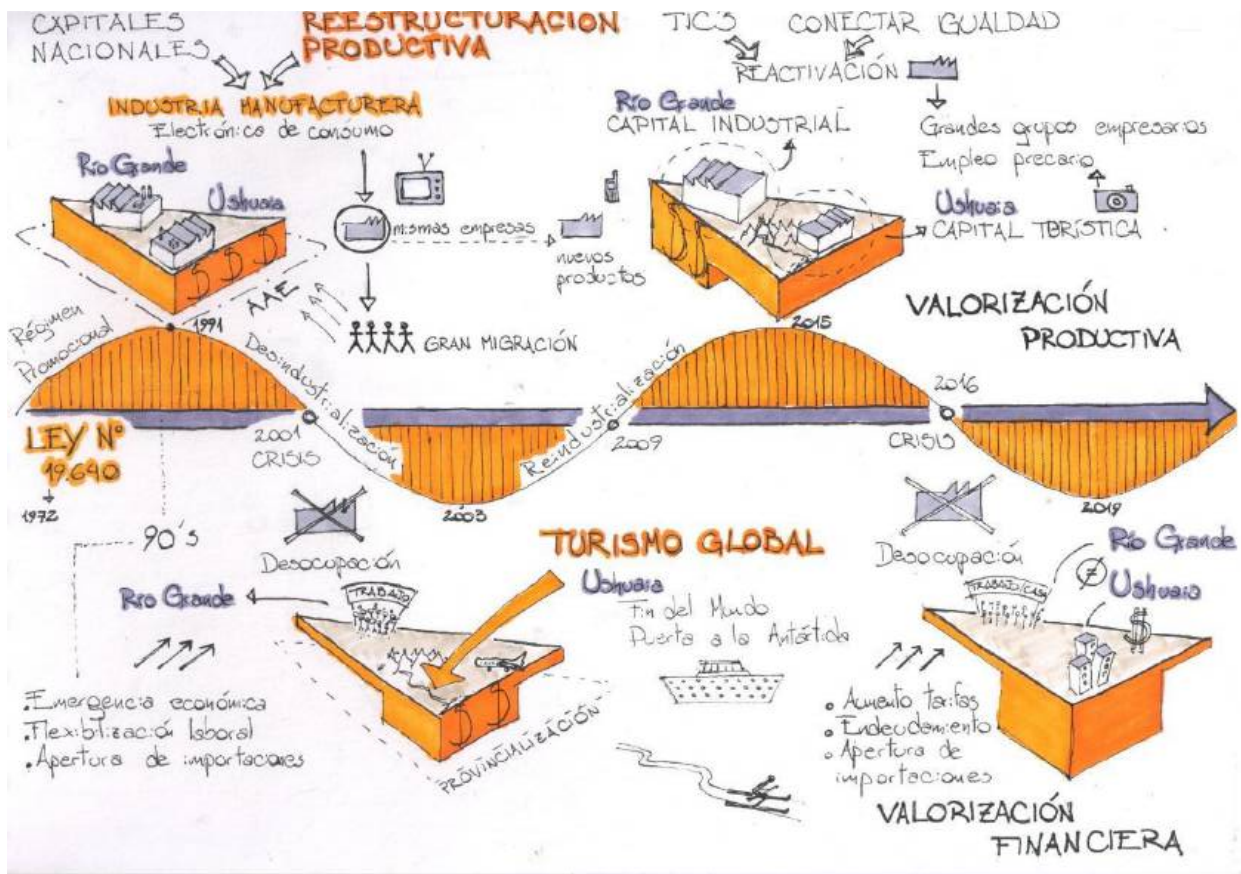


Figure 5.24: Synthesis of the extra-urban dynamics of the DED intervening in the production of space and urban inequalities in TDF, since its definition as an EEZ. Period 1972- 2019. Source: own elaboration

On the other hand, there is a marked process of differentiation, in which production of scale and regionality played important roles. In this sense, the application of policies for the definition of TDF as a SEZ was decisive for the migration of industrial capital from the central areas of the country, defining a new pattern of industrial location at the national level. Within the provincial regional scale, there are also dynamics of differentiation based on the relationship that each city established with industry, which were consolidated mainly after the successive cyclical crises of industrial capital. It is worth highlighting here the principle of place cited by Brenner for the analysis of USD, taking into account the possibilities and limitations of each city in terms of its geographic conditions, which directly influenced the current pattern of distribution of the different productive activities in the territory.

With this analysis in mind, we will now look at USD patterns at the urban scale.

Chapter 6:

Uneven spatial development at the urban scale. Housing conditions and dynamics of commodification and decommodification in the expansion of Ushuaia and Río Grande.



Since Tierra del Fuego (TDF) was designated as a Special Economic Zone (SEZ), Ushuaia and Río Grande have both experienced rapid growth and transformation, which has resulted in the emergence of distinct urban inequality patterns in each city. The industrial dynamics and the associated migrations provoked accelerated expansion processes in these urban centres, which abandoned their character of small towns to become, over a period of few years, flourishing intermediate cities. Although the State itself had promoted the industrial policy at the subregional, provincial, and national levels for the continuous settlement of the Isla Grande, the urban effects that the new production structure and people would bring were initially ignored. As we will see, this caused the cities to expand quickly and with little planning restrictions (Mastrocello, 2008; Pérez et al., 2014). The temporal and sectoral disarticulation between productive policies (which boosted population growth) and urban housing policies (which had to respond to the corresponding urban growth), led to a great mismatch between the available housing stock and the new and growing habitat needs. As we shall see, this would increase the precariousness of the living situations for substantial portions of the population, who frequently had to find informal ways to meet their requirements. Different patterns of differentiation within urban spaces, especially between formal and informal spaces, were established over time and depended significantly on the role that local and provincial states adopted in the development of the city.

Understanding the characteristics that are acquired by the process of spatial differentiation in each city depends critically on the dynamics of commodification and decommodification that are

inherent to USD in Latin American urban spaces, as well as their connection to the evolution of economic-productive dynamics.

Therefore, this chapter aims to characterize the intraurban USD dynamics that took place in the cities of Tierra del Fuego since the beginning of the industrialization process and up to 2019, and their linkage with the productive cycles and transformations identified above. In this regard, historical periods will be used to conduct the analysis of urban inequalities as a result of the intraurban dynamics that affected their development. Some of them emerge as a direct result of the production activities that take place at the extra-urban level and homogenize specific features of the landscape. As Smith (1996) stated, this is the case with city growth, which is a reaction to the geographical expansion of industry and related migrations. In this way, the already mentioned industrial activity and the resulting city growth create equalizing dynamics at the urban scale.

In parallel with urban expansion, processes of differentiation inside the cities started to emerge. These processes evolved over time in response to broader political, economic, and sociodemographic factors. At the subregional/provincial level, transformations were observed in housing conditions, which worsened, as we shall see, at the time of industrialization. In this view, the dynamics of urban space commodification and decommodification, which may be seen from the underlying logics of their production (Pirez, 2014b; 2016), are crucial. In the urban scale, as we saw, the mercantilist dynamics¹⁵³ respond to trends at other scales, and also to the internal valorization processes of urban space (Smith, 1996, 2012). Within the decommodification dynamics, we highlight the production of the State through urban housing policies applied in the cities under study, as shapers of possibilities and limitations of urban use, production and commercialization. In addition, the city's unofficial production, conducted by its inhabitants independently of established channels, was frequently the only other option for gaining access to housing.

Methodologically, qualitative and quantitative strategies were triangulated with spatial analysis, according to the dynamics under analysis. For the analysis of urban fabric, QGIS maps were prepared for the different time periods studied in relation to industrial dynamics (1972, 1980, 1991, 2003, 2003, 2010, 2015 and 2019), based on the interpretation of Landsat 5 satellite images (1985 and 2001), SPOT 3 HRV multispectral (1995) provided by state agencies (Directorate of Water Resources of the Province of Tierra del Fuego) and with various HR images available in Google Earth (for the period 2006-2020). In cases where the available graphic information was scarce, the maps were completed through the analysis of secondary sources, for which the works of Bondel (1985), Ciccolella (1989), Alcaraz (2015) and Finck (2016; 2019) were key inputs. The criterion for delimiting urban from rural areas was observation, according to type of material and specific use. The scale of analysis was the hectare.

¹⁵³ Given that in the case of Tierra del Fuego, the ownership of urbanized land was mostly fiscal until the 1990s, it was only after those years that the commercial dynamics began to take centre stage in the cities.

For the analysis of housing conditions, we worked with a survey of secondary sources, mainly with national population censuses conducted by INDEC (1991, 2001 and 2010)¹⁵⁴), which allowed us to identify the evolution of both land tenure conditions and the housing deficit. The tenure regime is an indicator of residential stability, defined by the legal situation in relation to the ownership or usufruct of a property (INDEC, 2010). A basic (though not exclusive) aspect of urban informality is irregular tenancy, which reveals a situation of increased vulnerability¹⁵⁵. This was obtained by adding the categories "occupants by loan," "other scenario," and "homeowners but not landowners." The housing deficit, on the other hand, is a descriptive concept that "refers to the existence of states of deficiency in the satisfaction of households' housing demands that the State must estimate in order to design and implement policies to resolve this situation" (UN Habitat, 2011: 3). On the other hand, the term "housing deficit" refers to the existence of states of under-satisfaction of households' housing demands, which the State must quantify in order to develop and implement policies to address this issue. (ONU Hábitat, 2011: 3). In this sense, it shows the difference between housing needs (related to the right to adequate housing) and the housing stock of a given place or region. Only the quantitative deficit, which includes multi-family housing and deficit properties deemed unrecoverable, was calculated¹⁵⁶. The calculation was based on information provided by the national population censuses of 1991, 2001 and 2010. Qualitative analytic techniques and spatial analysis, which also relied on the interpretation of satellite images taken from Google Earth, were added to examine the logics underpinning the formation of urban space. Given the complexity of their analysis and the variety of stakeholders who shape the territory, a classification based on the proposal put forth by Pirez and Herzer (1994), Abramo (2012), Alonso (2004), and Coraggió (2005) was first developed. This classification allowed for the separation of the various types and subtypes of stakeholders based on the logics they employ (this classification is presented in the following section). They were subsequently identified in the cities for the various study sub-periods. Exploratory maps were created for this purpose in Ushuaia and Rio Grande, together with interviews with important stakeholders involved in the cities' production process (public, private, and civil society). They included the use of social mapping technologies, as described in Chapter 3. The interviews were used as part of the process of evaluating the results as well as to validate the data derived from the satellite images and complete the missing data. According to three different types of stakeholders, which are broadly described in Table 6.1 below, twenty-eight interviews were carried out. The interviewees' positions and roles are described in detail in Annex 2.

¹⁵⁴ Available at: <https://www.indec.gov.ar/indec/web/Institucional-Indec-BasesDeDatos-6>

¹⁵⁵ To the extent that conditions that guarantee their occupants legal protection against forced eviction and against other environmental, social or economic threats are not met (UN-Habitat, 2019).

¹⁵⁶ The deficit can be broken down for measurement into quantitative and qualitative, depending on the type of deprivation and, in turn, taking into account the condition of tenure in access to housing. The analysis of the qualitative deficit was excluded since it does not represent a significant contribution in Tierra del Fuego in any of the periods analysed.

Table 6.1: Stakeholders interviewed for the study of intra-urban dynamics in the cities of TDF

<i>Public Sector (15)</i>	<p>Regional/ provincial level: 6 interviews with officials and technicians from habitat and housing agencies.</p> <p>Urban level (Ushuaia): 5 interviews with technicians of habitat, urban planning and environment areas.</p> <p>Urban level (Río Grande): 4 interviews with officials and technicians of urban planning and public works the areas.</p>
<i>Private sector (3)</i>	<p>3 interviews with independent professionals (engineers and surveyors), who have provided services as contractors to the Provincial State and local governments.</p>
<i>Civil Society (10)</i>	<p>Regional/ provincial level: 2 interviews with union leaders.</p> <p>Urban level (Ushuaia): 4 interviews with neighborhood leaders of current and former informal settlements.</p> <p>Urban level (Río Grande): 4 interviews with neighborhood leaders of current and former informal settlements.</p>

Source: Author's own work

In order to determine the State's actions, given that there isn't a survey of urban housing policies in TDF that covers the whole analysis period, this was developed through documentary analysis and interviews. First, a survey of documentary sources was carried out, including technical reports (Municipality of Ushuaia, Municipality of Río Grande, IPV), and previous research works (Pérez et al., 2015; Finck et. al., 2019) that addressed the issue in the subperiods of analysis (Annex 3). Second, the provincial legislature and the deliberative councils of both cities were studied for provincial and municipal urban regulations¹⁵⁷. An analysis of 84 local ordinances in Ushuaia, 78 in Río Grande, and 93 provincial legislation was conducted and is shown in Annex 2. Based on this, a critical analytical synthesis was developed by constructing and then categorizing (on an *ad hoc* basis) of the main regulations referring to urban planning, production of housing solutions, market regulation and attention to urban growth, specifically, growth due to informality. From 1972 until 2018, the synthesis was done chronologically. Interviews were then held to describe the creation of housing options provided by the municipalities in both cities, the Provincial Housing Institute, and the previous Territorial Housing Institute (INTEVU, for its Spanish acronym).

¹⁵⁷ <https://digesto.concejoriogrande.gob.ar/ordenanzas/>; <https://www.concejoushuaia.com/>

According to the Smolka and Bidermann's classification (2009), we considered urbanizations that initially lacked regular tenure and two essential utilities (water, sewage, and/or electricity) in order to identify informal city production. The National Registry of Popular Neighbourhoods (RENABAP, for its Spanish acronym) was used as a source of data for the identification of present-day settlements, and it was supplemented by interviews with the municipal technical teams of the Secretariat and Undersecretariat of Habitat in Ushuaia and Río Grande, respectively. Interviews with current and former residents of informal communities were carried out in addition to the analysis of historical sources for the historical mapping of settlements.

For the historical mapping of settlements, historical documents were analysed, and interviews were conducted with current and former inhabitants of informal settlements. Through the use of spatial analysis, their location was discovered, and it was later confirmed through technical team interviews with the urban development departments of each municipality.

Finally, the different logics were mapped in QGIS according to the already defined time periods. The information generated allowed us to understand the public, informal and commercial urban housing production in the 1972- 2018 period. It should be mentioned that the study is restricted to detecting spatial occupation patterns, even though it gives us a starting point for understanding the processes of differentiation and inequality formation. The hectare served as the unit of measurement for spatial analysis.

The results made it possible to arrive at qualitative and quantitative comparisons by city and time period (The transversal comparative perspective reveals the significance of local governments and their (lack of) articulation with other levels and sectors of the State in the urban expression of USD. In this way, it also explicitly picks up the reflection on the production of scale that was presented in the theoretical analysis. First, we will present the classification of the logics of urban space production, followed by the analysis of intra-urban dynamics according to study sub-periods.

6.1 Dynamics of commodification and decommodification. Classification of the logics of production of urban space.

As previously mentioned, two major intra-urban dynamics have strongly influenced the conformation and transformation of USD patterns in Latin American cities: the commodification and decommodification of urban spaces. The former responds to intra-urban accumulation processes where space was produced as a merchandise that generated revenue, a factor that was crucial in the development of spatial differentiation (Smith, 1996, 2012). We distinguish the many modalities of producing housing and other urban goods intended for capital accumulation within the mercantile sector, where the exchange of goods predominates. On the other hand, proponents of decommodification (especially in cities in Latin America) react to production processes in cities that

did not view capital accumulation as a goal in and of itself¹⁵⁸. We have found two main logics within the decommodification process, where fixed assets predominate (although not exclusively). On the one hand, the state's logic at its many levels as reflected in its urban housing policy. On the other hand, the self-managed housing production activities, which are primarily carried out outside of formal channels and which we refer to in the region as urban informality, represent the logic of necessity.

Since the ISI, these three logics have been shaping the urban space of large Argentine cities, but with neoliberalism their differences have intensified and spread to intermediate and small cities (Abramo, 2012). The spatial arrangements and inequality patterns that resulted from their (dis)encounter have changed over time. Its transformation is related to the more extensive dynamics of the USD on which we had previously been working, such as the positions that various countries held in the international division of labour at various times, with issues related to geopolitics and regional production, and the functions played by cities during subsequent accumulation phases. This has been added, in particular with the role of the State, which through its urban regulation instruments and the provision of public housing, has alternated its position in promoting housing as a right or a commodity (Cravino, 2004; Barreto, 2017). As previously said, an analytical classification was developed taking into account that within them there is also certain heterogeneity that must be considered.

Within the market stakeholders, Morales Schechinger (2005) distinguishes at least three types of owners who potentially "offer" land. The user owner: when he offers his property on the market, he does so hoping to recover money to acquire a property of similar characteristics in order to continue being a user; the investor owner: he acquires a property seeking to obtain a profit from its sale; and the patrimonial owner: he who does not find the investment in the land significant because he acquired it for free or because of the depreciation of its value, and keeps it because he has no need to sell it.

Transferring these categories to land production, we will exclude the user landowner and combine the investment landowner and patrimonial landowner into a single category of geographical analysis, to the extent that both types produce comparable dynamics around land value. However, it should be noted that the majority of the creation of new commercial property in TDF is tied to patrimonial landowners because of the historical process of spatial occupancy, in which the territorial State was the dominant landowner and was giving away land initially for rural use. According to Cuenya (2016), there are several dominant spatial configurations within the mercantile urban production, such as gated communities or exclusive complexes, which have a common goal of fostering social distinction, resulting in forms of social elitization.

¹⁵⁸ It should be noted that the distinction between commodification and non-commodification logics is not sharp, insofar as we recognize mercantile practices on urbanizations carried out by the State, as well as commodification in informal settlements (Cravino, 2017). The time variable should also be considered, since the construction of the city is a dynamic process in which different logics and interests are juxtaposed at different times.

Fernández Wagner (2009) distinguishes at least four ways in which the State influences the urbanization process within the dynamics of the production of a decommodified city: as a producer of built space; as a supplier of machinery and infrastructure; as a regulator of land use; and as a fiscal agent. The State intervenes in its operations at multiple levels—national, provincial or territorial (depending on the situation), and local—in parallel and occasionally articulately. Depending on the level and situation at which it intervenes, the State creates various forms of occupying space. Di Virgilio and Rodriguez (2016) emphasize the importance of the local State's role in managing territorial planning tools through which it intervenes by anticipating spatial demands. Particularly in Latin America, it is also worth highlighting the role it plays in the informal production of cities.

Based on these distinctions, four main ways in which the State intervenes through its policies in the production of the city can be recognized: as a planner of urban development; as a regulator or facilitator of the urban commodification process; as a producer of built space; and finally, as an executor of actions that directly affect the informal production of the city. Table 6.2 summarizes the main characteristics of the policies in each case, which will be the subtypes of logics to be observed in the cities of TDF.

Table 6.2: State policies in the production of cities.

<p>Urban planning policies. <i>State as a Planner</i></p>	<p>Refers to those instruments that anticipate the city's growth, aimed at defining and guiding actions at the local scale. A distinction can be made between formal and operational instruments. The former are, according to Reese (2011), "those that develop the general territorial development policies of the municipality", and are basically the strategic local development plan, the urban plan and the regulatory norms. The operational ones are responsible for its implementation.</p>
<p>Land market regulation policies <i>Regulatory/facilitating State</i></p>	<p>Refers to strategies used to prevent or advance the commodification of urban areas. They cover a wide range of tactics, including direct ones like the confiscation of urban capital gains and indirect ones like price control through urban production and public housing. They also include regulatory initiatives that restrict real estate development or, on the other hand, encourage them as policies of differentiation.</p>
<p>Habitat access policies <i>Producing State</i></p>	<p>Refers to the existence, quantity and variety of instruments that guarantee access to land with utilities and/or housing. It recognizes both the production of housing complexes and urbanizations (plots with utilities) and policies that intervene in the land and housing market. The three levels of the State are taken into account, since they all have an impact at the territorial level.</p>
<p>Policies regarding informality <i>Tolerant/prohibitive State</i></p>	<p>Refers to the existence of instruments or actions that have been directly linked to the recognition of informal settlements. These measures could be prohibitive or tolerant in nature (Cravino, 2017). The latter include evictions and other steps directed at the intolerance of informal expansion, while the former comprise anything from property regularization programs to comprehensive care strategies. Since they all exhibit incidence at the territorial level, the three levels of the State are taken into consideration.</p>

Source: Author's own work

In terms of the logic of civil society, we acknowledge urbanization processes initiated by urban residents themselves, in which neither the market nor the government intervenes (or only indirectly intervenes) (Herzer et al., 1994). The first distinction to be made is the one referring to the production of formal and informal space. We recognize self-managed urbanization in the first group, which is facilitated by unions, guilds, cooperatives, and other types of social organization that work together to promote strategies for obtaining housing through official channels (either through the market or through agreements with the State). Within the second group, we identify the multiple modalities of informal city production, in which, as we have already said, the users, in an organized or spontaneous manner, produce their own conditions of access to the habitat outside the formal channels. There are different classifications regarding informality, either by the historical moment of its production (Clichevsky, 2003), the type of property occupied (whether it is vacant land or a building, Di Virgilio, 2015), the type of settlement it generates (villa, settlement, fraudulent subdivision, 2011), and the location (whether it is located in interstitial or peripheral areas to the urban fabric, Cravino, 2012). Although these classifications will be considered as part of the analysis, we are interested in identifying the specific forms acquired by informality in the cities of Tierra del Fuego.

In addition to these three predominant logics in the expansion of urban spaces, it is essential in this study to include another form of city production. This additional form does not directly address housing needs, but it is complementary and frequently a determining factor in urban conformation. This is the productive logic, which is fundamentally related to the area set aside for industrial use and the logistics processes that go along with it. We understand that, depending on the nature, size, and position of the industry in the city, among other factors, the production logic may be internally examined in terms of commercial production. However, this would require another type of in-depth study, which does not respond to the purposes of this thesis, mainly related to the production of urban inequalities. In this regard, we will restrict ourselves to solely taking into account the production logic of land occupation.

Table 6.3 summarizes the categories defined for the spatial analysis of the logics of urban space production.

Table 6.3: Logics of production and occupation of urban space

<i>State</i>	National level <ul style="list-style-type: none"> • National housing plans/programs • Other national agencies Provincial level <ul style="list-style-type: none"> • IPV/INTEVU housing plans/programs • Urbanizations carried out by public works and/or by other provincial agencies • Other provincial agencies Municipal level
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	<ul style="list-style-type: none"> • Municipal housing plans/programs • Municipal housing developments • Regularization of ownership
<i>Civil society</i>	<ul style="list-style-type: none"> • Informal settlements and other types of urban informality • Urban developments carried out by civil society organizations
<i>Market</i>	<ul style="list-style-type: none"> • Developments promoted by private landowners
<i>Production</i>	<ul style="list-style-type: none"> • Industries and spaces for logistic use

Source: Author's own work

6.2 Intraurban dynamics of Uneven Spatial Development in Tierra del Fuego.

The demographic and territorial structure of the cities in Tierra del Fuego experienced huge changes as a result of industrialization. The activity itself as well as population growth, which increased by 940% between 1970 and 2015 (INDEC, 2010), had a strong spatial influence and resulted in a substantial rise in the housing stock. Table 6.4 illustrates the state of the small communities in Ushuaia and Río Grande before the arrival of industries by showing that 97% of Fuegian households reside in homes constructed between 1960 and 2010. It is remarkable that 50.1% of people live in houses constructed between 2001 and 2010.

Table 6.4. Households by type of dwelling by age of dwelling

<i>Households</i>	<i>Tierra del Fuego</i>	<i>Country Totals</i>
Total households	38,377 (100 %)	12,174,069 (100 %)
Up to 10 years old	19,218 (50.1 %)	2,973,030 (24.4 %)
From 11 to 49 years old	18,009 (46.9 %)	6,860,952 (56.4 %)
50 years old or older	1,150 (3 %)	2,340,087 (19.2 %)

Fuente: Author's own work based on INDEC, 2010

It is important to note that in 2010, there were 43,579 homes in Tierra del Fuego; 20,203 were located in Ushuaia and 23,363 in Río Grande.

Both the industrialization process and its effects at the regional level were not linear over time, and neither were its effects on the creation of urban areas and urban inequality. In the following section, we will examine the intra-urban dynamics of USD during the various time cycles that were noted in relation to industrial dynamics.

The urban expansion of Ushuaia and Río Grande will be discussed in terms of equalization dynamics. In terms of differentiating dynamics, we will study the evolution of housing conditions at

the provincial level, and the dynamics of commodification and decommodification of urban spaces, through the underlying logics of their production, and the patterns of occupation according to the different stakeholders involved¹⁵⁹. Special attention will be paid to the actions of the State at the regional/provincial and urban levels. The analysis suggested will be carried out in accordance with the industrializing and deindustrializing cycles established in the preceding chapter: 1972-1990; 1991-2002; 2003-2015; and 2016-2019, in order to comprehend the connections between economic dynamics and urban consequences.

6.3 Arrival of industries and the first stage of expansion of Ushuaia and Río Grande (1972- 1991).

With the industrialization process started in 1972 with the definition of the Isla Grande de Tierra del Fuego as an EEZ, there was an accelerated process of population growth (as previously indicated) that had a direct impact on the production of the cities of Tierra del Fuego and its inequalities. The population of TDF increased 412% between 1970 and 1991 (INDEC). While in Ushuaia there was an increase equivalent to 392%, in Río Grande it reached 420%. New needs arose, both in relation to habitat and productive dynamics. The territorial State supported a variety of initiatives aimed at enhancing industrial activity, including the construction of Industrial Parks in Ushuaia and Río Grande beginning in 1976¹⁶⁰ and the development of National Route No. 3, which is crucial for the land movement of commodities. The State gave up land that was supposed to be equipped with basic infrastructure in order to build these parks. Even though infrastructure-laying works had been done (and, according to surveyors contacted in 2018, was finished by the end of 1982), these were not sufficient, and the parks were basically limited to providing specific zoning regulations for industrial use.

Additionally, the institutional framework required to accommodate population increase, particularly urban growth, started to be strengthened in light of the increasing socio-housing demands. In order to address the housing demand, the Territorial Institute of Housing and Urbanism (INTEVU), which served as the counterpart of the Provincial Housing Institutes (IPV) and had the responsibility of carrying out the national housing strategy, was established (Law No. 207/ 1977). In addition, the Provincial Directorate of Sanitary Works and Services (Territorial Law 158/81), the Provincial

¹⁵⁹ This study of the occupation of space does not respond to a criterion of use (zoning), but of production, i.e. of stakeholders and logics that drove the urbanization process (Pérez, 1995; Herzer et al, 2014). Uses were taken into account within the analysis, in terms of changes in regulations that produced urban transformations.

¹⁶⁰ The industrial park is "an urbanized land subdivided into plots, according to a general plan, equipped with roads, means of transportation and public services, with or without factories built [...] and intended for the use of a community of industrialists" (ONUDI, 1979, quoted in Borello, 1998: 11).

Directorate of Energy (Territorial Decree 484/72), and the State Gas Company (privatized in 1992) were established.

The period of the cities' fastest spatial growth also started at this time. The urban area of Ushuaia increased by 466 hectares, or 233% more area than the urban area in 1972, between the start of the industrial development in 1972 and 1991, according to a spatial analysis done on the basis of satellite images. Geographical factors have been a significant natural barrier to urbanization since the beginning. On the one hand, the landscape, which is defined by the Andes Mountains' high relief, imposed a restriction on urbanization to the north because of the rise in slope on their foothills.; while to the south, the limit was the Beagle Channel. For all these reasons, the city began to grow in an east-west direction, following the land with less slope near the coast. During the first years of industrial development, between 1972 and 1980, the urban fabric was 58 hectares in the form of an oil slick, composed mainly of residential fabric. It was extended in areas contiguous to the existing urban fabric, on the lower slopes to the west and north (Figure 6.1.). As noted above, the greatest growth occurred between 1980 and 1991, when the promotional regime boosted the settlement of industries and new population. At that time, the expansion covered 408 hectares, and in this sense, urban growth was a result of the implementation of SEZ. The industrial park, which had a 130-hectare total size and served as the extent of the development, was built to the east along the seashore on reasonably level terrain that was separated from the historic centre by a sizable urban gap that corresponded to land belonging to the Navy. In turn, the completion of the new National Route No. 3 to the north, called Alem Avenue (parallel to the old road between elevations +68 and 81), and the new Hipólito Yrigoyen Avenue to the southwest, ended up defining a ring road within which most of the residential urbanization grew. Therefore, we could say that both the new Route 3 and the industrial park were the main structuring axes of the expansion. Due to the variations in relief between the various places of the city, an irregular sprawl has been observed since 1980, in contrast to the historical checkerboard urban layout. It is significant because there are urban gaps and a predominance of low density. To the east, the Navy quarters adjacent to the historic centre defined a boundary between the industrial sector and the rest of the city, while to the west, the existence of urban peat bogs contributed to the configuration of a dispersed sprawl.

On the other hand, Río Grande's urban area doubled between 1972 and 1991, growing by 554.63 hectares, representing 129% of the urban area in 1972. (Figure 6.1). The conditions for expansion were different from those of Ushuaia. Its location in a steppe area did not impose restrictions as did the steep slopes in Ushuaia and made it possible for a regular fabric to occur. However, estuaries in the vicinity of the river defined areas unfit for development, and to the east, the Atlantic Ocean served as a natural restriction to growth. In turn, both to the south and to the west, private land ownership linked to rural use was a strong constraint on urban space. Unlike Ushuaia, the rural productive structure has dominated the space surrounding the urban area up to the present day.

The city started to expand through the buying and selling of farms and farmsteads, with the private landowners' willingness to sell their property serving as the main factor for expansion.

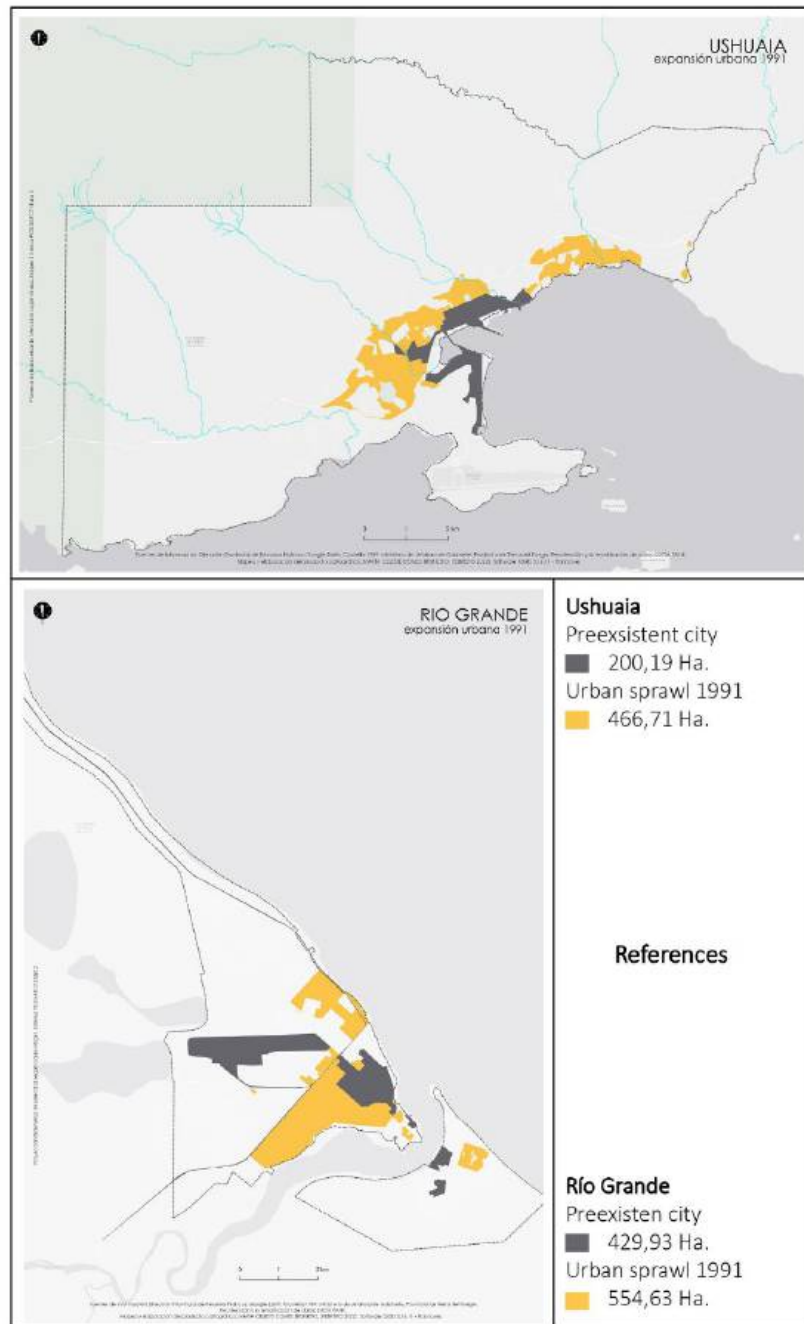


Figure 6.1: Urban expansion of Ushuaia and Río Grande. Period 1972- 1991. Source: Author's own work

The city expanded by 72 hectares between 1972 and 1980, moving over the old farmland to the west and up against the vast urban void formed by the Navy quarters to the north. Similar to Ushuaia, industry from 1980 onwards was the driving force behind the city's biggest expansion, which reached 394.71 hectares by 1991. Due to the comparative benefits of its position and physical features, as

previously mentioned, Río Grande was the primary beneficiary of both industry and new people. To the west, on Route 3, the 145-hectare industrial park was established and reached the limit of growth. The city expanded with residential use between the industrial park and the historic core, moving south along the river estuary as a result of landfill construction. To the north, high-rise housing and urbanization spread along the Navy quarters, which are still largely undeveloped urban regions. On the other hand, at the height of the historic centre, the construction of the Mosconi Bridge in 1981 connected the southern and northern banks of the Grande River. As a result, the city began to expand on the southern bank with a focus on residential development. We could say that Route 3 (east-west and north-south directions) and the new Interstate 95 were the major axes of growth during this time.

6.3.1- Conditions of access to housing in Tierra del Fuego and the role of the State (1972 - 1991).

The need for housing in TDF gradually increased between 1972 and 1980, the first years of industrial promotion. At the time, the Territorial State¹⁶¹, which was still subordinate to the national government, was in charge of promoting the majority of the new housing developments in both Ushuaia and Río Grande. Through the Secretariat of Public Works, small plots and housing complexes were built, in coordination with state financial entities. Municipal common land of the cities was also increased (Territorial Law 31/73). In this sense, it had a significant influence on metropolitan areas as a *producer*.

State housing production in TDF was governed by two primary axes formed in accordance with the economic capacity of demand beginning in the early 1970s, coinciding with the overall national situation. On the one hand, for the middle-income sectors with saving capacity, the National Mortgage Bank (BHN, for its Spanish acronym) granted credits with accessible repayment conditions and optimal long-term financing conditions (Pirez, 2016). These had the goal of creating individual homes on the owners' own plots. On the other hand, substantial housing complexes were created in the "turnkey" modality, supported by the National Housing Fund (FONAVI), which has been around since 1972 (Law No. 19929), for low-income socioeconomic sectors with no capacity for saving. When the military dictatorship took power in 1976, the early 1970s housing policy, which had a predominately decommoditizing character, suffered significant national changes as a result of the emerging trends of land and housing commodification (Barreto, 2017). These trends did not particularly affect TDF, where a strong state presence in housing matters was maintained, although it did suffer the FONAVI

¹⁶¹ It should be noted that since TDF was still a National Territory, the territorial government was part of the national State. Considering the period under analysis as a transition towards provincialization, the territorial State is distinguished as a subnational government, in order to identify actions according to management levels.

transformations of the de facto government, in relation to the financing model and the administrative model¹⁶².

Between 1980 and 1991, along with the industrialization and migratory flood, the territorial State promoted several efforts to address the new and rising housing need. In terms of territorial planning, it promoted some basic regulations in order to organize the growth of cities, such as the creation of the Territorial Cadastre (Territorial Law 146/80); the sanctioning of the Building Code for the whole Territory of Tierra del Fuego (Decree of the Territorial Government N 1367/81) and the General Census of Fiscal and Urban Lands of the territory (Territorial Law 325/88). It also transferred to the municipalities the norms of the planning code (Territorial Law 554/83).

Regarding housing access, plots with utilities were planned in both cities and promoted by the Secretariat of Public Works, many of which were accompanied by housing loans from the BHN. On the other hand, INTEVU built numerous housing plans through FONAVI. The latter materialized in two typologies: large multi-family housing complexes and duplex housing. They were accompanied by urban facilities such as schools, gymnasiums, and public offices. Between 1978 and 1991, 4895 new housing units were built. As shown in Figure 6.2, construction was greater in Río Grande (3569 dwellings) than in Ushuaia (1326 dwellings), probably associated with a greater industrial settlement and new population.

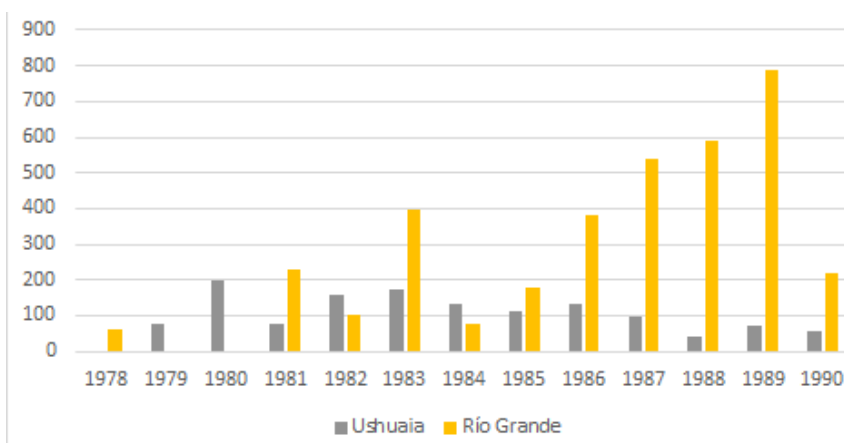


Figure 6.2: Construction of FONAVI housing in TDF by locality. Period 1991-2002. Source: Author's own work based on reports of the Instituto Provincial de Vivienda (Provincial Housing Institute).

¹⁶² Initially, FONAVI was to be supported by employers' contributions (equivalent to 1.5% of the levy). Law No. 21.581 (1977) institutionalized a new form of financing based on wage contributions (5%) and the contribution of self-employed workers of their social security obligations, transferring the burden to the workers and limiting the social sectors that could access state housing (Del Río, 2012). Regarding management, it defined the Secretariat of Urban Development and Housing (SDUV) as the responsible coordinating entity; it centralized the administration of housing funds, while the management of resources was embodied by the IPV (in TDF, the INTEVU). Thus, a centralized decision-making scheme was configured, with decentralized execution (Del Río, 2009: 88). The geographical distribution was defined in relation to the housing deficit.

However, construction times were much slower than those of population growth, and in the mid-1980s housing needs far exceeded the installed housing capacity. In light of the fact that TDF at the time was thought to have an underpopulated demographic structure (Cao and D'Eramo, 2020), there were few institutional resources available to generate land and housing in time to meet the expanding demand for urban land and housing. Furthermore, no fiscal land was accessible because TDF belonged to the federal government prior to its provincialization in 1991. In this context, various experts confirm a significant disparity between the supply and demand of available housing units (Mastrocello, 2008, Ciccolella, 1989). Mastrocello states the following:

... the regional situation was defined by business settlements and the ensuing development of jobs that acted as a catalyst for migration on the one hand, and by inadequate planning and infrastructure on the other (2008: 182).

Therefore, it might be argued that the rate of migration considerably exceeded the rate of capital investment and time, as Smith (1996) stated. Figure 6.3 demonstrates that between 1980 and 1986, the housing stock increased by 244% (Ciccolella, 1989), whereas unstable housing increased by 684%, accounting for 29% of the total.

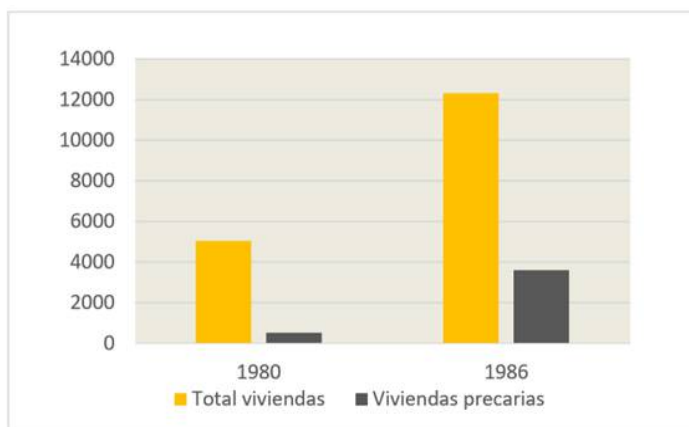


Figure 6.3. Total housing and precarious housing. Period 1980-1986. Source: Author's own work based on Ciccolella (1989).

Faced with the lack of housing supply, the process of informal production of cities began. This implied self-managed urbanization by the settlers, the majority of whom were workers recently arrived, on vacant, undeveloped land that was primarily public property and often not suitable for urbanization. Analyses of housing tenure conditions in Tierra del Fuego and according to INDEC data, shown on Table 6.5, it is possible to observe that towards the end of the industrialization period, in 1991, while 50.7% of the population were home and landowners and 15.4% were renters, irregular tenure was 22.5% (above the national average of 10.3%). Regarding their composition, it can be seen that 15.5% of all households did not own the land but did own the house, a percentage that at the

national level only reached 6.3%. In contrast, 7.4% of households were occupants by loan, and 0.7% of households corresponded to a different situation, with 3.6% and 0.4% of households at the national level, respectively. Considering that at that time Ushuaia and Río Grande concentrated more than 98% of the TDF population, it can be asserted that it was in these two cities where the informal urbanizations were concentrated. Although tenure data from the 1980 census are not available, based on the bibliographic sources analysed (Bondel, 1985; Ciccolella, 1989; Mastrocello, 2008), it can be said that informality began to emerge in the mid-1970s together with the demographic growth associated with the industrial activity.

Table 6.5: Households by type of housing tenure. TDF and Country Total, 1991

<i>Type of tenure</i>	<i>Tierra del Fuego</i>	<i>Country Totals</i>
Total households *	19,274 (100 %)	8,927,289 (100 %)
Ownership of house and land	9,778 (50,7 %)	5,486,831 (61.5 %)
Home ownership only	2,896 (15 %)	564,488 (6.3 %)
Tenant	2,972 (15.4 %)	1,101,575 (12.3 %)
Loan occupancy	1,424 (7.4 %)	324,751 (3.6 %)
Occupation by relationship of dependency	1,175 (6.1 %)	793,591 (8.2 %)
Another situation	129 (0.7 %)	38,406 (0.4 %)

* Excludes households registered on the street. Squatter at the national level 1991: 79,696 (0.9%)
Squatter in Tierra del Fuego: 112 (0.6%)

Source: Author's own work based on data provided by INDEC.

Although it was mostly formal workers who drove the informal occupation process, it was consolidated under the responsibility of the State. Due to its incapacity to take immediate action, it lacked the instruments to link industrial and settlement policy with a habitat policy in particular. The implementation of services and, to a greater extent, the processes for regularizing land ownership required several years in the new informal settlements. Many of the 1980s' unofficial neighbourhoods still lack clear ownership.

In addition, a significant trend of housing precariousness was underway by 1991. According to Table 6.6, whereas the national average was 7.3%, unrecoverable substandard housing made up 20.5% of the entire housing stock in TDF in 1991. This is very relevant, considering the adverse climatic conditions of the island. Table 6.7 shows that the quantitative housing shortfall at that time affected 23.8% of the population, roughly double the national average, when overcrowding per home (the existence of more than one household per dwelling) is taken into consideration.

Table 6.6: Households according to housing quality. TDF and total country, 1991

<i>Households by type of housing</i>	<i>Tierra del Fuego</i>	<i>Country totals</i>
Total	19,274 (100%)	8,515,441 (100%)
Non-deficit housing	13,957 (72.4%)	6,281,921 (73.8%)
Unrecoverable substandard housing	3,876 (20.5%)	624,274 (7.3%)
Recoverable substandard housing	1,204 (6.2%)	1,461,624 (17.1%)

Source: Author's own work based on the National Population, Household and Housing Census.

Table 6.7: Quantitative housing deficit. TDF and Total Country, 1991

<i>Quantitative Deficit</i>	<i>Tierra del Fuego</i>	<i>Country totals</i>
Total	19,274 (100%)	8,515,441 (100%)
More than one household per dwelling	719	411,848
Unrecoverable housing	3,876 (20.5%)	624,274
Quantitative housing deficit	4,595 (23.8%)	1,036,122 (12.1%)

Source: Author's own work based on the National Population, Household and Housing Census.

The composition of unrecoverable dwellings is referred to as a distinctive feature of this time. In Tierra del Fuego, mobile homes made up 53.5% of unrecoverable housing, compared to shacks at the national level (50.5%). This matter is interesting since it has a direct bearing on the unreliability of land access. Several interviewees who worked in the public sector at the time (E.11, 12/12/2018; E.19, 14/08/2015; E.18, 12/8/2015), as well as some neighbours (E.29, 25/2/2018; E.27, 26/5/2018), claim that it was common practice to set up the homes on flimsy wooden frameworks known as sleds so they could be moved to another plot in the event of eviction. The land ownership structure was weak, as were the occupancy permits and the formal system of adjudication. This reflects a scenario of extraordinarily high habitat vulnerability, in light of a persistent danger of impending eviction.

In this context of great dynamism in housing construction (and in spite of the housing policies promoted by the territorial State), informality began to consolidate in both cities, in sectors adjacent to the new formal expansion sectors, and in undeveloped areas close to industrial parks. We will now

analyse the production of space by city between 1972 and 1991, recognizing the main urban housing policies applied in each case and the urbanization patterns according to the different stakeholders. Although there are great similarities in the growth of Ushuaia and Río Grande, there are also particularities of each urbanization process.

6.3.2- Production of space in Ushuaia (1972-1991).

Between 1972 and 1980, with the beginning of the industrialization process and a still slow and incipient population and urban growth, the State, at its different levels, was the main driving force behind the city's growth. The national government produced new facilities, such as the headquarters of Vialidad Nacional and the Austral Centre for Scientific Research (CADIC-CONICET), as well as small-scale housing complexes for new national employees. New urban developments were built by the territorial government's Secretariat of Public Works in areas that were to the north and west of the former urban area. Although the municipal government did not have a direct impact on urbanization or housing construction, it did promote some planning regulations that attempted to address urban growth, while at the same time articulating it with industrial activity. The first Urban Planning Code (Ord. No. 71/75), approved by the Municipal Secretariat of Public Works and Services, was published in 1975. The Code addressed the necessity to plan land use and prepare for the urban area's potential future growth. Among other things, it considered the zoning of the municipal area (in which urban, suburban, and industrial tourism and industrial districts were designated), the classification of highways, the new Route 3, and the relocation of the port and airport. Subsequently, Ordinance No. 96 of 1977 incorporated new areas to the urban space, according to the needs of the new zoning proposed in 1975.

As we have seen, urbanization grew quickly after 1980 as a result of the significant migrations brought on by industry. New neighbourhoods and houses were mostly produced by the territorial State. It created lots with services through the Secretariat of Territorial Public Works, which gave rise to new neighbourhoods. The urbanization on the sea and on Kuanip Street was expanded to the south by the neighbourhoods of Gaucho Rivero, Tolkar, and Don Bosco. The communities of Los Calafates, Los Alerces, Juan Domingo Perón, and Towara, which lie to the north, completed the connection between the current urban area and the new Route 3. Finally, the urban edge at that time was consolidated by the northwest neighbourhoods of Andino, Río Pipo, and Latinoamericano.

In terms of housing development, INTEVU constructed various housing complexes to the south, centre, and north of the city (INTEVU IV, V, VI, XIII, XIV, XIV, XV, XVI, and XVIII) (Figures 6.4 and 6.5). Between 1978 and 1990, 1,326 housing units were built in Ushuaia (IPV, 2008), although many of them were not delivered until the following decade. Given the relief and the presence of deep peat bogs, particularly in the southwest, the key determining factor in the placement was the availability of fiscal land with ideal circumstances for urbanization. INTEVU had to carry out multiple

drainage and filling works, which also slowed down construction times. The new neighbourhoods were both high-rise multi-family housing complexes and single-family dwellings, financed entirely by FONAVI. The units were all three- and four-bedroom units¹⁶³.



Figure 6.4: (Left) Barrio San Salvador (INTEVU IV), to the south, single-family strip housing (Right). INTEVU 13, 15, 16 and 17 neighbourhoods, in the centre, duplex housing. Source: own registry



Figure 6.5: (Left) Yaganes neighbourhood, in the centre of the city (INTEVU 14), multi-family complexes (Right), Monte Gallinero neighbourhood (INTEVU V), to the south, multi-family high-rise complexes. Source: own registry

The role of the municipality as a housing producer was limited. It built only one neighbourhood in the entire city, called San Vicente de Paul, located next to the industrial park. It was designed to temporarily house the population that had recently arrived to work in the factories. In this way, "transit and waiting" housing, also known as basic housing, was constructed to house incoming migrants until they could find permanent homes. However, the homes were eventually inhabited on a long-term basis by their residents.

The more than 1,300 housing units built by INTEVU, (especially considering the construction time) as well as the "transit and waiting" units, were not enough to cover the demand of the new population. The municipal limitations to face the rapid expansion process were expressed in some ordinances of the period such as the declaration of the urban housing emergency in 1987 (O.M.

¹⁶³ In the case of INTEVU XIII, XV, XVI and XVII, the typology and construction system was based on a dry construction system imported from Finland. The rest of the projects were designed by INTEVU's technical teams, mainly based on industrialized systems.

558/87), and two ordinances of 1988 prohibiting the division of private lands (O.M. 349/88) and the approval of new urbanizations (O.M. 422/88), "to avoid the municipal expenses of urbanization".

Faced with the lack of available options, the informal production of the city that had begun at the end of the 1970s was consolidated as a characteristic form of spatial occupation in the 1980s. In spite of the challenges presented by the steep topography to the north, settlements evolved primarily independently and spontaneously inside the formal urban stain on the east-west axis (as illustrated in Figure 6.6). To the east, the settlements were located in the northern sector of the industrial park, while to the west they grew on land affected by wetlands. They were typically made up of shacks constructed from precarious materials, which with time increased their usefulness. Typologically, they constituted spaces of irregular layout, highly densified, an issue that responded to their initial transitory nature. There was also another type of informality, produced by the construction of housing outside the criteria of urban regulations.

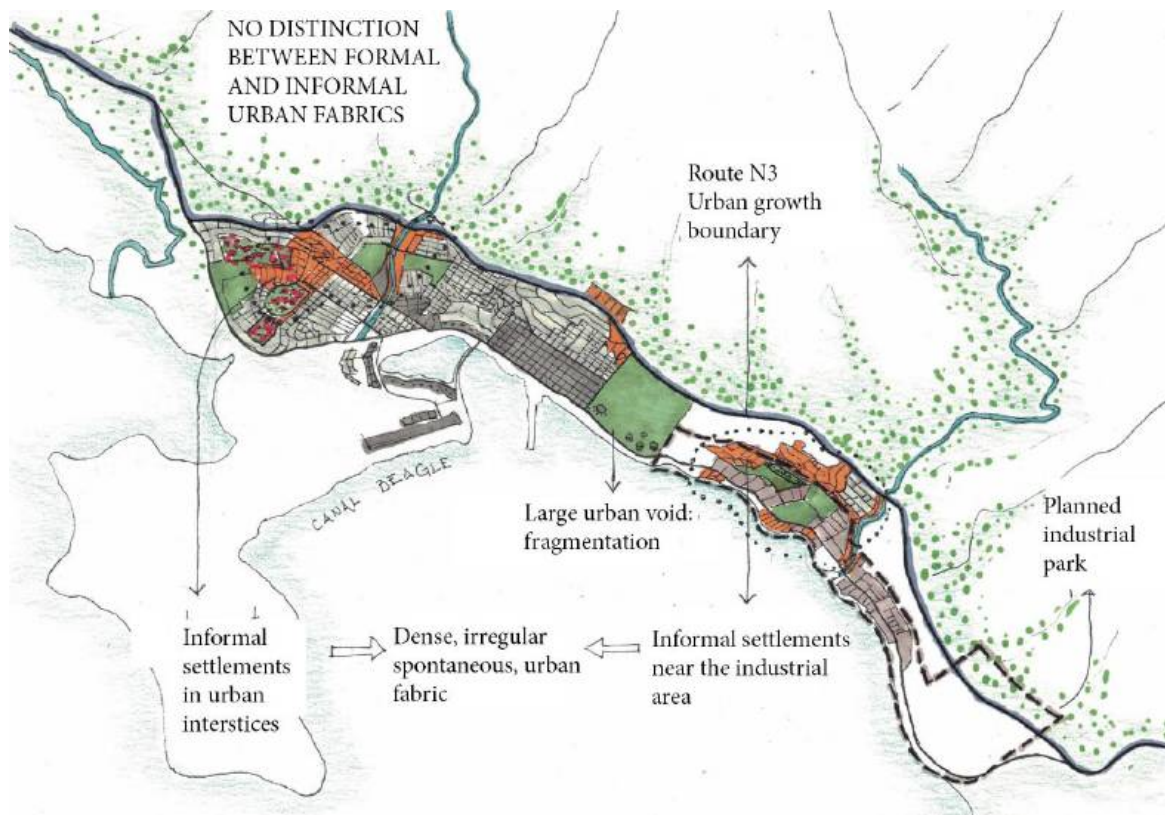


Figure 6.6: Urban informality in Ushuaia. Period 1972- 1991. Source: Author's own work

A survey conducted at the time by the Municipal Territorial Social Action Secretariat revealed the state's concern for the problem. This indicated that in 1986, 33% of the dwellings in Ushuaia had no legal claim on the land, while in 1988 this figure increased to 37%, with 2,618 cases of land occupations in the city. According to various key informants from the State and settlers of settlements

that had already been regularized or relocated (E.9, 24/3/2018; E.11, 12/12/2018; E.20, 15/8/2015), the majority of the settlements and informal housing were occupied by new, "recently arrived," industrial workers who were unable to find other housing options in the formal market. When consulted in this regard, a member of a popular neighbourhood of that time, (who was also an industrial union member), stated:

...people from the factory would arrive and settle on a piece of land, then they would go and ask for it, you asked for electricity and they would give it to you. There was no water, you had to go to a public tap. That was a constant reality for anyone who worked in the factory [...] most of the people who arrived went somewhere, and they told you: "hey, they are building little houses over there". You went and settled down, they didn't give you a subsidy, they didn't give you a house, because that's the truth, they didn't give you anything. It was difficult for a metalworker to get a loan from the IPV (INTEVU), or a loan from the Mortgage Bank, impossible because he was already a newcomer, it was known that the work in the factories was relatively unstable, but they gave you electricity, if you could pay for it. They let you settle in, nobody came to dismantle your house, nobody chased you away. I lived under the yellow bridge, it was the last little piece of land. Some co-workers at the factory told my husband, "hey, we're all going to go there", and a little house was built on the weekend. [...] Wooden panels with tongue-and-groove boards. (E. 35, 18/12/2018)

The first thing that stands out in this fragment is the relationship between the industry's promotion of precarious employment and the inability of the recently arrived population to have easy access to habitat. Second, we observe that the State allowed communities to expand to the point that, after the land was occupied, they offered some basic services. However, analysing the regulations, we observe that tolerant policies were expanded at the end of the 1980s, which marked a difference from the restrictive policies that existed during the early years of industrial development, such as the prohibition on substandard housing on land without title deeds (O.M. 52/75). Proof of this are some regularization actions, such as the Plan for the Regularization of Non-Fixed Housing (O.M. 348/88) and the Plan for the Registration of Clandestine Works (O.M. 351/88). In this sense, there is a concern for precarious housing but not a solution regarding access to habitat.

Additionally, and within what we refer to as the logic of need, *Cooperativa Centenario*, an urbanization sponsored by civil society, emerged around this period. A project participant who was interviewed (E. 35) said that a construction business would create a subdivision with services in two stages and with loans from the BHN. Although the first stage was successfully finished (located in the city centre), the loans for the second stage fell through. Thus, the applicants had to use their own money to pay for the plots and the cost of construction. They were conned by the construction business, and although the plots were eventually designated erratically and without measurements, the houses were never completed.

With respect to the patterns of spatial occupation between 1972 and 1991, and as a result of the spatial analysis of the logics of occupation, Figure 6.7 shows that residential expansion reached 262 hectares, representing 80.62% of the growth of the urban area, while industrial production expansion

got to 139.44 hectares, equivalent to 19.4%. This represents 80.62% of the growth of the urban area, while the industrial production expansion was 139.44 hectares, equivalent to 19.4%. Residential urban space was mostly created by the territorial state (56.2%), accounting for 33.3% of urbanization, while informality accounted for the second most common expansion mechanism. Residential expansion was brought about by the national government at a rate of 4.7% compared to the local government's 3.9%. Regarding the market, only one hotel was constructed.

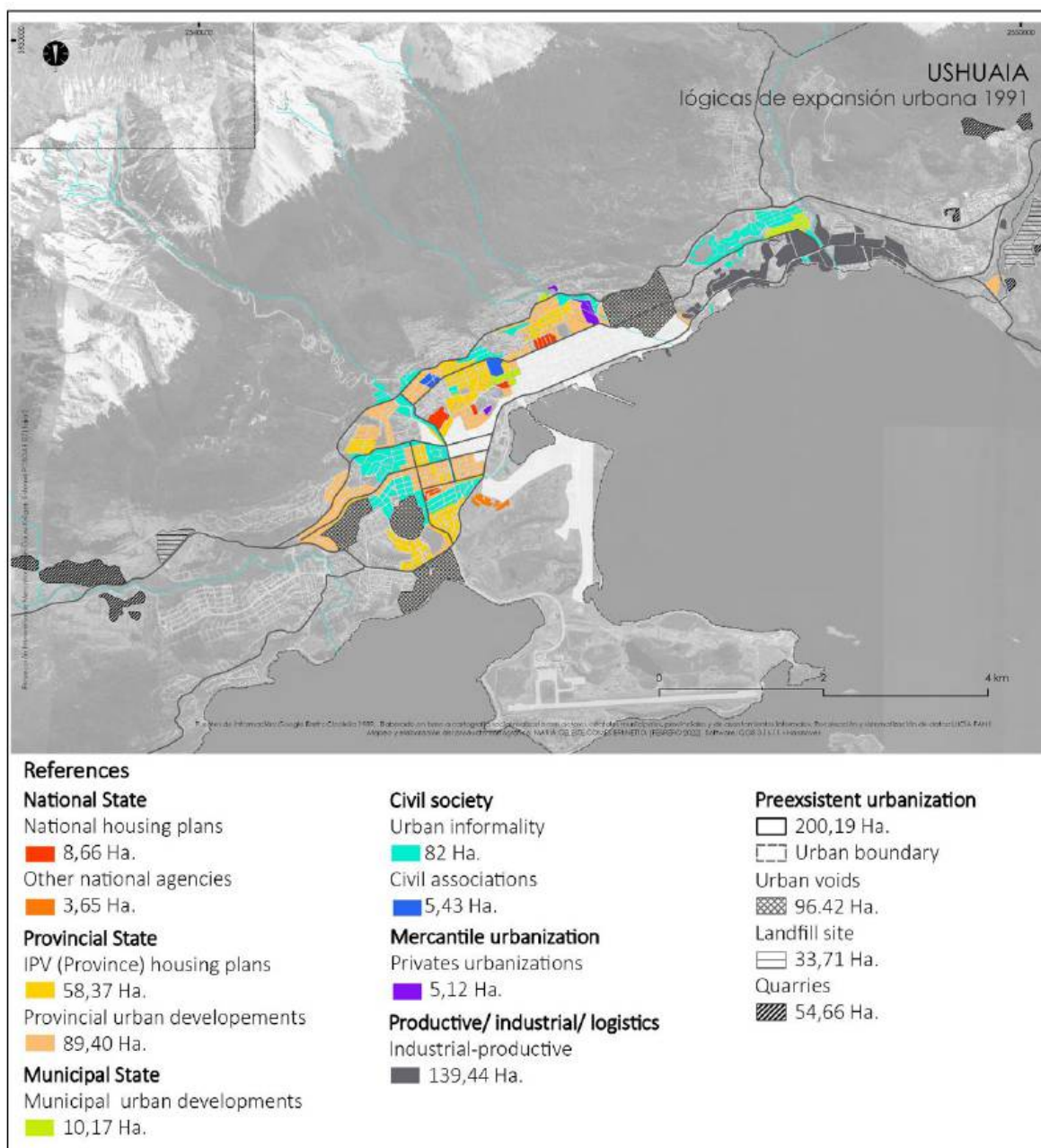


Figure 6.7: Logics of urban space production. Ushuaia, 1991. Source: Author's own work

The significance of the enormous urban gaps, which at that time made up an area equal to 44% of the urbanized space, should be noted. Both the natural areas occupied by wetlands to the southwest, as well as the large void generated by the Navy quarters to the east, fragmented the city into three parts. From west to east we could identify a predominantly residential sector, occupied by both state-owned housing developments and informal settlements. In the centre, a residential and commercial sector, coinciding with the historic centre and the new state housing developments. Finally, to the east, a third predominantly productive sector, made up of the industrial park and several informal settlements.

6.3.3- Production of space in Río Grande (1972-1991)

As was the case in Ushuaia, until 1980 urban growth in Río Grande was slow, linked to a still recent industrial settlement. The territorial State produced fewer neighbourhoods than in the case of Ushuaia, and this seems to be due to the territorial importance of the latter as administrative capital. However, it did urbanize some sectors adjacent to the old town to the east, which still retained their status as productive small farms (*quintas*). The national government, for its part, also built small-scale housing complexes for military personnel in the former *quintas*. The municipal government did not produce housing solutions at that time. In terms of planning, in 1978 the city had its first Building Code, but it was replaced in 1982 (Ord. No. 161/82) by the Building Code for the entire Territory of Tierra del Fuego (Decree 1367/81). Unlike Ushuaia, the city did not have urban planning instruments, and only in 1988 it got an urban diagnosis, with an ordinance of subdivision and urbanization (O.M. N 415/88) and in 1990, with an urban planning scheme, of which no written records were found.

The average yearly population growth rate in the city from 1980 onwards and with the creation of industries reached 90.7 points (Hermida et al., 2016), which led to a large increase in the city's land area. As in Ushuaia, it was the State at the territorial level, which had the greatest impact on the growth of the city. On the one hand, the Territorial Secretariat of Public Works generated two urban developments: the *25 de Noviembre* neighbourhood to the west, near the industrial park, while to the north, past the Navy quarters, it produced the *Mutual* neighbourhood and its expanse. In the latter, housing was built through BHN.

Additionally, 3569 new dwelling units (INTEVU I, II, III VII, VIII, IX, X, XI and XII) and public facilities were created by INTEVU which were finished in the 1990s. The housing developments were located to the west, between the historic centre and the industrial park and to the north. While the former were strips of duplex and low-density single-family dwellings (Figure 6.9), to the north there were both strips of dwellings and multi-family high-rise complexes (Figure 6.8). Regarding the latter, it is worth noting their character as large-scale urban projects, as shown in Figure 6.6. An interviewee who was part of its design and execution confirms that it was the most ambitious at the provincial level

at that time, to the extent that it contemplated all the "functions" that a city should fulfil in its interior. The availability of national fiscal lands played an important role in the location.



Figure 6.8: Chacra II neighbourhood (INTEVU I, II and III), in the north of the city, multifamily housing developments. Source: <https://www.ruta0.com/rio-grande/fotos/-1563.htm>



Figure 6.9: (Left) INTEVU neighbourhood (VII, VIII, IX), in the west of the city, one-story strip housing. (Right) X, XI and XII, in the west of the city, duplex housing. Source: own records

The municipal State, on the other hand, contributed more to the creation of the city than it did to Ushuaia, primarily through the implementation of infrastructure projects like the opening of streets¹⁶⁴, the sanitation of the seashore and landfill works to the south, on the estuary of the Grande River. However, one of the things highlighted during an interview with the former mayor for three terms during the 1980s (S. 11) was the complexity involved in setting up the institutional scaffolding, given that the local state apparatus was very small at that time and, in addition, there were very few employees with experience in urban management. Additionally, he emphasized the issue brought on at the time by the scarcity of land for urbanization: "Land management wasn't a thing back then. Because the land was public, it was also challenging for us to plan and predict how the city would

¹⁶⁴ For this purpose, it requested a loan from the *Caja Nacional de Ahorros y Seguros* for the paving of 60 blocks in the municipal area (O.M. N 200/85).

develop." (E. 11, 12/12/2018). In relation to the municipality's lack of land, the former official identified two issues: the first linked to the inability to anticipate urban growth, to the extent that this was provided by national and territorial bodies; the second, the impossibility of providing the new population with offers in relation to habitat.

In this context, despite the large production of housing by INTEVU, the long construction times, as well as the lack of possibilities of the municipality to promote other options regarding access to habitat, a disconnect was caused in housing matters between the urgencies of the new population and the state responses. The high demand exceeded the installed housing capacity, which led to rapid spontaneous and informal growth. Since most of the land surrounding the urban area was privately owned, the settlements were located on land unfit for development on the northern bank of the Grande River, on its flood bed, and extended to the border with the industrial park (Figure 6.10). According to Ciccollela (1989), approximately 2,000 families lived in this area. The housing conditions revealed a high vulnerability in terms of environmental risk, since most of the dwellings were precarious shacks on wooden sleds, located on flood-prone land.

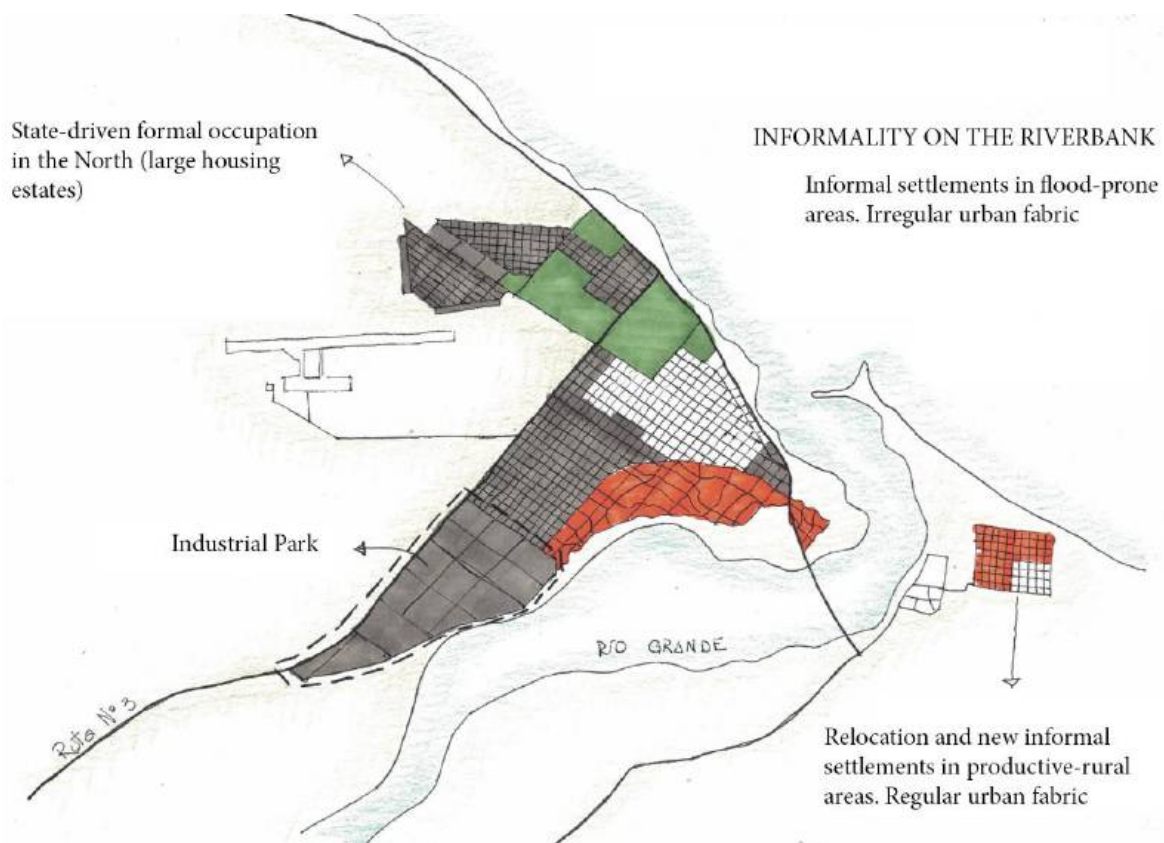


Figure 6.10: Urban informality in Río Grande. Period 1972- 1991. Source: own elaboration

Faced with this situation, the municipal government decided to move the population to the south bank of the river, a sector associated until the 1980s with meat packing plants and rural use

(recently connected to the rest of the city through the Mosconi bridge), and at the same time generated landfill works on the north bank. In this regard, the Mayor at that time stated: "Because of this situation we had to gain almost 80 hectares off the river. It was a very low area and when the big tides rise that flooded everything, to the point that people had to get out by boat" (E.11, 12/12/2018). The settlers were relocated in what is known as the Austral neighbourhood, in lots without public services or land tenure security, thus creating a new informal sector. In the following years new neighbourhoods grew on the southern river margin, although not as spontaneous settlements but as fraudulent lots. Many owners paid for land that did not belong to those who sold it in the first place. These neighbourhoods are known as Aeroposta, Reconquista and Cabo Peñas. Typologically, there were differences between the settlements on the north and south banks of the river. The former showed a spontaneous layout (which was regularized over time or relocated), while the latter were initially designed to eventually become formal neighbourhoods, with a regular layout and plotting.

Policies regarding informality also oscillated between prohibition and tolerance. For example, while Municipal Ordinance No. 528/90 authorized relocation on the southern margin, Ordinance No. 542/90 empowered the Municipality to carry out evictions in the face of occupations on public lands. An interesting aspect of this regulation is the fact that it encourages owners to relocate their shacks to other land, thus acknowledging the recognition of home ownership and the mobile nature of housing. Landfill improvements were made to numerous villages at the same time, but it would take decades for services and property regularization to come along. Also, and in line with tolerance, on the southern margin the Municipality became the joint guarantor of the neighbourhoods where the population had bought fraudulent plots (O.M. N 515/90).

Regarding the spatial analysis of space occupation logics, Figure 6.11 shows that between 1972 and 1991, residential space represented 66.14% of the Río Grande expansion, while 33.86% corresponded to productive-industrial use. This number is much higher than in Ushuaia. As in Ushuaia, the territorial State was the main producer of residential space with 58.54% of the expansion hectares, followed by informal city production, equivalent to 34.1%. The national state, on the other hand, produced 5.48% of the expansion, while the municipal state produced less than 1%. Unlike Ushuaia, the mercantile logic generated a neighbourhood; however, in terms of expansion it meant only 1.15% of the space produced in the period.



Figure 6.11: Logics of production of urban space. Rio Grande, 1991. Source: Author's own work

On the map, it is clear that at this time, Rio Grande took on a radically diverse landscape: to the north, the state-produced formal metropolis, while to the south, and even on the opposite side of the river, the city grew ad hoc. With an area equal to 37.5% of the urbanized space, the urban voids, especially those belonging to the Navy to the north, also gained significant importance. Between the historic core and the northward development, this led to a significant break in the urban fabric.

6.3.4- Comparative summary (1972- 1991)

The industrialization process and the associated migrations had a direct impact on the urban expansion of Ushuaia and Río Grande, as a dynamic of equalization in the USD analysis. On the side

of differentiation, the role of the State was a fundamental factor in the USD, marked by the disconnect between regional promotion policies that pursued population growth and policies that should address the desired growth in space. In this regard, there was a clear separation between the urban dynamics, where strong internal differentiation processes emerged, and the industrial dynamics, which, as we saw in Chapter 5, produced thousands of jobs in a short period of time. The population was exposed to high degrees of vulnerability due to the uncertainty surrounding the security of land tenure and the unstable environments in which most of the urbanization process and home building took place, which in many cases still exist today.

USD patterns within cities were not influenced by land value dynamics from formal city production or other commodification processes. Land scarcity, as the main driving force behind urban informality, was linked in this case more to state action than to the dynamics of urban land valuation. It is also worth mentioning the commercialization of fraudulent plots, which in both cities also led to informal growth. In Ushuaia, because they are located close to the industrial area, in areas of significant relief and on wetlands, while in Río Grande because of their location on flood-prone areas.

6.4 Industrial crisis and differences in the configuration of Ushuaia and Río Grande (1991-2002)

As we have seen above, the opening and deregulation policies at national level sparked a serious crisis in Tierra del Fuego's industrial model that would persist during the entire 1990s. As a result of the widespread national crisis, new people continued to move into this region even if the migratory wave was less intense than it had been in the preceding period. Between 1991 and 2001, the provincial population increased by 45.7%. (INDEC). The urban space production and expansion processes the two cities started to differ during those years of the industrial crisis. Given that its productive structure at the time was dominated by industry, Río Grande suffered significantly more damage during the deindustrialization process. The main impact of this was a decline in the demand for manufacturing labor. As a result, the city's population increase, which had been 38% between 1991 and 2001, was less than in earlier phases. On the other hand, Ushuaia was better equipped to handle the crisis due to both the existing public employment associated to its role as the provincial capital and the rising tourist industry, which also led to a significant need for workers in the construction industry. In this regard, it experienced a 54% increase in population (INDEC). On the basis of the extent to which each city relied on industry, this started to establish disparities in USD at urban level, which grew more pronounced in the decades that followed.

Figure 6.12 illustrates the expansion of the cities showing that although Ushuaia's growth had been lower in prior decades, its urban sprawl increased by 566.45 hectares between 1991 and 2003 and it represented 84.93% of the urban area of 1991. The city advanced on urban interstices where

urbanization had proved difficult in the past and it spread on the mountain slope to the north, into the interior of the Andorra Valley to the northeast, and over the sea to the southwest. Linked to tourism, the international airport was installed to the south in 1995, on the peninsula where the old airport was also located. To the northwest, on the way to the Marital glacier, tourist complexes increased in an area that had been set aside for hotel developments. Additionally, the port's growth made it possible for tourist cruise ships to dock in Ushuaia, some of which had Antarctica as their final destination. The industrial park to the east started to be urbanized at the same time that the tourist urban profile started to take shape. By the middle of the decade, the industrial park area had dropped its former name and became a mixed-use development. The expansion of high-rise developments stands out in this final category. Once more, the outline of National Route 3 served as the primary structuring axis for expansion.

In the case of Rio Grande, this period is the one with the lowest growth in terms of absolute expansion due to a lower intensity of industrial activity and associated migrations. The urban area expanded by 281.92 hectares, which represented 28% of the urbanized space in 1991. With the expansion of San Martín Avenue to the north, the airport's surrounding area was fully urbanized, and the Navy Lands and the runway's shadow cone were combined into one huge urban vacuum. Facilities for provincial institutions, such as the jail and the police headquarters were built towards this area and along Route 3. In the central areas, the main avenues and the marine waterfront were both improved. On the other hand, the southern bank of the Rio Grande experienced a residential-rural expansion linked to the emergence of successful businesses. The structuring axes of the expansion in this period were, on the northern bank of the river, the new section of San Martín Avenue, and on the south bank, the old rural roads and the old layout of Route 3 were decisive (Figure 6.12).

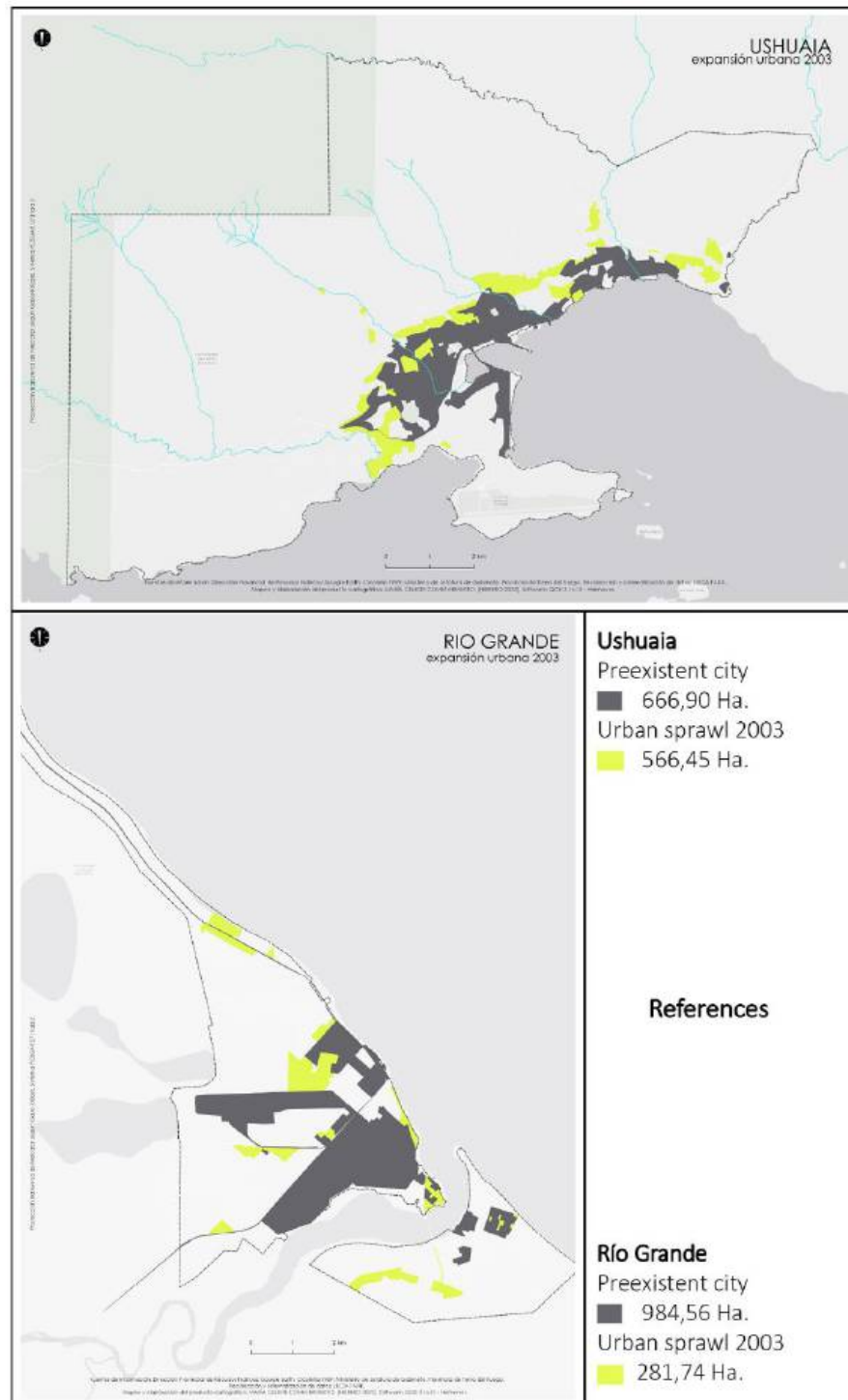


Figure 6.12: Urban expansion of Ushuaia and Río Grande. Period 1991- 2003. Source: Author's own work

6.4.1- Conditions of access to housing in Tierra del Fuego and the role of the State (1991 - 2002)

In the 1990s, housing demand fell comparatively in both cities associated with less rapid population growth. However, institutional architecture at national, provincial, and urban levels

underwent some changes concurrent with the beginning of the deindustrialization cycle, and these changes directly affected the way the State was able to supply the need for housing.

In 1990 Tierra del Fuego abandoned its administrative character of National Territory and was constituted as a Province (National Law N° 23775). Until that date, the national State had been responsible for housing, security and health policies since it was the one that had promoted, as we have seen, the settlement of the island.

The 1991 Provincial Constitution recognized housing as a right in terms of habitat access and delegated duties and authority to the provincial State and municipalities. The provincial State was granted the responsibility of providing access to land and housing, specifically in its role as promoter of housing programmes (Art. 23), and of preserving the urban-environmental environment (Art. 54). The municipalities, in turn, were given authority "for the administration and use of public lands inside the municipal lands" as well as duties for urban planning (Art. 173). (Debia and Lobato, 2013). A division can be observed here between housing policy and urban policy, at least in terms of the State's obligations, which generated conflicts in the articulations of the policies implemented at each level. Moreover, it should be highlighted that the connection between these measures and larger productive dynamics was never mentioned. At the same time, the fiscal lands that were previously of national character, passed in the first instance to the provincial government, and the Provincial Legislature was in charge of their regulation, adjudication, cession and/or expropriation. Subsequently, in 1996, they were transferred to the municipalities, which required new institutional capacities.

On the other hand, at national level, the neoliberal paradigm was solidified by the policies of State reform (Law 23696/89) and economic adjustment that started in 1989¹⁶⁵. As a result, state intervention in terms of resources and programs for the lower-income population significantly decreased during the early 1990s. Instead, the government turned its attention to promoting various forms of private capital, including the real estate industry (Pirez, 2016). Housing policies, influenced by World Bank recommendations, reduced large-scale housing production and, in contrast, loans and negotiable mortgages were increased with a view to financing individual demand (del Río, 2012; World Bank, 1994 in Barreto, 2017). FONAVI's funding scheme was also transformed (Law 23.966&91) and it started to rely on a 42% tax on petrol (Barreto, 2017). In 1992, Law 24.130 ratified the Fiscal Pact and, among other things, decentralized functions and transferred to the provinces (through the IPV) the regulatory competencies as well as the technical and financial requirements for the execution of housing projects.¹⁶⁶. In accordance with this framework, the Provincial Housing Institute (IPV for its

¹⁶⁵ It entailed, among other things, the transference of responsibilities to the local governments but without the necessary resources and, as Fernández Wagner (2009: 2) puts it, the "transference of the crisis".

¹⁶⁶ With the same measure, it endorsed the retention, on the part of the National State, of funds resulting from the shared federal tax revenue (Rodríguez y Di Virgilio, 2008), and in exchange, it granted the provinces a fixed monthly sum to cover FONAVI'S financial resources. These reforms resulted in the dismantling of the centralized system for the production of housing which was "universal" and redistributive in character (Cravino, Fernández Wagner, Varela, 2002).

acronym in Spanish) was established in TDF in 1992 to take the position of INTEVU (Provincial Law N 19) and to serve as an independent body with responsibility for developing and implementing the housing policy.

The Federal Housing System (SFV for its acronym in Spanish, National Law No. 24,464) was subsequently adopted by the province in 1995. It was designed to address the imbalance brought on by the transfer of responsibilities but not resources to the provinces, and it put forth a new institutional and financial framework¹⁶⁷. As a result, the number of housing units completed per year increased (which decreased at the end of the decade due to the growth of indebtedness), the type of operations diversified and the recovery rate increased. In spite of the State retreat situation, the IPV was then able to complete many of the housing schemes started in the prior decade, albeit with changed features¹⁶⁸. The large urban project modality was abandoned and small housing complexes were created, which lower-income sectors were not able to access. Housing typologies could not exceed 60m², and land areas were reduced.

Figure 6.13 shows that the housing production of the IPV declined during the nineties in TDF compared to the previous decade. A total of 3613 housing units were built, with the largest number in Ushuaia during this period. Also, 1214 loans were granted for the construction of new houses (797 in Ushuaia and 417 in Río Grande). After the 2001 crisis, housing production became null.

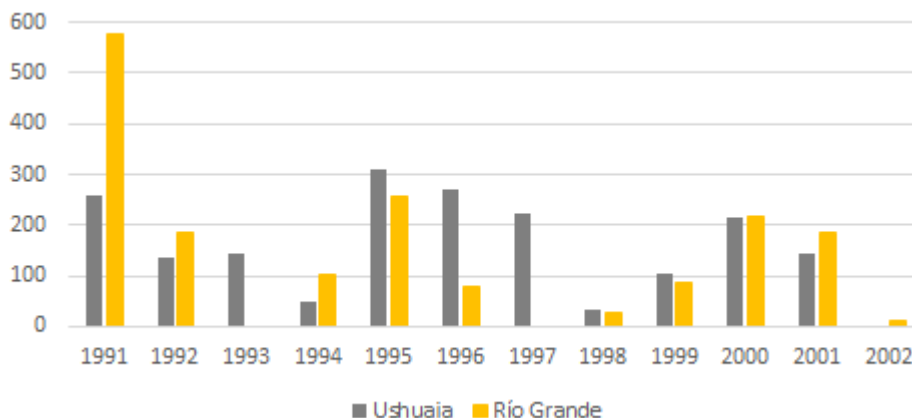


Figure 6.13: Construction of FONAVI housing in TDF by locality. Period 1991-2002. Source: Author's own work on the basis of data provided by the IPV.

¹⁶⁷ Financially, a minimum annual level was established (900 million pesos/dollars) that the National Treasury had to guarantee to the provinces when the collection of petrol tax was not enough. As an institution, the SFV was eventually constituted by FONAVI, provincial agencies and the National Housing Council (CIPPEC, 2019). For TDF, the new law established a 2.65% coefficient in the distribution of resources (Ministry of Economy, 2007).

¹⁶⁸ Towards the end of the period, Provincial Law N° 491/00 authorized IPV to obtain funding (\$30,000,000) through the securitization of its credit portfolio. Taking into account convertibility, the exchange rate was beneficial for the construction industry (this would change in 2001 with the widespread economic crisis).

During these deindustrialization years, although the expansion of urban informality in both cities was substantially less than it had been during the prior decade, it remained high because of the challenges the new state structure had to supply the housing demand¹⁶⁹. According to information from the 2001 Census about housing tenure circumstances, as shown in Table 6.8, we can observe that while home and land ownership increased in TDF from 50.7% to 64.8% between 1991 and 2001, irregular tenure decreased from 22.5% to 15.8%, matching the levels of the country as a whole. Within irregular tenure, home ownership only decreased from 15 % to 7.3 % of the total and Loan occupancy from 7% to 5.3 % This decrease seems to be explained by the lower intensity of migrations and the completion of many housing units produced by the IPV, which made it possible to meet part of the accumulated housing demand. The number of tenants, meanwhile, remained stable, representing 15.8%, compared to an 11% at national level.

Table 6.8: Households by type of housing tenure. TDF and Country Total, 2001

<i>Type of tenure</i>	<i>Tierra del Fuego</i>	<i>Country total</i>
Total households *	27.812 (100 %)	10.073.625 (100 %)
Ownership of house and land	18.021 (64,8 %)	7.115.508 (70,6 %)
Home ownership only	2.036 (7,3 %)	432.009 (4,3 %)
Tenant	4.406 (15,8 %)	1.122.208 (11,1 %)
Loan occupancy	1.484 (5,3 %)	829.985 (8,2 %)
Occupation by relationship of dependency	986 (3,5 %)	253.679 (2,5 %)
Another situation	879 (3,2 %)	320.236 (3,2 %)

Source: Author's own work based on INDEC data

Regarding housing quality, we can see in Table 6.9 that unrecoverable substandard housing, which made up 11.3% of the total housing stock in the 2001 Census, declined significantly. Even so, this value is still greater than twice as much as the national average. Within unrecoverable housing, the Census indicates that 97.5% corresponded to precarious houses, changing the composition with respect to the previous period in which mobile homes predominated. Also, the quantitative housing deficit shown in Table 6.10 dropped from 23.8% to 18.5% although it remained 10 points above the national average.

¹⁶⁹ The decentralization of national responsibilities together with provincialization and a new migrant population still significant in number, “exceeded in many aspects the capacity to channel and regulate population growth” (Municipal Management Unit, 2013).

Table 6.9: Households according to housing quality. TDF and total country, 2001

<i>Household by type of housing</i>	<i>Tierra del Fuego</i>	<i>Country total</i>
Total	26.640 (100 %)	9.712.661 (100 %)
Non-deficit housing	22.165 (83,2 %)	7.628.240 (78,5 %)
Unrecoverable substandard housing	3.019 (11,3 %)	507.950 (5,2 %)
Recoverable substandard housing	1.456 (5,5 %)	1.576.471 (16,2 %)

Source: Author's own work based on the National Population, Household and Housing Census

Table 6.10: Quantitative housing deficit. TDF and Country Total, 2001

<i>Quantitative Deficit</i>	<i>Tierra del Fuego</i>	<i>Country total</i>
Total	26.640 (100 %)	9.712.661 (100%)
More than one household per dwelling	1.172	360.964
Unrecoverable housing	3.019	507.950
Quantitative housing deficit	4.791 (18%)	868.914 (8,9 %)

Source: Author's own work based on the National Population, Household and Housing Census.

In relation to service provided to informal settlements, different actions on the part of the provincial State led to an ambivalent policy lacking a perspective of continuous assistance over time. The prohibitive and condemnatory nature of some provincial policies regarding the growth of new settlements is highlighted. Among these, the 1996 Housing Emergency for Urban and Rural Lands is the most significant (Law No. 273). "Urban restructuring" was the goal of this statute, which was in effect for a year (Art. 1) and authorized evictions in lands occupied by settlements. It also enabled legal actions against the occupants and it punished new settlements with fines. However, it did not suggest any other strategy to structure or generate land. In the same line, Provincial Law No.313 was passed authorizing evictions in fiscal lands destined to production. This started to change after 1996 with the transfer of provincial fiscal lands to municipalities, which were in control of public land distribution and land ownership regularization procedures and generated, as we will see later, mechanisms for access to land. However, the administrative times of this transfer, as well as the need to set up a new

municipal structure, meant several years of low response capacity in terms of habitat¹⁷⁰ and informality, in particular.

A number of alternative national programs to the traditional housing production policy began to develop toward the end of the 1990s which addressed the problem of informal settlements and low-income sectors. These programs would have their counterpart in new provincial state assistance policies. The regularization of property ownership and the comprehensive improvement of low-income neighborhoods are two of the key initiatives. The Neighborhood Improvement Program (PROMEBA for its acronym in Spanish), which was introduced in 1997 and is still in use, is one of the most renowned initiatives in this respect¹⁷¹. However, the drastic decrease in state housing production towards the end of the period added, as we will see later, to a new industrialization process accompanied by market growth would be key factors in a new explosion of informality.

Considering therefore the relative improvement of housing conditions at the provincial level during the deindustrialization cycle, we will now analyze the production of urban space in Ushuaia and Río Grande.

6.4.2- Space production in Ushuaia (1991 - 2003)

Although Ushuaia suffered strongly from the political and economic impacts of the deindustrialization process in the 1990s, its role as administrative capital, together with the boom in new activities, allowed the city to continue growing at a dizzying pace. However, the patterns of spatial occupation were changing with respect to previous decades. The availability of developable land began to be a problem while the State, at its different levels, considerably reduced housing production. At the same time, new dynamics of spatial commodification emerged that would begin to change the profile of the city.

Although it was still the principal source of new land and housing, the provincial government had a smaller impact than in prior decades. By filling urban gaps in sloping regions (because to the lack of fiscal land with better conditions), it developed new home complexes through the Ministry of Public Works in the west of the city (Barrio Los Fueguinos, Bella Vista, Pista de Esqui), which involved higher costs and construction times. The IPV, in turn, finished two significant multifamily housing developments that had been supported during the previous ten years in addition to other specific

¹⁷⁰ This fact had a greater impact in Ushuaia given that most of the urban land surrounding the urban sprawl was fiscal land. The transfer of land was resolved permanently in the decade of 2000 with the passing of the urban charters.

¹⁷¹ PROMEBA's goal was to improve habitat conditions in informal settlements and marginal neighbourhoods and was aimed at social sectors with low incomes or with NBI (Unmet Basic Needs, for its acronym in Spanish) status. While at the beginning it was fully funded by the IDB loans, starting from 2003, the national state made direct contributions with its own funds.

works spread around the city. The first complex, known as "245 housing units," is situated next to the INTEVU's formerly constructed between the center and National Route No. 3. The second complex, known as "640 housing units," is situated in the eastern portion of the complex, on lands that formerly belonged to the industrial park (Figure 6.14). Due to the latter's separation from the rest of the metropolitan area, considerable construction work was required for the laying of utilities, which attracted additional businesses and industries. The fact that it was built on a steep slope and was bordered by factories, however, kept it in a more segregated status than the other state housing. The Arroyo Grande villages were moved to a nearby sector as a result of the IPV's promotion of relocating settlements found in high-risk regions.



Figure 6.14: (Izq.) Neighborhood "245 viviendas", in the center of the city, multifamily high-rise complex. (Right) Neighborhood "640 viviendas", in the eastern end of the city, multifamily high-rise complex. Source: Author's own records.

The municipal government deployed a set of actions in its previously distinguished four roles, namely, as producer, planner, market regulator/facilitator and agent dealing with informality. In terms of planning, a relevant issue was the zoning of the municipal area, which was carried out in conjunction with other agents, such as specialized professionals and non-governmental organizations (M.O. 1496/94). Among the most important points, the municipal government defined the industrial park as a mixed zone, allowing residential use, and also enabled a hotel reserve on the way to the Martial Glacier. Both things show the transformation of Ushuaia's productive profile towards tourism, and with it, the urban profile. Subsequently, towards the end of the period, the Urban Planning Code (1999) was passed, which established general regulations for the organization of the urbanization process. At the beginning of the document, the diagnosis made by the Municipality and the local Deliberative Council regarding urban growth is noteworthy:

To the current situation, the status of isolated population settlements must be added given the abrupt demographic growth, resulting from the peripheral overflow to the urban core, due to the lack of regulations and ordinances that establish and define land use and an effective exercise of police power. The following is verified in those area that tend to densify, without the minimum essential reserves for the future location of basic services[...]: Speculation with urban land, incoherent lots and subdivisions, poorly located, sometimes in unhealthy and floodable areas and lacking infrastructure and services, with inaccessible street layouts, lot sizes incapable

of adequately addressing the housing problem[...], all of them contributing to the disorder and deterioration of urban areas, which are usually affected by effluent pollution, environmental pollution, noise, etc. (Urban Planning Code, 1999:14)

It is important to note the prohibitive perspective regarding the settlements, where, as it is claimed by the cited document, the problem is with police control, not with finding shelter for the influx of people. In this way, urban planning is viewed primarily from a technocratic perspective. The inclusion of an environmentalist perspective in the analysis of urban issues also stands out as typical of a historical period in which several national and international regulations evolved in this regard¹⁷². Subsequently, among the goals of a new zoning, the document encourages structuring on the basis of tourism.

Regarding habitat access, several regulations have been passed to encourage actions for the creation of new lots, including the creation of the Municipal Commission of Fiscal Lands (O.M. N. 1117/93), the regulation of land adjudication (O.M. N. 1406/94), and the regulation on the delimitation, registration, cession, adjudication, and collection of municipal fiscal lands (O.M. N. 2025/99). The latter specified a minimum of two years to qualify as a beneficiary, among other things. Within this framework, the urbanization called Barrio Malvinas was carried out in the southwest of the city. Subsequently, Municipal Decree No. 1658/99 (ratified by Resolution No. 016/2000) closed the demand registry for public land and, at the same time, gave priority to tourist-hotel developments. It should be noted that from 2000 until 2006, the Municipality did not produce new housing solutions.

One of the first steps taken to address informality and maintain Ushuaia's image as a tourist destination was the passing of Ordinance No. 1022/92 banning precarious construction. Then, toward the end of the decade, actions were inclined on the one hand, to the relocation of settlements situated in "scenic value" areas (such as the settlements situated in the Arroyo Buena Esperanza), and, on the other hand, to the ownership regularization of those settlements situated in less advantageous locations in terms of the tourist circuit. In relation to this, Municipal Ordinance No. 2178/00 produced a legal framework for the regularization of ownership of public land, yet its influence was limited. In this regard, an architect who was a technician within the municipality and later a civil servant, explained in an interview:

...what used to be done was to regularize the existing situation, there was no vision of how to deal with the future [...] We were simply engaged in surveying the stock, processing credits which, by the way, the Nation always has, but which are absolutely canned credits. So, the truth is that there are many situations that you have to force in order not to miss that financial supply, which the Municipalities alone, in none of the cases, are in conditions to deal with [...]. (E.19, 14/8/2015)

¹⁷² At international level, the 1992 Earth Summit held in Rio de Janeiro, established an environmental agenda of sustainability, which led to the Rio Statement on Development and the Environment. At national level, in 1994, the environment was included in the National Constitution as a right.

The interview suggests at a municipal desire to modify the current city to conform to outside standards and funding, but it did not reveal any reflection on the actual city's urban future beyond legal considerations.

On the other hand, towards the middle of the decade, the commercial logic began its own urbanization process through the production of lots in the southwest area of the city (Barrio Mirador del Pipo), and later, in the extreme west (Barrio Mirador del Fernández), taking advantage of the services provided by the IPV. The developers in both cases were patrimonialist landowners who had owned the property since the middle of the 20th century, had produced their occupancy licenses as productive land, and had occupied thousands of additional hectares than was required. Far from exercising "police power" with the landowners, the Municipality accepted the change from rural to urban land use in each case, without asking for any contribution in return. It should be noted that these private housing developments were aimed at high-income sectors, seeking to generate exclusive urban environments (Cuenya, 2017) as a dynamic of distinction within Ushuaia's urban space. Proof of this is that in both cases the developments had a perimeter fence, and the first of them even tried to become a gated community, something that the local management did not allow.

At the same time, the municipality encouraged the growth of the tourist industry by policies and initiatives that assisted private businesses, such as the low-cost land grants given to hotels. Within this structure, numerous five-star hotels were constructed. Additionally, in 1999, a private firm (Tranex) received 60 hectares of woodland next to the national park to create the "El Trencito del fin del Mundo" (The Little Train at the End of the World) tourism project. This concession was given to the town for 90 years without any kind of payment in exchange.

In the meantime, informality grew as a result of limited access to available land, a delay in the IPV's delivery of houses, and the high cost of private lots. Informality advanced on public lands not suitable for urbanization, mostly on the edges of the consolidated urban fabric, as well as in some urban interstices, as shown in Figure 6.15. These barriers to growth were represented by the Beagle Channel to the south, the National Park to the west, and the Andes Mountains to the north.

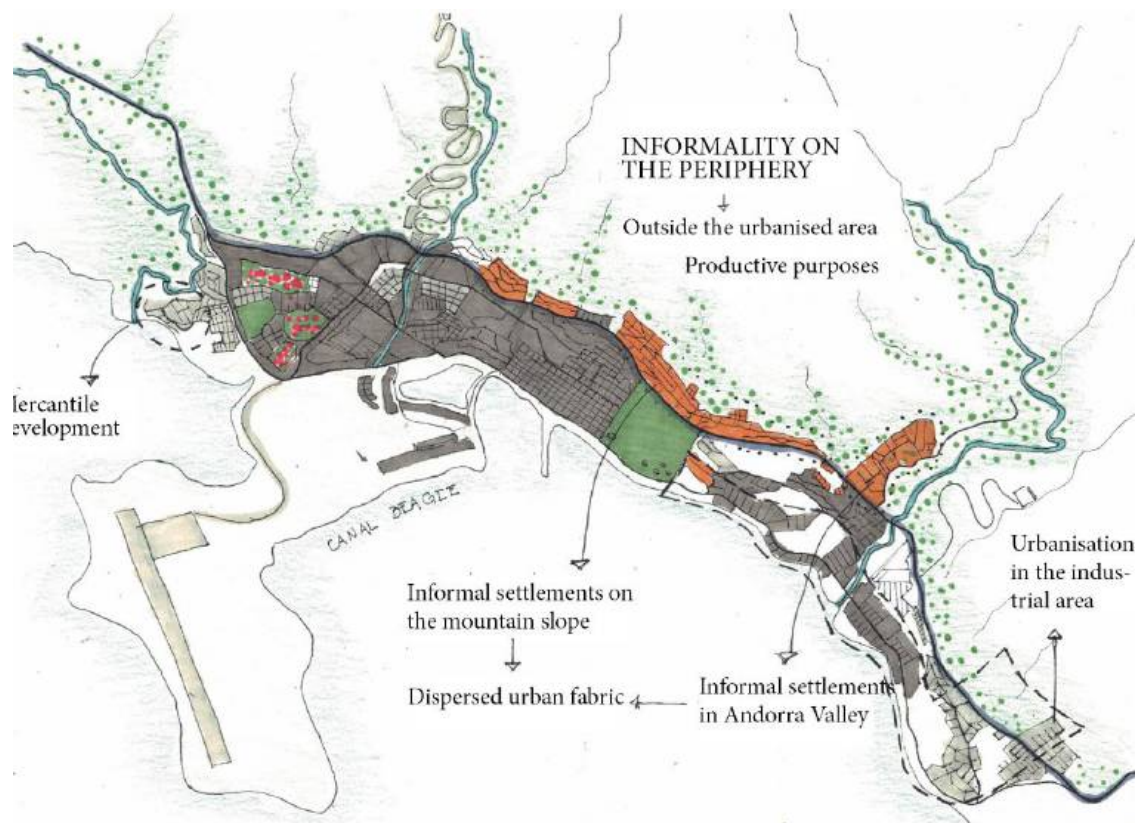


Figure 6.15: Urban informality in Ushuaia. Period 1992-2002. Source: Author's own work

In the case of the interstices, new settlements grew adjacent to the industries, in spaces with steep slopes. In the case of informality outside the urban fabric, this took two forms: on the one hand, some neighborhoods had to begin to be built on slopes, "climbing" the wooded mountainside to the north above the maximum elevation defined for urban development, while others moved into the Andorra valley. The latter sector had difficult habitability conditions due to the areas covered by wetlands and forests, in addition to lacking basic infrastructure and transportation services.

There are typological differences between the interstitial settlements and those that extended outside the urban fabric. The former seems to have originally responded to an urgent demand for habitat and, as a result, produced relatively densified spaces with small lots and precarious housing. In the second case, the informality in Andorra resulted from its occupation for productive enterprises that were not later carried out and, in this sense, the occupation pattern is quite dispersed and made up of large plots of land. With regard to informality on the mountainside, the occupation fitted middle class sectors, which legitimized the creation of the "Ecological" neighborhood's on the basis of a discourse centered on environmental care. Despite the fact that it fills a habitat demand gap, its constitution doesn't seem to be driven by a sense of urgency but rather by a unique sense of occupying space in relation to the rest of the city. The lots are sizable, have native trees, and have well-built homes.

It should be noted that both Andorra and Ecológico were collective initiatives that pursued a goal beyond meeting housing needs.

Regarding the policies that addressed the growth of new informal urbanizations at the beginning of the period, we observe prohibitive and/or restrictive policies, which changed towards the end of the decade, coinciding with the perspective of regularization and improvement of the settlements mentioned above.

According to the spatial analysis of spatial occupancy patterns, Figure 6.14 shows that between 1991 and 2002 largely residential urbanization accounted for 92.38% of output, while productive-industrial use only accounted for 7.61% during this deindustrialization period. Changes in occupancy patterns compared to the previous time period can be seen in relation to urbanization logics. The provincial state reduced its production of urban dwellings, which accounted for 23.55% of the space produced. In addition, with contributions of 1% and 4.5%, respectively, the national and municipal governments continued to have little direct influence on the expansion. One manner of state intervention that started to grow was that of the regularization of land ownership, which affected settlements from earlier decades and accounted for 10.25% of the expansion. Meanwhile, the predominant logic of expansion was informality, representing 40%, with an even greater proportional (and absolute) growth than in previous decades. This would prove that in Ushuaia's case, the growth of the settlements is not exclusively linked to industrial dynamic, but rather to other dynamics of space valuation. In this sense, we can also see that commercial logic produced 20.85% of the expansion.

Considering the occupancy patterns, Figure 6.16 indicates that the informal logic started to dominate in the north while the market generated its urbanizations in the periphery, moving east to west. The pre-existing city's interstitial areas were mostly inhabited on the basis of state logic (with the exception of the 640-home neighborhood located in the periphery to the east). Urban voids, which constituted 54% of the urbanized area at the time, continued to divide the city into three major sections.

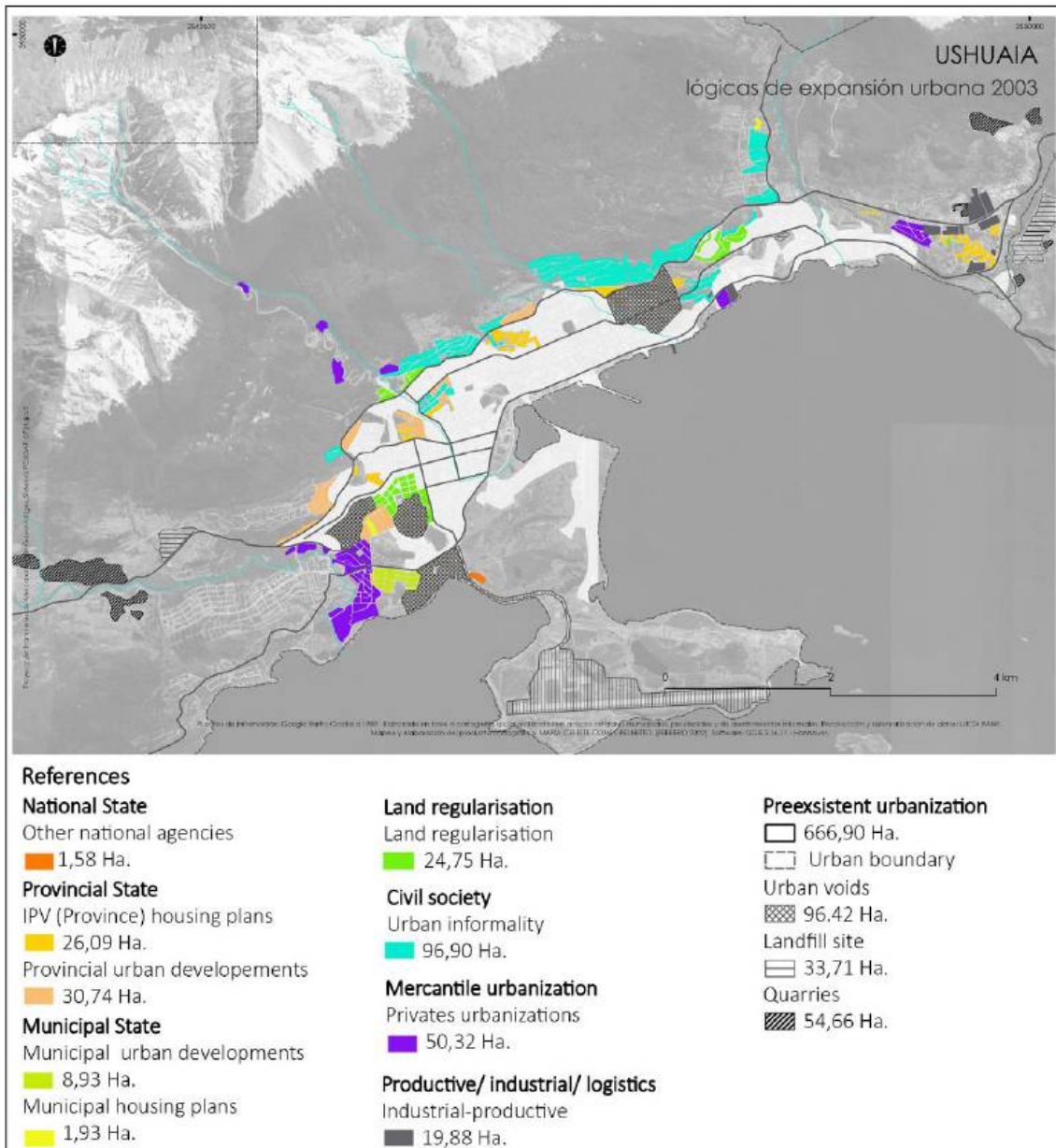


Figure 6.16: Logics of urban space production. Ushuaia, 2002. source: Author's own work

6.4.3- Space production in Río Grande (1991 - 2003)

Due to its concentrated production structure, which made it more susceptible to economic impacts, Río Grande was the Fuegian city that experienced the industrial crisis to the greatest extent between 1991 and 2003. Contrary to Ushuaia, Río Grande did not develop as a tourist destination or played a significant role in the provincial public administration from an urban perspective. In the absence of new economic dynamics, there was less migration and no new mercantile dynamics of urban space valorization emerged. For all of these reasons, expansion was different from that of the nearby city.

Although the issue of land availability started to emerge and would become critically important in the following decade, the State continued to dominate in the production of the city. On a provincial level, the Ministry of Public Works supported the development of the Airport Neighborhood on the last remaining parcels of public property next to Federico Echelaine Avenue. The redevelopment of the AGP Neighborhood on the northern bank of the Río Grande, previously occupied by settlements, was also completed. Additionally, as part of the provincialization process, public facilities were constructed to the north including the provincial road network, the police department, and the prison. Chacra II and Chacra IV neighborhoods, shown in Figure 6.17, are examples of multi-family housing developments that the IPV finished. In the Airport area, and the northern zone, duplex housing was also developed. By the time the Navy's vast urban emptiness and the airport void were filled, the housing complexes—primarily those of Chacra II and IV—had been established as areas outside of the urbanization.



Figure 6.17: Chacra IV" neighborhood, north of the city, multi-family high-rise complex. Source: Author's own record

With regard to Municipal government and in terms of planning, Municipal Ordinance No. 771 of 1995 established the boundaries of the municipal lands and divided the territory into three main areas: urban (uses associated with residential activity), suburban (non-extensive agricultural and livestock use, and urban services not compatible with residential activity), and rural (extensive primary activities). The City's Urban Planning Scheme (Municipal Ordinance No. 1258/2000), which had been the only planning instrument up to that point, was subsequently authorized in the year 2000. However, this scheme had been designed in 1990, which left a significant gap between the proposed urban planning and the actual city at the time of its approval 10 years later. A Municipal Department of Land Use (O.M. No. 1353/00) also started operating that year, ostensibly with the aim of making the Urban Planning Scheme's implementation effective.

Regarding the local government's function as a producer of habitat, neither new housing lots nor housing designs, nor alternate methods of habitat access, were encouraged throughout this decade. On the other hand, progress was made in the institutional support system, as in Ushuaia, to start responding to the demand for land. Municipal Ordinance No. 895/97¹⁷³ created the Municipal Land Directorate as the entity in charge of administering, controlling and managing the granting of public lands, and also established the requirements to be an applicant. Subsequently, tools were promoted that made it possible to know the potential demand for land (O.M. N° 1014/98). However, no progress was made in the production of lots.

One significant distinction from Ushuaia is that, after the IPV housing complexes were finished, the vast fiscal land reserves were exhausted. At that time, the private proprietors of the farms to the north of the industrial park and the *estancias* around the urban region owned (and still own) the land surrounding the urbanized area. However, unlike the following decade, when the industrial dynamics were revived, the commercial logic of city production did not expand during this time, at least not in terms of new urbanizations.

In relation to informal production in the city, Lobato (2017) following Pérez et al. (2015) argues that "until the mid-1990s the main mechanism of access to land involved the *de facto* occupation of a plot or lot, and then the introduction of improvements to it in order to request the permit for precarious occupation and adjudication." (y/n). In spite of this, we observe that informality decreased in comparison with the previous period, probably due to a lower intensity of population growth, as well as to the construction of new housing by the IPV.

The recently founded, *ad hoc* spaces, as depicted in Figure 6.18, were created on private property, largely on the southern bank of the Rio Grande, in what is known as the suburban area. As in the case of Andorra, in Ushuaia they were designed for primary production purposes, such as orchards or animal husbandry. An informal sector also grew up in front of the industrial park, occupied for production purposes, known as "Asociación de la Pequeña y Mediana Empresa de Agricultores" (Association of Small and Medium-sized Agricultural Businesses; APYMEMA for its acronym in Spanish).

¹⁷³ It should be emphasized that the ordinance refers to the land both in terms of its residential use as for its industrial and primary production use: "it is convenient to enact the laws that regulate the adjudication policy for the settlement of industries [...] in the Industrial Par, [...], as well as to create the regulatory framework for the granting of the plots intended for family housing and institutions" (considerations, 895/97). It stands out the priority sense that is granted to the industrial issue, even above the habitat issue.

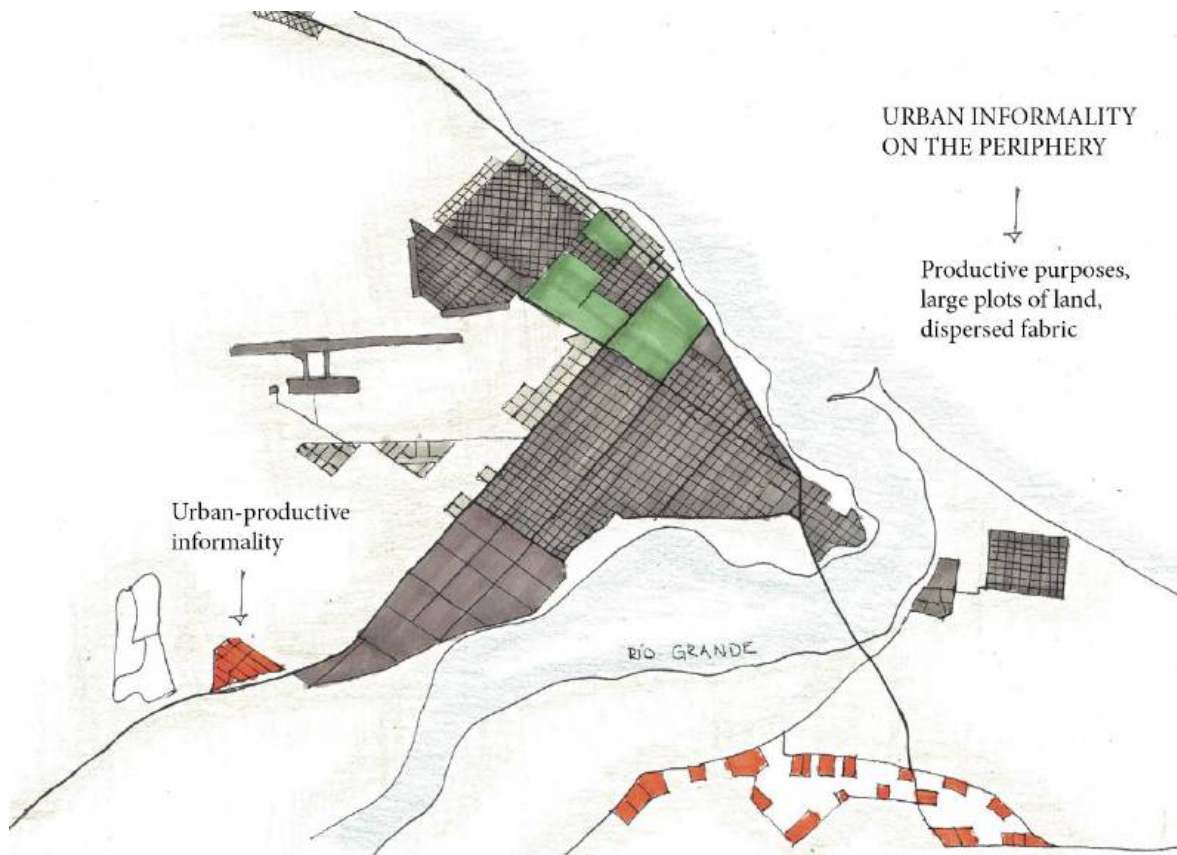


Figure 6.18: Urban informality in Río Grande. Period 1992- 2002. Source: Author's own work

Initially viewed as a labor option in the face of the high unemployment statistics of the 1990s, this type of settlement with a productive profile grew as a result of collective efforts. However, because of the harsh weather, they weren't substitutes for work but rather, and in the best of circumstances, focused on self-sufficiency. Typologically, they differ significantly from the spaces created *ad hoc* in earlier decades in that there were fewer families who occupied sizable plots of land (approximately 65 in the southern margin, according to a Producers' Association interview, and 45 in APYMEMA, according to their own survey).

In order to address informality, programs for the regularization of property titles for homes erected in the past were encouraged, especially in the southern edge areas of Barrios Reconquista, Aeroposta, and Cabo Peñas that had been developed as fraudulent lots (O.M. No 825/96 and 1710/02). Regularization and infrastructure improvement projects also began on the north bank, which would continue during the following decade. However, as in the case of the new settlements produced during these years, especially those located on the southern margin, they were not dealt with until the following decades.

In terms of spatial analysis, Figure 6.19 shows that during this time, residential space production accounted for 95.5% of total output, whereas the industrial-productive one fell to 4.5%.

The IPV's building of housing complexes had a significant impact on the logic of city production, which was dominated by the provincial state and accounted for 52.15% of the production of urban housing.

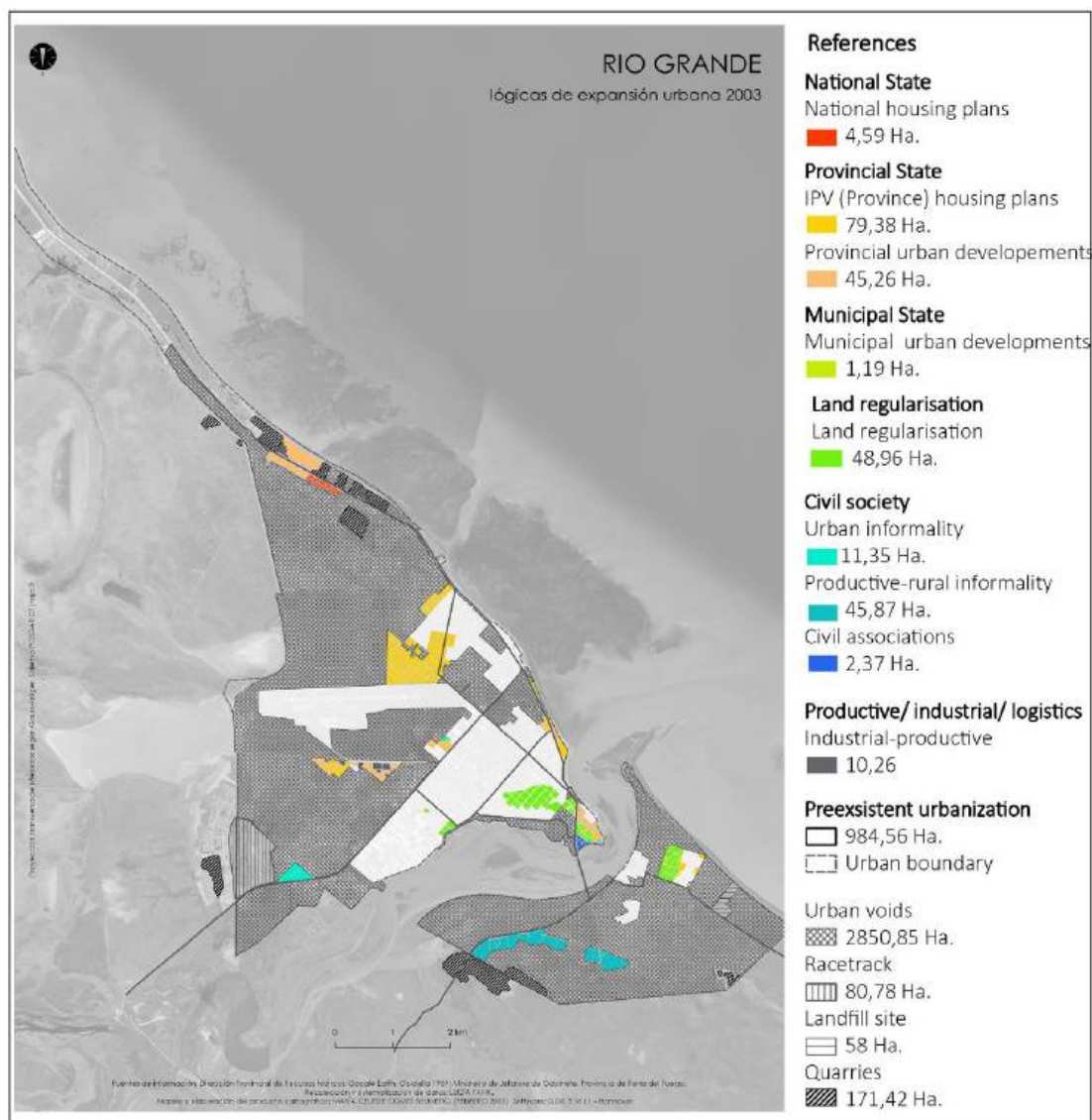


Figure 6.19: Logics of urban space production. Rio Grande, 2002. Source: Author's own work

Once again, the national and municipal governments had a low incidence in the city's growth, representing only 1.9% and 0.5% of the space produced. Property regularization was higher than in Ushuaia, representing 20.5%. Contrarily, informality accounted for 25% of the growth and took second place in the prevailing logic.

With regard to urban empty spaces, we see that these are equivalent to 72.3% of the area produced in the period, and in this sense, we can assert that land ownership began to determine the patterns of occupation of space. While the IPV-produced urbanization in the north began to take on

homogenous characteristics, on the south bank informality started to consolidate as a means of access to property, leading to the first urban distinctions between one side of the river and the other.

6.4.4- Comparative summary (1991-2003)

Therefore, we can notice differences in the USD of Ushuaia and Ro Grande during the period of 1991–2003 in response to the deindustrialization process, linked to two dynamics. On the one hand, there is a difference in the relationship that each city established with the productive dynamics. While within a framework of economic and industrial crisis Ushuaia turned to its administrative role and tourism, Río Grande became stagnant in productive terms. Although population growth was less rapid in both cities than it had been during the industrial period, Ushuaia continued to attract new residents and develop quickly, while in Rio Grande, urban growth and the dynamics of internal differentiation were less pronounced. On the other hand, in terms of space production, we can observe some similarities as well as various dynamics of differentiation in each of them. In both cities, the provincial state continued to play an important role in housing production. However, the process of provincialization and the transfer of land to the municipalities towards the middle of the decade, as well as the generalized crisis at the beginning of 2000, generated a decrease in the state housing supply.

A disconnection can be observed between the housing policies implemented by the IPV and those connected to urban planning, and said disconnection has led to housing complexes that are physically isolated from the rest of the city and positioned in the city's periphery. Although the municipal governments acquired greater involvement in institutional terms, as well as in their responsibilities with respect to urban growth and planning, in their role as producers, they did not achieve more than the bureaucratic structure to meet the demand for housing. All this had a certain impact on the growth of informality in both cities, despite the lower migratory intensity, which would generate even greater repercussions, as we will see in the following decade, with the new industrial dynamism.

We identify a very specific type of informality in both cities that developed as a result of the emergence of microbusinesses for primary production. Many times, they were unsuccessful, and new types of residential informality emerged as a result. The middle class was significantly responsible for the growth of informal settlements in Ushuaia that had an "environmental" outlook. In both cities, but especially in Rio Grande, this time period saw the emergence of the first informal social groups rooted in the city's long agricultural and cattle traditions.

Ushuaia was the target of a process of valorization linked to its landscape characteristics, which had various effects. Within an entirely neoliberal framework in Argentina, and with a marked retreat on the part of the State (at its various levels), new agents emerged in the production of Ushuaia's space,

which facilitated the dynamics of commercialization. The local State supported this process, and at the same time, it continued without offering new mechanisms for the new population to access habitat, which led to a rise in informality. While the provincial State continued to be strong in Río Grande, informality was the prevailing logic of the construction of space in Ushuaia in the face of economic advancement and State retreat.

Regarding the way in which informality was addressed by, we can note that whereas in Río Grande the State played a more tolerant role, in Ushuaia a prohibitive role predominated in terms of the creation of new settlements tied to the image of a tourist city. With regard to patterns of inequality, informal spaces continued to show worse housing conditions than the rest of the city, associated with the lack of service infrastructure. However, precarious conditions were lower than in previous decades. Spatially, in Ushuaia these patterns acquired a new and more marked configuration linked to a peripheral territorialization in the urban area of the new settlements.

6.5 New industrialization, new dynamics of space valorization associated with real estate speculation and tourism (2003-2015)

As we discussed in the last chapter, the neo-developmental policies implemented at national level since 2003 have led to a new economic recovery, which in Tierra del Fuego specifically has resulted in a new phase of industrialization. In Río Grande, the electronics industry once again positioned itself as the central activity of the city, and particularly from 2009 onwards it showed productive values similar to the boom of the eighties. In Ushuaia, factories were once more established (among them, New San, which created the most jobs in the Isla Grande), and at the same time, tourism kept growing thanks to a new international drive brought on by the favorable exchange rate. As a result, between 2001¹⁷⁴ and 2015, the population rose once more, rising by 59.6% in Río Grande and 49.6% in TDF (INDEC, 2022). The greater industrial maquiladora settlement in Río Grande, which, as we've already mentioned, creates a lot of jobs, is linked to the city's greater demographic increase.

It is noteworthy that the years 2010 and 2015 experienced the most growth, following the implementation of the Chapter 5 policies that boosted industrial activity (among them, the extension of the EEZ until 2023, the tax increase on imports of electronic products from third countries in 2009, and the promotion of new productive processes). Cities consequently faced significant changes once more.

Ushuaia expanded 752.11 ha between 2003 and 2015. This area was equivalent to 61% of the 2003 urban sprawl, as shown in Figure 6.20. Until 2010, the city grew approximately 345 ha in

¹⁷⁴ The 2001 value is considered as it is the official population data. Its validity is upheld for the purposes of this work, to the extent that in 2022 the population dynamic remained stagnant due to the severe crisis hitting the country and the province.

different directions and in a fragmented manner. To the west, it grew adjacent to the previous urban sprawl. It did so through scattered urban developments on the road to the National Park, and on the sea, from the opening of Los Ñires Avenue. Towards the northeast it grew within the Andorra Valley and on the mountain slope, surpassing the old urban limit that constituted Route 3. Due to the progress across forests, swamps, and former fertile areas, the layout in many circumstances was irregular. To the north, new hotel developments arose on the way to the Martial Glacier, while to the south, landfill works were carried out to reclaim land from the sea, consolidating the coastal area. To the east, adjacent to and inside the industrial park, small urban developments also arose. There was less expansion growth between 2010 and 2015 (330 ha). To the northeast it continued to advance on the mountainside, while to the west it continued to grow both on Route 3 and on the sea; also in intermediate sectors, poorly linked to the existing urban fabric. To the east, urban interstices were completed within the former Industrial Park, and new urban developments emerged that constituted new limits. We could say that the structuring axes of growth by expansion in this period were Los Ñires Avenue to the south, and Esteban Nicola Loncharich Street in Valle de Andorra and Route 3, at its east and west ends respectively.

Rio Grande's surface area expanded by 855.38 hectares between 2003 and 2015, which is a 67.5% rise from the city's 2003 surface area. It expanded by 330 ha between 2000 and 2010; however, the majority of that growth was concentrated in only two major directions: the west and the south. In all cases, the land was originally former farms still in private ownership, so the expansion was based on these owners' willingness to sell or urbanize. Due to this, it is possible to see the emergence of large urban vacuums, particularly to the west, which correspond to farms that have not yet been urbanized. To the west, the city grew along the layout of Route 3 and also along the road to the airport, while on the south bank of the river rural farms that were not considered part of the urban area began to be developed. Their design is closely tied to the former layout of the rural area, resulting in a discontinuous and disjointed fabric. With the new industrial incentives, there was a second spurt in growth between 2010 and 2015, reaching 604 ha. Proof of the industrial impact was the expansion of the Industrial Park to the west and the creation of a new industrial-logistic park to the north. At the same time, the construction of the west-north ring road was completed, which sought to prevent trucks from entering the city and also represented the limit of the urban space. After that, the city expanded to the north with a dispersed residential fabric in areas along Route No. 3, while to the west the route and the new ring road (which was eventually supplanted by the expansion) served as the city's main driving forces. The most significant development occurred, though, on the river's southern bank.

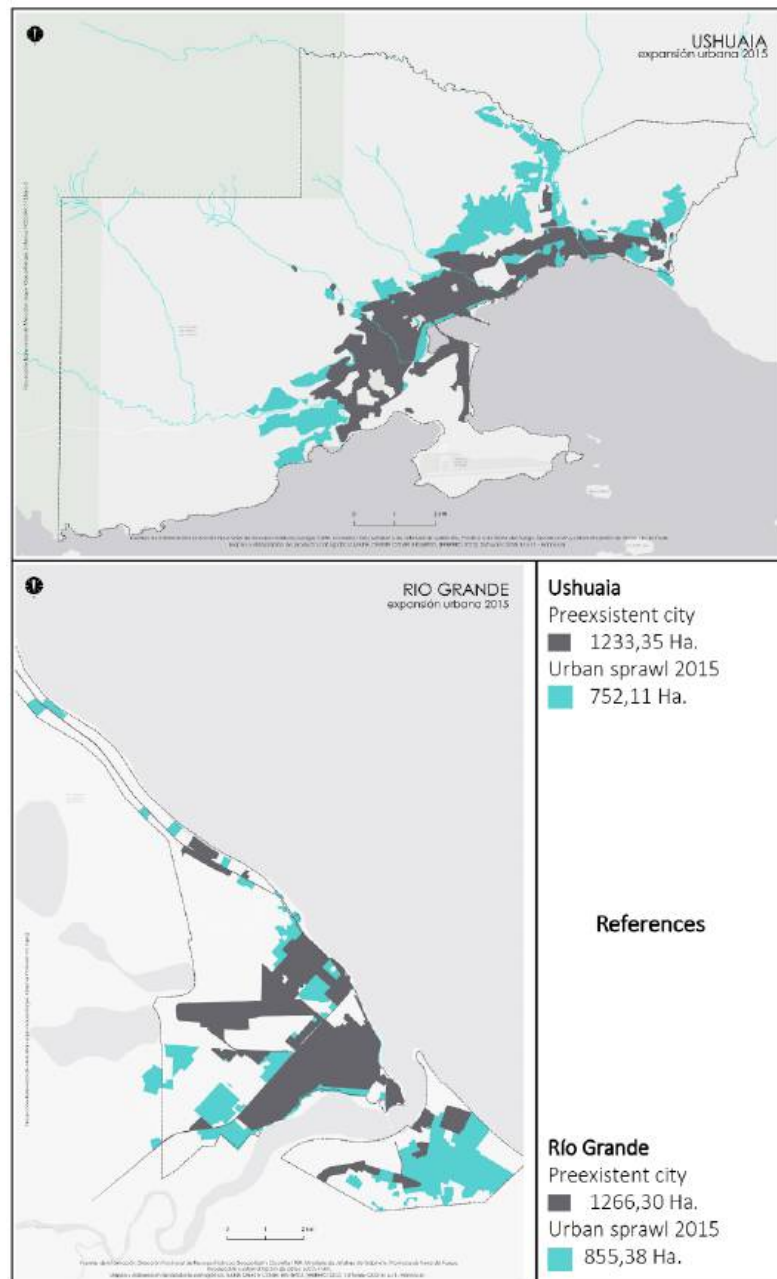


Figure 6.20: Urban expansion of Ushuaia and Río Grande. Period 2003- 2015. Source: Author's own work

It should be pointed out that during this period there was a new process of high-rise growth in the central areas of both cities, which we understand responds to a process of "renewal" (Smith, 1996,2012) of urban centers, tied to real estate speculation.

6.5.1- Conditions of access to housing in Tierra del Fuego and the role of the State (2003 - 2015).

As we previously stated, a new growing population brought on by reindustrialization from 2003 onwards resulted in a significant demand for habitat in Tierra del Fuego. However, the first years

of this period found the public administrations, both national, provincial and municipal, in full reconstruction after the biggest economic crisis in Argentina's history. FONAVI was almost completely defunded¹⁷⁵, which led to a low production of state housing by the IPVs at the national level until 2004 (Del Río, 2012). In addition to the complex general economic situation, housing production was limited by the amount of land made available by the agency (IPV Note No. 462/2008). As a result of this situation until that year only 400 houses were produced in Tierra del Fuego, 219 in Ushuaia and 180 in Río Grande (Figure 6.21).

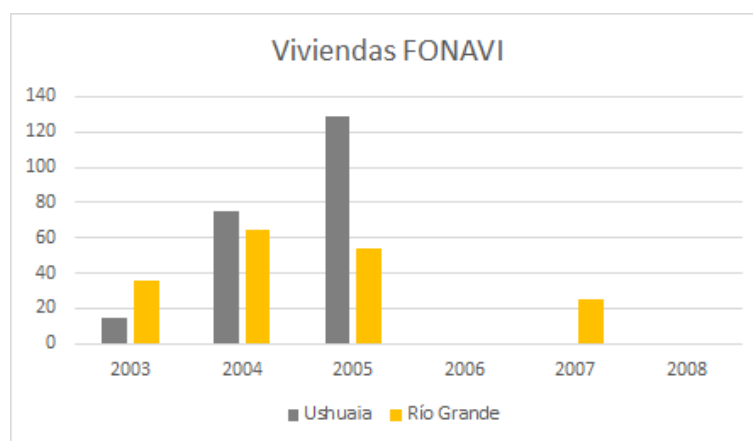


Figure 6.21: Construction of FONAVI housing in TDF by locality. Period 2003-2008. Source: Author's own work based on IPV

At the same time, and starting in 2005, a new set of housing policies began to be advocated in TDF, concurrent with a new Federal Housing Policy (PFV) at the national level, which would have its correlative in a significant housing production towards the end of the decade. Beginning with Néstor Kirchner's presidency (2003–2007), the State once more assumed a prominent position, interfering in the economy and generating activity through public works. In this context, the PFV proposed to generate employment and, at the same time, to meet the housing demand of low-income families by subsidizing the mass production of housing¹⁷⁶. In this case, and in contrast to the previous government, through programs financed by the national government's own resources¹⁷⁷. In order to give housing

¹⁷⁵ A criticism to FONAVI had to do with its procyclical behaviour as, historically, it shrank during economic crises, going against its goals (Ministry of Economy and Production, 2007).

¹⁷⁶ PFV suggested three courses of action, seeking to “comprehensively address the housing problem” (Del Río, 2012). The first one consisted in strengthening national housing government agencies with schemes aimed at habitat improvements. The second one had to do with a transverse and sectorial state articulation. The third one sought to strengthen the SFV by increasing FONAVI resources and turning activities more operative through the IPVs. (SDUV, 2008).

¹⁷⁷ These started to emerge at the end of Convertibility with a positive trade balance and with new retentions to imports. By contrast, in federal programmes funds ceased to be automatic transfers and relied on the approved projects according to guidelines regarding costs and house sizes, besides demanding from IPVs land and infrastructure works. To that end, FONAVI was used in many cases and that affected its economy and open the game for social allowances on the basis of political agreements. (Barreto, 2012, 2017; Palero and Lentini, 2015).

production a fresh start, non-reimbursable resources were handed to the provinces. As a result, "turnkey" construction was resumed, and a number of new housing schemes were introduced that aimed to diversify the supply in response to a variety of requests. These programs offered varied levels of inter-agency and sectoral articulation, serviced different target populations, and used different managerial philosophies.

A variety of housing programs were used in the case of TDF. The IPV constructed 1,200 houses as part of the Federal Housing Construction Program (Agreement No. 3042/04) and then 5,000 houses through the Federal Pluriannual Housing Construction Program (Agreement No. 3947/05). Additionally, it began implementing the Federal Sub-Program for the Improvement of Urban Habitat, Infrastructure, and Complementary Works (Agreement No. 1547/05, Reg. Gov. 10601/05), through which it opened streets, laid services, and constructed 2,980 housing solutions, including both houses and lots with services. The Federal Housing Improvement Program "Mejor Vivir" (Agreement No. 3044/04, Resolution 273/04) began to be applied to improve housing, while new policies for the integral improvement of popular settlements continued and emerged. The main ones were the National Program for Neighborhood Improvement (Programa Nacional de Mejoramiento de Barrios¹⁷⁸ by its Spanish acronym, PROMEBA), initiated at national level in 1997 and subsequently the Federal Subprogram for the Urbanization of Slums and Precarious Settlements (note 462/08). An important issue to highlight is that the policies applied by the provincial government were mainly for housing production, but not for urban land. Nor did the IPV provide individual loans for self-construction due to lack of financial availability.

Table 6.11 summarizes the programs carried out by the IPV in TDF, between 2003 and 2015, within the framework of the Federal Housing Plan.

Table 6.11: Housing programs implemented by the IPV in Ushuaia and Río Grande. Period 2003- 2015

<i>Program</i>	<i>Ushuaia</i>	<i>Río Grande</i>
<i>Policies for the generation of new housing solutions (housing, serviced lots).</i>		
Federal Housing Construction Program (PFCV)	New homes in urbanization Pipo	New homes in Chacra 13
Multi-Year Federal Housing Construction Program (PFPCV)	New homes in urbanization Pipo	New homes in Chacra 13
Federal Sub-Program for Urban Habitat Improvement (PFMHU)	Permitted performing services in the Río Pipo urbanization.	

¹⁷⁸ As PROMEBA operates in a decentralized manner, Executive Units were created for its operation both at Province Level (UEP) as Municipal (UEM), which were in charge of developing and carrying out the projects.

Existing neighbourhood attention policies (formal and informal)

PROMEBA	Kaupen Neighbourhood and the first occupied Andorra , of 64 Ha	B Cabo Peña, Mirador, Argentino and Aeroposta. Infrastructure, equipment and 60 humid cores
Sub Federal Program for the Urbanization of Slums and Precarious Settlements (SPFUVA)		Intervention in Margen Sur, including the construction of 180 housing units.
Federal Housing Improvement Program "Mejor Vivir" (Better Living) (PFMV)	100 housing solutions	
Federal Housing Solidarity Program (PFSH)		Margen Sur

Source: own work based on IPV reports (2008) and interviews (E.9, 24/3/2018, 6/6/2018; E.7, 4/3/2018; E.10, 20/3/2022)

Towards the end of the period, the national government began to intervene directly in the demand for housing with the Argentine Credit Program (PROCEAR), which was aimed at the middle class and consisted of loans from the BHN for the construction or acquisition of housing at subsidized rates (Fernández Wagner, 2015). In TDF, this program was applied through two lines: the first, for those who owned their own land, as an individual credit for housing construction; the second, for those who did not have land, as urban development. Thus, up to 2015, 382 individual loans were granted, 101 of them in Río Grande and 281 in Ushuaia. In the case of urban developments, 138 housing units were built in Río Grande and 462 in Ushuaia. In both cases, they were carried out on lands administered by the Agency for the Administration of State Assets (AABE), in urban vacancies within the urban grid¹⁷⁹. However, both the timing of land transfer and execution caused the housing units to be delivered only in the following period, starting in 2016 and under a new financing scheme.

In short, given the years of inaction brought on by the national crisis and the scarcity of land, the demand for housing far surpassed the State's ability to supply it. The state offer began to be an active policy only in 2009/ 2010; in order to be a beneficiary, conditions were established that did not meet the needs of the new migrants, among them, a minimum of four years of residence in TDF¹⁸⁰. Added to this, the bureaucratic times and the execution times themselves (in addition to the interruptions produced by changes in political management), seem to have been the main reasons why the supply was disconnected from the needs of the new population (E.7, 4/3/2018). For all of the

¹⁷⁹ At the national level and by Decree No. 902/2012, the transfer of assets from ABBE to the Public Trust Fund to PROCREAR was enabled. In Río Grande, the transfer of land took place in 2014, and in Ushuaia in 2015.

¹⁸⁰ In addition, the housing allocation system at the provincial level determines that irregular land occupants cannot be beneficiaries, unless they have signed an agreement to dismantle their shacks.

above, we could assert that, once again, the productive dynamics and, particularly, the migration associated with the industry were disarticulated from the habitat policy.

Another consequence of economic growth, mainly associated with industrial dynamics, was a strong growth in construction driven by the private sector. Figure 6.22 shows the area authorized for new construction and expansions in Ushuaia and Río Grande in the formal manner. This was higher in the latter city, with 2011, 2012 and 2013 being the years of greatest growth coinciding with the industrial boom.

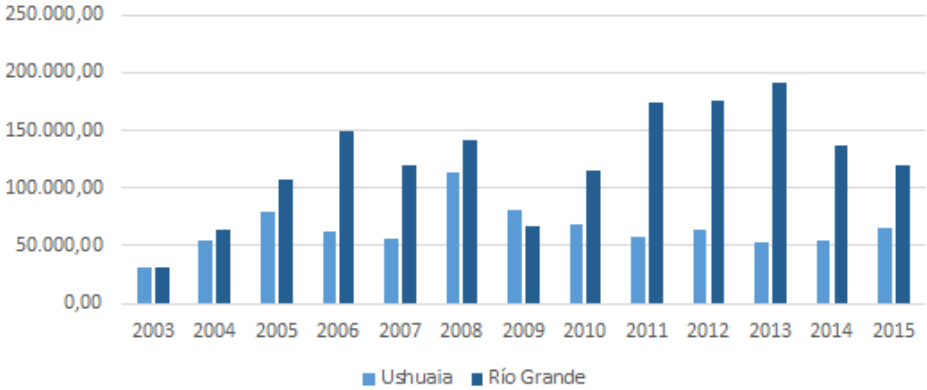


Figure 6.22: Surface authorized for new constructions and extensions (m2). Ushuaia and Río Grande. Period 2003-2015. Source: Author’s own work based on data from Provincial Directorate of Statistics and Censuses, 2021

When we look at its composition (Figures 6.23 and 6.24), we can see that home construction predominated in both situations, primarily in Ushuaia. Between 2003 and 2009, new construction for hotels and lodging was also observed in both cases, although mostly in Ushuaia. While there is little space designated for tourism in Rio Grande, compared to Ushuaia, there has been a major growth in the space designated for business, industry, and storage facilities without a designated function, most likely for logistics.

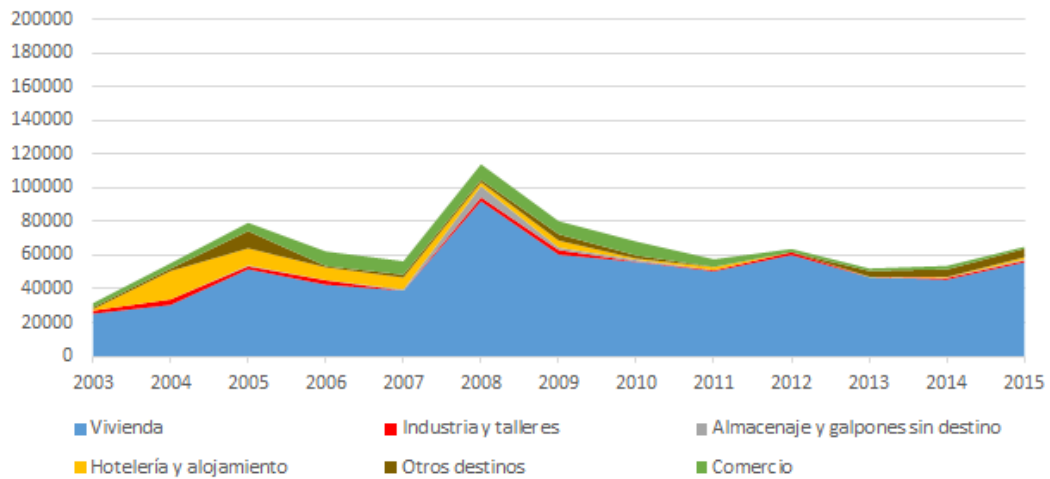


Figure 6.23: Surface authorized for construction according to purpose (m2), Ushuaia. Period 2003-2015. Source: Author's own work based on data from the Provincial Directorate of Statistics and Censuses, 2021

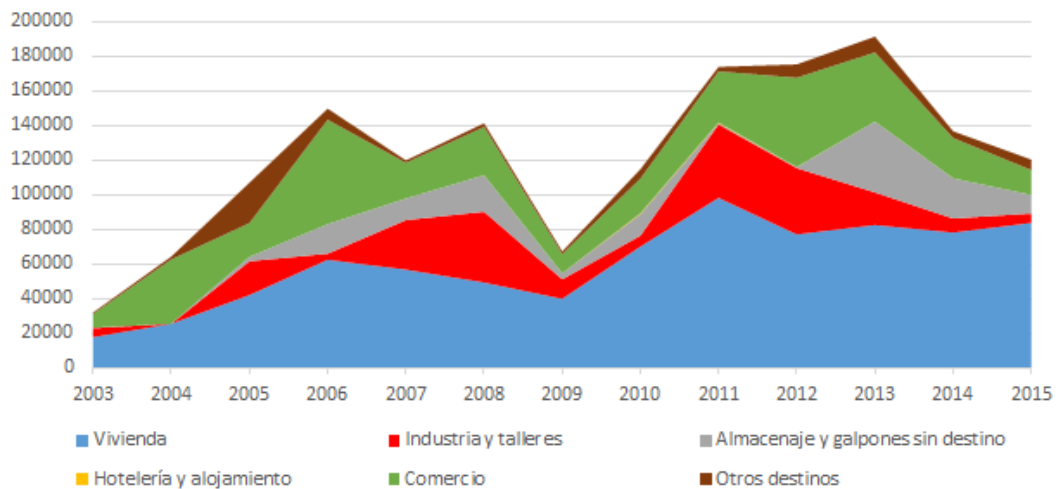


Figure 6.24: Area authorized for construction according to purpose (m2), Río Grande. Period 2003-2015. Source: Author's own work based on data from Provincial Directorate of Statistics and Censuses, 2021

Although commercial urban production had been increasing in Ushuaia since the mid-1990s, a new dynamic of real estate speculation (Barreto, 2017)¹⁸¹, arose in both towns in 2003, using land and real estate as objects of accumulation and valuation. The beginning of a process of land and housing commodification stands out (Pérez et al., 2014, Lobato, 2017), in the context of a shortage of non-commodified available supply.

¹⁸¹ As we pointed out previously, the protagonist role of real estate capital grows after the cyclical crises of capital, altering the urban configuration: "a landscape that is generally constructed, destroyed and reconstructed in times of crisis and restructuring" (Cuenya, 2016).

Access to housing became a major issue at the provincial level due to a new decoupling between the State's time and migrations, added to the expanding speculative dynamics. This was reflected in the Housing Emergency Law (746/07) and the Urban Housing Emergency Law (766/08), which with successive extensions were in force between 2007 and 2019. These regulations were created, among other things, to prevent evictions and expulsions from informal settlements and to put the State in charge of creating urban land and housing options.

Solutions were slow in coming and would not be able to supply the new population. In this context, informal settlements grew again and housing conditions worsened once more. Analysing Table 6.12, regarding tenure conditions in 2010, we see that while land and housing owners reach 67.7% in the national average, the provincial value is 55.7%, the lowest percentage for this category at the national level. Irregular tenancy increased again to 16.6%, while at the national level it fell to 9.2%. Renters also increased, from 15.8% in the previous period to 25.5%, exceeding the national average by 9 points. Unfortunately, there are no data available for 2015; it is disappointing because it was the year with the largest population growth during the 2010–2015 subperiod. In the section that follows, we will attempt to discuss this issue in each city using additional sources and qualitative geographical analysis.

Table 6.12: Households by type of housing tenure. TDF and Country Totals, 2010

<i>Type of tenure</i>	<i>Tierra del Fuego</i>	<i>Country Totals</i>
Total households *	38,956 (100 %)	12,171,675 (100 %)
Ownership of house and land	21,703 (55.7 %)	8,240,293 (67.7 %)
Home ownership only	3,842 (9.9 %)	539,629 (4.4 %)
Tenant	9,858 (25.3 %)	1,960,676 (16.1 %)
Loan occupancy	1,750 (4.5 %)	844,694 (6.9 %)
Occupation by relationship of dependency	956 (2.4 %)	242,487 (2 %)
Other categories	851 (2.2 %)	343,896 (2.8 %)

Source: Author's own work based on INDEC

Regarding housing conditions, we observe in Tables 6.13 and 6.14 that in 2010, the unrecoverable deficit housing and the quantitative deficit remained stable with respect to the previous period. However, as mentioned above, it is assumed that housing conditions worsened between 2010 and 2015, with the industrialization boom.

Table 6.13: Households by housing quality, 2010 in TDF and the country total

<i>Household by type of housing</i>	<i>Tierra del Fuego</i>	<i>Country totals</i>
Total	36,689 (100 %)	11,317,507 (100 %)
Non-substandard housing	3,010 (84.2 %)	9,436,632 (83.3 %)
Unrecoverable substandard housing	3,986 (1.,3 %)	400,282 (3.5 %)
Recoverable substandard housing	1,693 (4.6 %)	1,480,593 (13 %)

Source: Author's own work based on INDEC

Table 6.14: Quantitative housing deficit. TDF and Country Total, 2010

<i>Quantitative Deficit</i>	<i>Tierra del Fuego</i>	<i>Country totals</i>
Total	36,689 (100 %)	11,317,507 (100%)
More than one household per dwelling	2,267	854,168
Unrecoverable housing	3,986	400,282
Quantitative housing deficit	6,253 (17%)	1,254,450 (8.9 %)

Source: Author's own work based on INDEC

We will now examine the production of urban space in Ushuaia and Rio Grande taking into account the reindustrialization process, the housing policy at the provincial level, the expansion of the real estate market, and informality at the provincial level.

6.5.2- Space production in Ushuaia (2003 - 2015)

Both industrial and tourist dynamics contributed to Ushuaia's steady growth between 2003 and 2015. After the latest industrial revival initiatives were implemented in 2010, the demographic effects of reindustrialization would become more pronounced. While industry had a greater impact on migration during those years, due to the amount of intensive labour it required, tourism was a key factor in the deepening of inequalities between the commodified city and the decommodified one, which had been incipient up to that time.

As we shall see, the State lost its prominent position in the production of space, and its participation was smaller than that carried out by the logics of the market and informality, the latter of which predominated throughout this time. Due to the size of the intervention, the Río Pipo urbanization, which was created at the provincial level, can be regarded as the most ambitious public urban project in Ushuaia. Although this urbanization had been projected in 2000, its execution began

in 2005 and would be extended in different stages until today. For its realization, and in view of the lack of its own land, the IPV purchased 300 ha of land located towards the west of the city that belonged to the former Estancia Preto (E.9, 6/6/2018). The acquisition was made through the cancellation of debt that the original owner had with the Bank of Tierra del Fuego. Since it was rural land, urbanization projects had to be carried out first, generating new urban indicators considering environmental impacts and executing large infrastructure works. However, the urbanization was surrounded by rural land, and in this sense, weakly linked to the rest of the consolidated urban fabric. The majority of the housing produced by the provincial government up until this point has been centred in this sector. The housing programs that were put in place during each of the three periods of urbanization altered or overlapped. Some of them, like the homes constructed under the Federal Plan, were targeted towards low-income communities. Others, like the Plan Arraigo Joven, a component of the Pluriannual Federal Program, targeted middle-income groups, in particular the young people listed in the provincial housing registry. As seen in Figure 6.25, the typologies included both single-family homes and duplexes as well as multi-family housing complexes. Although a precise figure is unavailable, it is estimated that up until 2015 2,300 homes were constructed in this urbanization (IPV report, 2008).



Figure 6.25: “Río Pipo” neighbourhood, in the west of the city, multifamily high-rise housing (above) and duplex dwellings (below). Source: own record

The municipal government took action as a planner, as a city producer, as a market facilitator and also in dealing with (and repressing) informal settlements. In terms of planning, two main policies were implemented in 2003: the Urban Environmental Development Plan (PDUA, for its Spanish acronym)

and the Strategic Urban Plan (PUE, for its Spanish acronym). In their diagnoses, both instruments show that the State has been lagging behind the need for habitat since the beginning of industrialization¹⁸². In addition, the PDUA mentions two issues that were key to the growth of informality during times of large influxes of migrants. On the one hand, the scarce supply and high rental prices and, on the other hand, the requirement of two years of residence in the city to be eligible for a state housing solution. Faced with a market that was difficult to access and a State with requirements that were too rigid for the newly arrived population, informality spread as a massive practice in the city's production. An interesting issue that appears later in this document is the recognition of a transformation in the subjects that inhabit informality. In this regard, it says that this demand "went from being configured by the middle class and recently arrived professionals, to being constituted mainly from sectors expelled from the formal labour market that cannot sustain rents and migrants of low labour qualification not incorporated to the formal economy". It also states that 10% were living in highly precarious housing conditions.

Despite the fact that the habitat problem is recognized, and the dynamics of informal expansion are already in place, the solutions suggested afterwards are far from taking this issue into account when urban planning. The PDUA proposed structural axes to delineate non-urbanizable areas, consolidate urban vacuums, and put boundaries to expansion. It made a distinction between structural and local projects, although they are put forth in the context of environmental requalification and densification rather than in relation to habitat in terms of access.

The PUE, in line with the PDUA, directed urban policies towards the consolidation and requalification of the landscape with the goal of "building a city that consolidates its tourism and Antarctic services profile, ordering its growth, urban image and economic and environmental sustainability." The majority of the projects suggested in both instruments have already been finished in the city centre, including the waterfront expansion, San Martín Avenue improvements, and the restoration of historic homes, all of which are closely related to the revitalization of this area for tourism. Neither of the two plans anticipated the subsequent industrial revival and, consequently, the new expansion process that would take place in the following years. With the great new migration, the problem of habitat and the growth of settlements once again brought the issue of finding solutions to the centre of the debate. Regarding the municipal government as a producer, it is worth remembering that the housing demand registry was closed until 2006, which meant that no solutions were generated until that time, despite the recognition of the needs. With the reopening in 2006 (O.M. 3131/2006), the Municipal Program for the Creation of Urban Land for the urbanization of the Andorra Valley was promoted, covering 64 hectares and providing solutions to approximately 1000 families (O.M. 3085/06). However, it only accepted people who lived in unofficial colonies as applicants. The latter

¹⁸² According to the Urban Development Plan, the territorial and municipal governments showed little or no participation in defining urbanization criteria (2003).

program developed the O.M. 3178/06 system of individual access to public property and the system of access to housing by collective self-management. They proposed criteria for land allocation and made it possible to deliver plots without utilities to various cooperatives and unions in the city (Finck et al., 2016). For at-risk families, "housing settlement" modules (O.M. 3376/06) were also implemented. They were the only municipal housing construction policy at the time, despite being advertised as having a temporary nature.

Subsequently, within the framework of the housing emergency at the provincial level, the Integral Housing Plan was launched in 2007, which lasted until 2015. The plan included four main axes: generating urban land; intervening in informal settlements; building municipal housing; and securing financing for the first three axes. In order to do this, it suggested three new urban developments: Alakalufes (which would be finished in the following period), Barrancas del Pipo, and a third development in the already-informally occupied Andorra sector to the northeast.

At the same time, the State promoted the growth of new neighbourhoods aimed directly at the elitization of certain sectors of the city. The approval of the first gated community, known as "Los Cauquenes," which is situated to the west on the Beagle Channel, represents a clear policy in this regard. Given the shifts in land use from rural to urban that were frequently required, no urban surplus value instruments were promoted to benefit in any way from the expansion of private housing constructions. The promotion of international events helped to solidify Ushuaia as a tourist destination while other efforts were taken to boost urban marketing (Alcaráz, 2016).

The market, on the other hand, began to grow vertiginously in the period under study. Several private housing developments were built, both to the west and at the eastern end of the city, on previously rural lands. These developments were sold as "distinctive" the fact that they were located in exclusive landscaped surroundings, with excellent views, in addition to the promise of having all the services available in a short period of time (a matter that was not always fulfilled). In many cases, the State itself ended up delivering the services directly or through its own urbanizations, with no payment or other kind of compensation (E.9, 24/3/2018). In this way, the landowners had a monopoly over the rent from private urbanizations. Numerous urbanizations were driven by patrimonial owners (Barrio Casas del Sur, Mirador Fernández), but since 2010, investor owners have also noticed growth as a result of the commercialization of expansive land parcels (e.g., Barrio Altos de Oshowia).

On the other hand, and in the absence of housing offers, the commercial logic for greater densification of existing lots began to grow. The different interviews conducted with both public stakeholders and real estate agents (E. 13, 9/12/18; E. 14, 9/12/18; E.42, 15/12/18; E.43, 16/12/18), testify that the traditional 600m² plots made possible the construction of small housing complexes or duplexes in spaces that previously had only one dwelling. However, this type of market was mostly oriented to renting, considering that the dollarized prices to access new housing were inaccessible for most of the population (E.16, 04/22/17; E.36, 15/14/18; E.24, 8/12/2015; E.21, 6/26/21). Finally, the

market was also oriented to the production of new large hotels in strategic locations such as mountain slopes or panoramic points, and also to new small-scale tourism enterprises.

In this context, the timing of housing production by the IPV, as well as the lack of foresight on the part of the municipal government regarding the latest migratory process, gave way to the market as the main stakeholder in defining land prices and rents. This led to an increase in real estate speculation: the prices of land and housing built in Ushuaia between 2012 and 2015 could be compared to those of the most expensive neighborhoods in Buenos Aires city centre (E.43, 16/12/18). At the same time, the restrictive conditions for access to the rental market left a large part of the working population in industry and construction excluded, insofar as in many cases stable labor contracts were required, while the aforementioned sectors, as we have seen, showed flexible contracts of only a few months.

In light of this situation and the lack of affordable solutions, informality started to increase progressively from 2003 and significantly from 2006 onward. Geographically, the settlements grew on mountain slopes, over peat bogs, and through ravines due to the boundaries imposed by private holdings, the National Park, mountain ranges to the east and north, and the sea to the south. Three major sectors of new informal urbanization can be distinguished, with significant growth dynamics between 2006 and 2015 (Figure 6.26). The first of them to be urbanized was Escondido, which is located to the northwest on the mountainside in a part of the communal forest called sector K and D, adjacent to the Kaupen neighbourhood, which was regularized at that time. It is integrated by the neighborhoods Escondido, Obrero, Altos de la Cumbre, El Mirador, Mirador Ushuaia, El Cañadón, Esperanza; the slope of the Dos Banderas hill. This sector began to grow gradually in the early 2000s, while the process accelerated in 2006 with the organized takeovers. The second sector of informal urbanization was the slope of Cerro Dos Banderas. Here the settlements advanced over the forest to the north of the El Ecológico neighbourhood (also informal but from the previous decade). Its greatest expansion began in 2009, in line with the industrial dynamics. It is composed of the settlements of La Cima, Dos Banderas, Las Raíces, Sector Raíces 4. The third sector grew in the Andorra Valley as a continuation of the settlements of previous decades, advancing gradually and steadily over the peatlands and climbing the mountain. It is made up of the settlements of Santa Rosa, Pasaje Peniel, Bajada los Leñadores, Bajada los Maestros, Las Reinas, Itatí, La Encantada, and Cuesta del Valle. Between 2013 and 2015, the Provincial Executing Unit conducted a census, counting 339 families in Andorra (resolution 349/2013), 684 families in the K and D sector, and 2,314 persons overall. Also, although to a lesser extent, neighborhoods grew in urban interstices difficult for urbanization. Such is the case of the settlements located in the industrial zone, called 11 de Noviembre, la Bolsita and U.

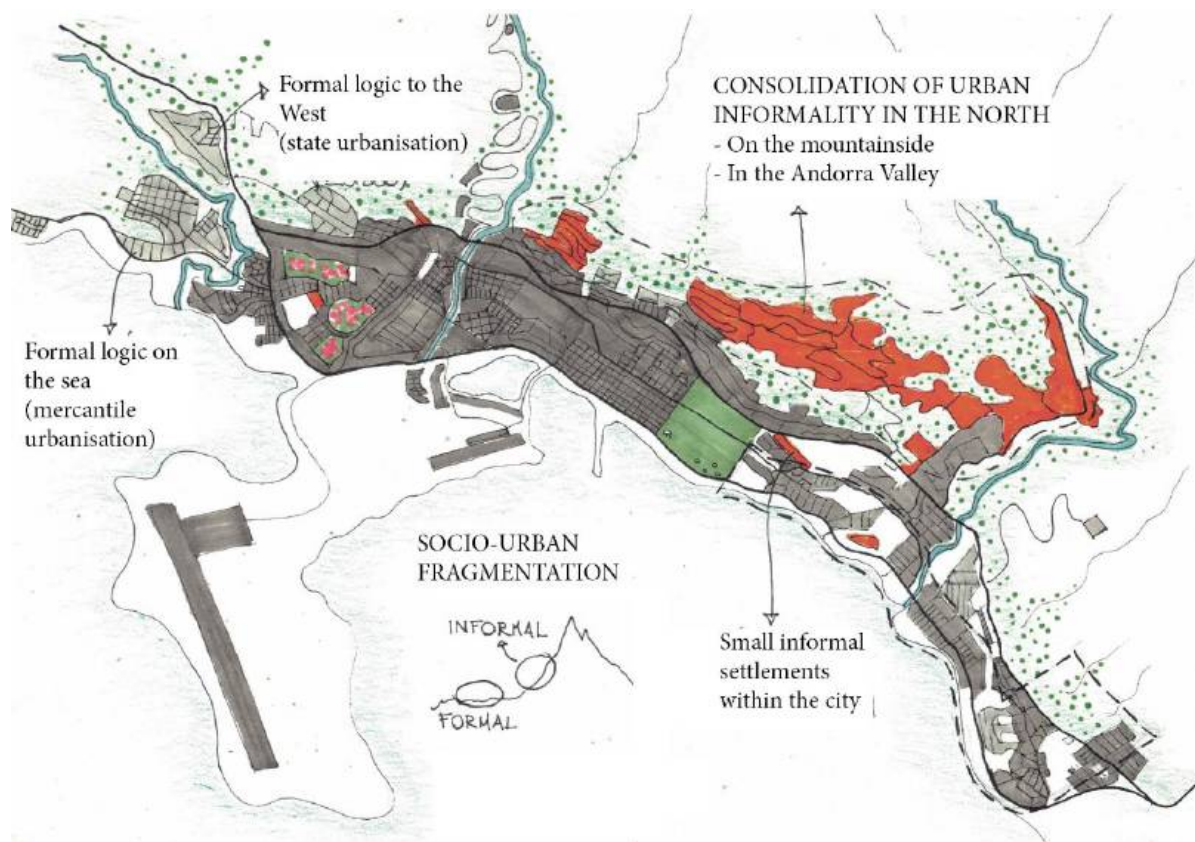


Figure 6.26: Informality in Ushuaia. Period 2003- 2015. Source: own elaboration

Self-management practices are exhibited in the settlements of these years through the emergence of several social organizations. The Urban Social Forum (FSU, for its Spanish acronym) in Ushuaia, which was founded after 139 families occupied public lands on forested mountain slopes, is used as an example (Alcaraz, 2015). The FSU directly influenced the political decision to declare the Urban Housing and Environmental Emergency Law. (2007).

There are major typological differences within the informality of the period. El Escondido and the settlements in urban interstices occupied a small area due to the steep slopes where they are located and have a highly densified fabric of small plots. The Dos Bandera and Andorra sectors, on the other hand, occupied large areas of land on the valley and on less steep slopes, and have a dispersed fabric.

In both cases, whether because of the distance from the city or the challenging accessibility conditions, these areas started to define significant conditions of socio-spatial exclusion while new instances of urban-housing vulnerability emerged. A process of differentiation of "two cities" began, which was identified in the interviews conducted with state employees and inhabitants of the settlements (E.18, 12/8/15; E.31, 28/11/16; E.12, 24/4/17): the city "below", with services and urban facilities, and the city "above", in which time is counted in winters, due to the harshness that these

present in terrible living conditions. A municipal official acknowledged this during a combined tour of the Dos Banderas hill villages:

The water here comes from the streams [...] It is not the same living in San Martín street, with all the services, as living up here without services, and on top of that, with a climate that surely drops two or three degrees. In the coastal area there are thirty days of frost a year and here, forty-five. The snow starts to freeze a month before and then the thaw lasts another month, so if you have a strong winter you could have five or six months with frozen ground. The machines don't go through, they cannot get into clean. [...] People have been making their homeland in some sense and have gone up to live in places that are impossible [to live in]... They realize over time how difficult it is to live up here, or maybe they don't even realize it because maybe the guy came from the north and the first house he built and the only one he lived in was that one, he doesn't know that living here is much more difficult". Interview conducted as part of a field visit, April 2017. (E.12. (E.12, 24/4/17)

In addition to environmental concerns, segregation also spread into the social sphere as a result of the media's encouragement of a discriminating discourse among citizens of the official city that singled out those who lived in settlements (Alcaraz, 2015; Pérez et al., 2015).

The State adopted different approaches to informality depending on the time period; for the older settlements, the policies were ones of regularization and tolerance, while for the newer settlements, they were ones of intolerance and repression. In the first case, existing situations were regularized, such as the Barrio Kaupen, the Bosquecito, the Cantera and the first sector of occupation of Andorra, of 64 ha. This was done through PROMEBA; the Provincial Executing Unit (UEP) and the Municipal Executing Unit (UEM) were the agencies in charge of the process. Also, Municipal Decree No. 624/06 made it possible to allocate land for the temporary relocation of populations in Andorra. The land, which previously had a productive character, became urban, and thus became the object of speculation by former property owners. They began to encourage occupations, on the understanding that the Municipality would later value them through the urbanization process.

Restrictive and intolerable practices were implemented with regard to the new settlement sectors, and they took the form of prohibitive ordinances and systematically removing of shacks. The approach to the new occupations was based on criminalization, through surveillance devices on public lands and the promotion of denunciations of squatting. The Municipality installed checkpoints at the entrance to the neighbourhoods and also outsourced repressive actions through the contracting of a cooperative called Magi-Mar, which was in charge of preventing the entry of construction materials into the settlements, in many cases resorting to violent practices. With the excuse of "urban security", according to Alcaraz (2015: 48), "these measures were accompanied by a discourse centralized in the confrontation between social sectors (squatters versus 'Fuegian citizens in waiting')". The execution of public consultations addressing the need to protect the environment through the imposition of occupancy fees and the legalization of complaints to the Civil Defense in the event of "intrusion" suspicions were two more ways that settlements were made illegal (Alcaraz, 2017). In the case of El

Escondido, the then-mayor complained, prompting the judiciary to order the eviction and relocation of vulnerable residents in "transit and waiting" circumstances (Alcaraz, 2015). The eviction was contested by the families, unions, and professional organizations that requested fair policies for access to housing. Their tenacious resistance resulted in the establishment of the aforementioned Urban Social Forum¹⁸³.

The first signs of recognition towards self-management practices took place in 2009, with the signing of Agreement No. 13816, ratified in Decree No. 1298/2009 between the provincial and municipal executive powers and social organizations. However, the practices of criminalization of informality extended until the end of 2015 with the change of municipal management. That year, the Municipality set forth (O.M. 3085/15) that whoever irregularly occupied a plot of land would be cautioned to vacate it and would not be able to access any housing options.

The provincial government's position on the settlements was equally ambiguous. In addition to creating a master plan for water and sewage for the mountain villages with the help of the NGO "Engineers Without Borders" (ISF), it worked with the Municipality to collaborate on the systematic demolition of shacks. Additionally, it acknowledged the FSU's habitat self-management processes by agreement and provided acreage for self-management activities.

According to a spatial analysis of urban area production patterns, residential usage accounted for 92.1% of urban production between 2003 and 2015, and industrial-productive use accounted for 7.9%. For 47.4% of the period's urbanized area, informality served as the primary logic of city production. Settlements were largely found in the northernmost, outlying areas of the urban region, as seen in Figure 6.27. The commercial logic, on the other hand, made up 21.5% of the expansion at that time and tended to be situated in areas with favourable landscape characteristics in the east and west extremities of the city. In terms of the State, we can see that, in contrast to earlier eras, municipal city production was larger in terms of expansion, accounting for 11.9%, while provincial production accounted for 8.75% and national production for less than 1%. The higher levels of housing creation were achieved since the provincial state used the IPV to build high-rise complexes. The location of the state logic was also predominantly towards the west, although, unlike the market, the housing developments were not located on the seashore but on the road to the National Park. The state logic of property regularization represented 10% of the expansion and was located mainly to the east in the Andorra Valley.

In this regard, we can state that a pattern of formal space occupation has become established to the west and east, whereas a pattern of informal occupation has become established to the north.

¹⁸³ According to Alcaraz (2015), the FSU had a great institutional and political impact on the way in which the State began to address informal settlements. At the institutional level, it actively participated in urban regulation projects and promoted transparency within the mechanisms for the allocation of public works. At the political level, it promoted new inter-actor configurations and hybrid actions (Cravino, 2014).

Although the IPV and private housing developments are located only 200 meters apart, there is no road connectivity between them. Urban voids represented 19.4% of the urbanized space in the period, and continued to be an important factor in terms of urban fragmentation and dispersion.

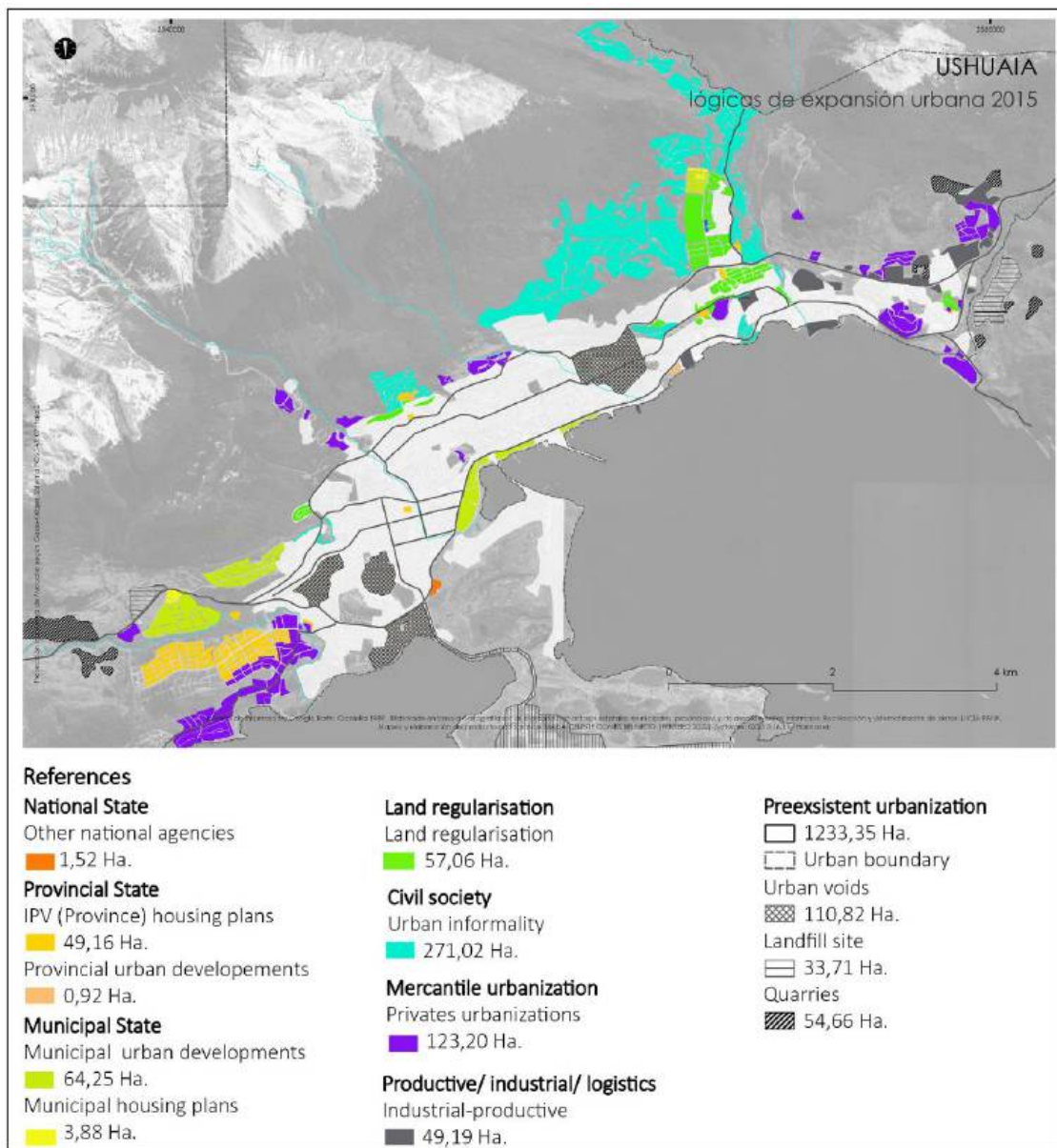


Figure 6.27: Logics of production of urban space. Ushuaia, 2015. Source: Author's own work

6.5.3- Space production in Río Grande (2003 – 2015)

Río Grande was the city most affected by reindustrialization and, with it, experienced significant demographic and urban growth. With the growth of the Industrial Park, the appearance of new productive facilities, and the completion of infrastructural projects intended for logistical activities, industry crystallized in the city. The new migratory dynamics did not become apparent until 2006, and their effects became more pronounced after 2010. The city expanded rapidly and, unlike

Ushuaia, neither the provincial nor the municipal government had available land. The urban layout was surrounded by rural land, and in all cases, the lands were, in principle, the old private farms. As a result, the expansion happened in accordance with the owners' wishes for sale, exchange, or swap. This would be the main reason for the growth of urban commodification, which occurred despite the absence of tourism as in the neighbouring city.

Similar to Ushuaia, the city's state production declined in importance as the commercial logic and the logic of necessity expanded quickly. However, a significant urbanization at the provincial level occurred in the west of the city in front of the Chacra XIII industrial park, where 1033 homes were built. Due to the urbanization's rural design, the project necessitated the completion of all infrastructure works. Because of this, even though the project started in the middle of the 2000s, the housing units weren't delivered until 2010. These were duplexes and housing strips that were less high on a typological level than those in Ushuaia, creating a lower density urbanization (Figure 6.28).



Figure 6.28: Chacra XIII neighbourhood, west of the city, duplex dwellings (above) and multifamily complexes (below). Source: own record.

Once completed, the development ended up surrounded by urban voids, isolated from the consolidated urban fabric, connected only by the road. When asked why this site was thought to be more accessible, a technical team member engineer who was interviewed gave the following remark:

The IPV carried out its urbanizations in accordance with the desires of a few powerful people who owned surrounding land. A former IPV officer who is now the owner of a real estate firm put pressure on the IPV to build Chacra 13 because he owned the surrounding land. They could then construct their own plots without building the infrastructure when the IPV expanded the services there. (E.9, 24/3/18)

The above text shows that in order to better understand the dispersed patterns of urbanization, factors such as lobbying, which affect the articulation of market and state logic, must also be taken into account.

The municipal State, on its part, acted during this period both as a planner and as a city producer, favouring and/or restricting the market, and also attending to and neglecting (depending on the moment) informal settlements. With respect to planning, the most important action was the implementation of the Land Management Plan for the city of Río Grande (Municipal Ordinance No. 2863/11) in 2011. The organization of urban-territorial growth, environmental qualification, enhancement of local identity, and socio-urban integration were among the measures that were suggested. In an effort to support regional growth, it also considered how to convert spaces for productive reactivation. However, as in the previous period, the plan was drafted in 2002 and approved in 2011, which meant that it did not take into account the latest migratory wave and, at the time of its approval, the city had grown very differently from what had been foreseen. Although the plan anticipated urban growth in the northern sector and productive uses in the south, a significant number of new informal settlements had already been established on the southern boundary by 2011. Despite this, the incorporation of urban management instruments that gained legal status and through time strengthened institutional skills in the regulation of the market and the creation of urban land was one of this plan's most important improvements compared to those of Ushuaia.

In terms of the Municipality as a producer, no activities were done to create urban land up to 2004 (M.O. No. 1848/2004). In the northwest of the city, in the Chacra XI area, land wasn't purchased until that year by a trade with a private landowner. The urbanization began in 2006, and in 2007 219 plots were delivered, becoming the first municipal urbanization. This was carried out on suburban land, and this required the execution of services, which were not fully executed and had to be completed by the families awarded the plots.

A number of habitat policies were then put into place between 2010 and 2015 to address the housing need in a comprehensive manner. The difficulties in access to land and suitable housing for low-income sectors were one issue, and the increase of informality, particularly in the southern part of the city, was another (E.13 9/12/2018). Based on these problems, two types of policies were defined: those aimed at planning growth in anticipation of land access needs (preventive policies), and those aimed specifically at mitigating problems related to informal habitat (curative policies).

In the first case, the efforts were concentrated on two areas: the creation of housing alternatives and intervention in the regulation of the real estate market through management instruments aimed at obtaining wider accessibility to urbanized land. With respect to the instruments that regulated the market, among the most relevant are the participation in the differential rents generated by the urban development action through the contribution for improvements established in the Tax Code.¹⁸⁴ (O.M 2848/10). Given that the tax on new subdivisions is 20% of the lots created by the subdivision, this

¹⁸⁴ Although the contribution for improvements had been part of the Tax Ordinance since 1993 (O.M. No. 626/93), the Tax Code expanded the type of operations, from infrastructure works to land subdivisions and gated communities.

instrument enabled the Municipality to participate in the differential rents obtained from operations containing benefits for developers (Finck et al., 2019). This has been a widespread practice over the years in the expansion of Río Grande, to the extent that much of the urbanized private land was previously rural. In this way, the improvement tax became a fundamental source of income for the Municipal Land Bank. Also, the implementation of a zoning called Residential Zone of Private Public Interest (ZRIPP) through which new urbanizations of private owners were generated with the intervention of the municipality. Under this zoning, urbanization was encouraged by setting maximum prices and on the condition that the purchasers were registered in the municipal registry of applicants for public land and did not own real estate in the province. In return, the municipality permitted urbanization with 180 m² plots. Within this framework, the San Martín Norte Construction Trust was carried out and 1,800 plots were generated.

In the west of the city, two new municipal housing developments were built: the Barrio Los Cisnes neighbourhood (100 plots), which was built on land provided by Estancia Mara Behety in exchange for infrastructure upgrades, and the Bicentenario neighbourhood, which was built on land provided by the racetrack. 150 dwelling units were created by work cooperatives in both employing the PFIS. The following time frame saw the completion of several housing complexes.



Figure 6.29: Municipal Housing, Los Cisnes Neighbourhood. Source: El Fuego Newspaper, 2017.

Parallel to state production, commercial production started to emerge through the urbanization of some rural farms and urban voids to the north (Multillar, Altos de la Estancia, Barrio Norte, Las Barrancas), to the west (Vapor Amadeo), as well as through the urbanization of portions of the Estancia María Behety. In the latter case, the private proprietors set out a master plan that is currently being carried out. All of the situations included the urbanization of rural or suburban land, and while services were supposed to be provided by the developers (E. 13, 9/12/18; E. 14, 9/12/18; E. 21, 6/28/21) three interviewees claimed that the State had to complete the construction work. When it comes to the west, the Vapor Amadeo urbanization stands apart since the PDT (which had recommended the Ring Road (Circunvalación Avenue) as the western boundary for urban expansion) had also been approved. The municipal government constructed the Barrio Los Cisnes next to this

private development, disarticulating the planning's habitat strategy, in addition to being situated on the opposite side of the Ring Road. An even more contradictory situation with the planning was the execution of the gated community El Multillar, the only one of its kind in Río Grande, which is located 25 km north of the city. Since its fulfilment involved an expansion of the metropolitan area and services outside of any conceivable city schemes, the municipal executive power was opposed to it. The City Council had to enlarge the urban area in order to do this, and this urbanization was permitted by exception. Following the sale of the plots, the neighbours approached the municipality to ask it to resolve the provision of services, a problem that is still being discussed. The developer, who is also the owner of the ranch and where the neighbourhood is situated, did sell the plots with services, taking the extra money for himself.

Unlike Ushuaia, and with the exception of El Multillar, the private urbanizations did not respond so much to a scheme of distinction as to a real estate business of the owners of the rural land that at this time had lost value for primary production (E.14, 16/8/15; E.15, 28/5/18). This is evident by the smaller plot sizes than in Ushuaia, the lack of complete utilities in some instances, and the lower value placed on the landscape as a marketing tool. It is observed that all private urbanizations have in common a form of dispersed urbanization, established according to speculative criteria and guided in large part by the usufruct of services provided by the State. Also, as in Ushuaia, the other market that grew was the rental market, linked to a similar dynamic of densification of plots in the pericentral sectors.

Faced with the strong process of real estate speculation and the time required for the production of housing and plots by the State, a large part of the new population that arrived in Río Grande after 2003 could not resolve their housing needs through formal means, and once again had to do so by occupying land informally. The settlements grew first on the north bank of the Grande River, directly on its flood bed. These extended from the southern edge of the industrial park to the Mosconi Bridge to the east. Beginning in 2005, they started to grow on the southern bank of the Grande River, as illustrated in Figure 6.30. This sector saw the greatest expansion between 2003 and 2015. Once again, these lands, unsuitable for urbanization due to their natural characteristics, mostly flood prone and waterlogged areas destined for productive use, were the only possibility for non-commercialized urbanization.

According to the Undersecretariat of Territorial Planning of Public Investment (2016), fourteen settlements were counted in the region in 2015: 10 de Noviembre (2015), Milagro (2015), Miramar, and 15 de Octubre, 15 de Octubre bis, Unido, Be-tel, 22 de Julio, Fueguino, Provincias Unidas, Argentina, and Argentino (2015). Typologically, new settlements with a regular fabric and an organized occupation process (to the north) are distinguished from the informal micro-urbanizations that arose on the productive farms on the southern margin occupied during the previous period with a more erratic sprawl and a lower level of organization (to the south).

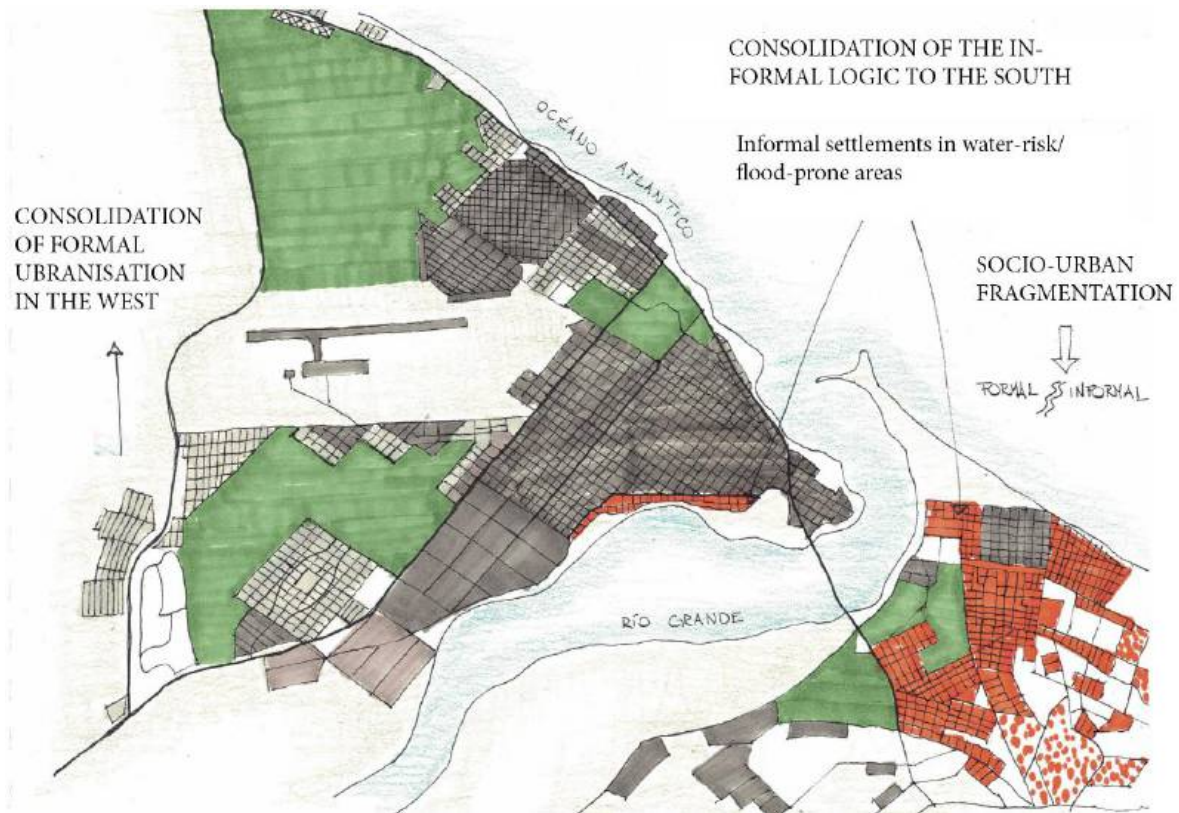


Figure 6.30: Informality in Río Grande. Period 2003- 2015. Source: Own elaboration

In all the settlements, but especially on the southern margin, the housing situation became really precarious. Due to the lack of services, until 2020 water was supplied by tanker truck, while more than 90% of the population did not have sewage or gas networks. The houses were mostly shacks built with discarded materials, an issue that improved over the years (Municipality of Río Grande, 2018).

All this, together with the scarce connectivity, deepened the processes of inequality between the formal and the informal city on the southern margin, not only in terms of habitat precariousness, but also due to the physical barrier represented by the river and the crossing by a single bridge. This inequality was reaffirmed in the interviews conducted with residents of neighbourhoods on the south margin (E.25, 26/5/18; E.26, 21/6/19; E.27, 25/5/18).

With regard to addressing informality, it should be noted that the original differences in land ownership led to parallel and disjointed actions at different levels of the State. While the provincial State held a policy of tolerance from the beginning, the Municipality opposed, in the early years, to legitimize the occupations. The most convincing evidence in this sense was a dispute originated in 2006 over some community taps that the City Council authorized (O.M 2176/06), but the Municipal Executive vetoed by decree. However, unlike in Ushuaia, there were no practices aimed at criminalizing the inhabitants of informal settlements or systematic evictions (Finck et al., 2019).

In 2006, a new municipal policy to address informality was launched with the Program for Urban and Social Integration, Consolidation and Completion (Programa de Integración, Consolidación y Completamiento Urbano y Social)¹⁸⁵, which sought to address "neighbourhoods with high precariousness in terms of infrastructure, land tenure, services" (O.M. 2182/06, Art. 1). Due to the great poverty of many new migrants, the work on urban issues had to be supplemented with other social and economic initiatives. The Municipality began promoting the Integral Territorial Management Program in 2011. One way this program advanced was in the historical regularization of land tenure process, and another was in the consolidation of the informal settlement regularization process with a comprehensive strategy in the South Margin¹⁸⁶. Then in 2015, the Carlos Mujica Program began to be implemented through the National Secretariat of Access to Habitat for the generation of infrastructure works in six neighbourhoods: Fuerza Unida, 22 de Julio, 15 de Octubre bis, Unido, Provincias Unidas and Los Fueguinos. The regularization was only completed in 2016. On the other hand, the Province supported IPV actions in communities that were situated on provincial and/or private land. In the 15 de Octubre neighbourhood, it built 218 dwellings as part of the Housing Solidarity Program and began the process of expropriating the occupied lands in the Chacras neighbourhood (Law Nos. 598 and 847) in order to sell them to the tenants (at an affordable price) at discounted rates. Additionally, it collaborated with PROMEBA via the UEP (Provincial Executing Unit) to enhance the Mirador and Argentino communities and completed infrastructure projects to provide new machinery, water, and power to over 5,000 homes in the southern margin.

In terms of the spatial analysis, Figure 6.31 shows that residential use made up 87.3% of the urbanized space, while industrial-productive use increased in comparison to the previous period, now representing 12.69% of the urbanized space. The predominant logic of residential production, as in Ushuaia, was informal, representing 56.6%, and located almost entirely on the southern margin. Within civil society, social organizations also produced 3.8% of the space. The second predominant logic was commercial, with 18%, and was located to the north, west, center and south of the city, in the form of small developments. The provincial government produced 12.87% of the urbanized space, while the municipal government produced 7.75%, both to the west. The regularization of land ownership accounted for 4% of the total.

¹⁸⁵ Among the recitals, it is emphasized "that municipal policy has remained oblivious to housing problems [...] inaction and lack of long-term planning has generated inequalities and situations of social injustice".

¹⁸⁶ It gave rise to the "Urban Tax Land Regularization Regime" (O.M. 3281/14) and modified the land use regulations in the southern margin, from Extra Urban Services Zone to Special Social Interest Zone. (ZEIS).

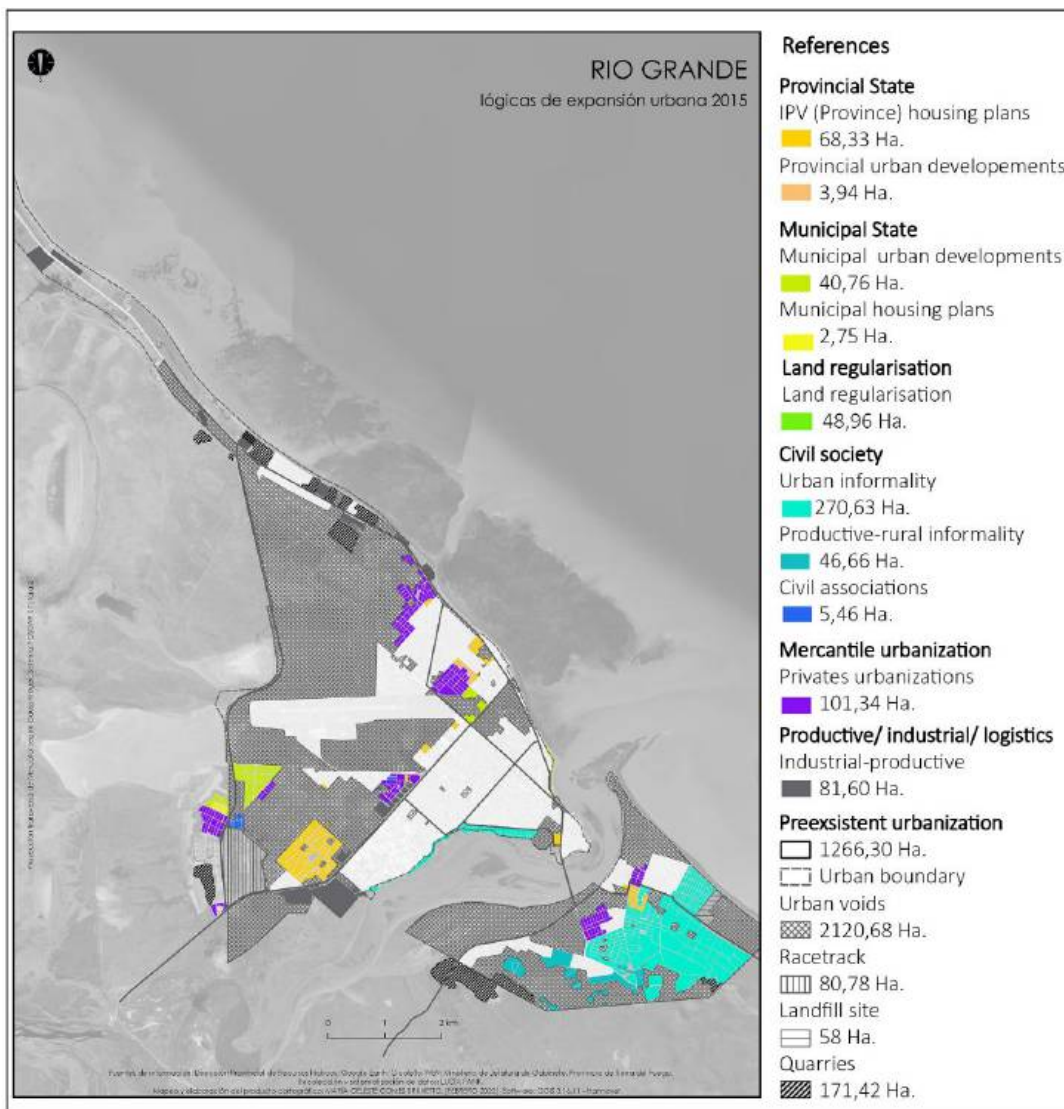


Figure 6.31: Logics of production of urban space. Río Grande, 2015. Source: Own elaboration

It should be noted that the formal urbanization patterns were mainly defined by private landowners, both through their own urbanization actions and through the sale of land to the municipalities. For this reason, there are large urban voids in the city (undeveloped farms), both to the north and west and on the southern margin. The surface variation is equivalent to 63.65% of the space produced between 2003 and 2015.

6.5.4- Comparative summary (2003 – 2015)

In the period 2003-2015 and within the framework of reindustrialization, the USD was expressed again in the urban expansion of Ushuaia and Río Grande in terms of equalizing dynamics. Industry settled mostly in Río Grande due to better geographical and location conditions, while in Ushuaia it was divided between industry and tourism. This productive differentiation caused similarities and differences in the dynamics of internal structuring.

In both cities, there was a divergence between the State's capacity to provide housing and the rapid pace of migration. Due to a lack of housing options, real estate speculation increased, which raised the cost of urban areas. As a result of the growth of the commercial logic both in land and rents, and its excluding conditions of access for industrial workers, informality grew considerably and was the main logic of production of space, even more so in Río Grande.

Regarding the role of the State at the municipal level, we see great differences between cities. In Ushuaia, it favoured the growth of the processes of commercialization of the city and, based on a discourse of environmental protection, generated multiple actions of intolerance towards the growth of settlements. In Río Grande, management instruments were generated that tended to regulate commercial growth, while the policy towards the settlements was mostly one of tolerance. In terms of the planner's role, we can observe that neither of the instruments produced anticipated the expansion of habitat requirements.

In both cases, there were marked patterns of spatial differentiation between formal and informal areas of the city, where physical barriers also began to play an important role as social barriers. Private housing developments grew in areas peripheral to the extension to the traditional urban areas. In Ushuaia they extended over the seashore, in areas of high landscape value, while in Río Grande, they did so according to the availability of urban services. Due to a shortage of accessible space, informal housing developments grew on terrain unsuited for urbanization, in regions with high environmental risk, and disconnected from the formal urban fabric. On the other side, the provincial government built huge housing complexes that were cut off from the city's infrastructure. In this way, uniform landscapes were configured in accordance with the logic of spatial occupation.

6.6 Industrial crisis and increase in tourism (2016 - 2019)

In 2016, there was a severe crisis in the sector due to a shift in national administration and a return to a neoliberal productive orientation. Even though it is still challenging to comprehend the demographic and geographic scope of the most recent deindustrializing period due to closeness and time, we can confirm that, according to the National Institute of Statistics and Census (INDEC), unemployment levels in 2019 were comparable to those in 2003. As a result, the Ushuaia-Río Grande conglomerate experienced the second-highest unemployment rate ever recorded in TDF history at that time (13% compared to a national average of 10.1%). In this context, and from the analysis of interviews with technicians and officials of the Institute of Statistics and Census of TDF (E.1, 16/8/15; E.2, 14/11/18), the migratory intensity seems to have decreased. This had an impact on the cities, resulting in a marked decline in growth via expansion compared to the prior period. Given the larger industrial dependence of Río Grande, it was more pronounced here.

Ushuaia expanded by 350.5 hectares over this time, making up 17.6% of the urban area in 2015. As shown in Figure 6.32, a huge urban gap to the west that had previously belonged to the Navy was urbanized. It also continued growing along the coast and on National Route No. 3 leading to the National Park. New urban developments also appeared to the east along the Route, beyond the city, and to the north, albeit they were much smaller than the growth to the west. Although the growth due to expansion has been lower, a trend that began in the previous period was consolidated, especially in Ushuaia. It was related to the growth in height of the urban centres as part of a process of renovation, and also as a result of the execution of collective housing.

Rio Grande expanded in this period to 376.9 hectares, corresponding to 17.76 % of the urbanized space in 2015. The predominant sector of expansion was the north, in a sector that formerly corresponded to the Estancia María Behety. On the southern margin, new urbanizations also grew on the Grande River, completing the fabric between the riverbank and the previously urbanized area of productive ponds. On the other hand, towards the west, small urbanizations of smaller size were produced, and the urban voids also began to be urbanized.

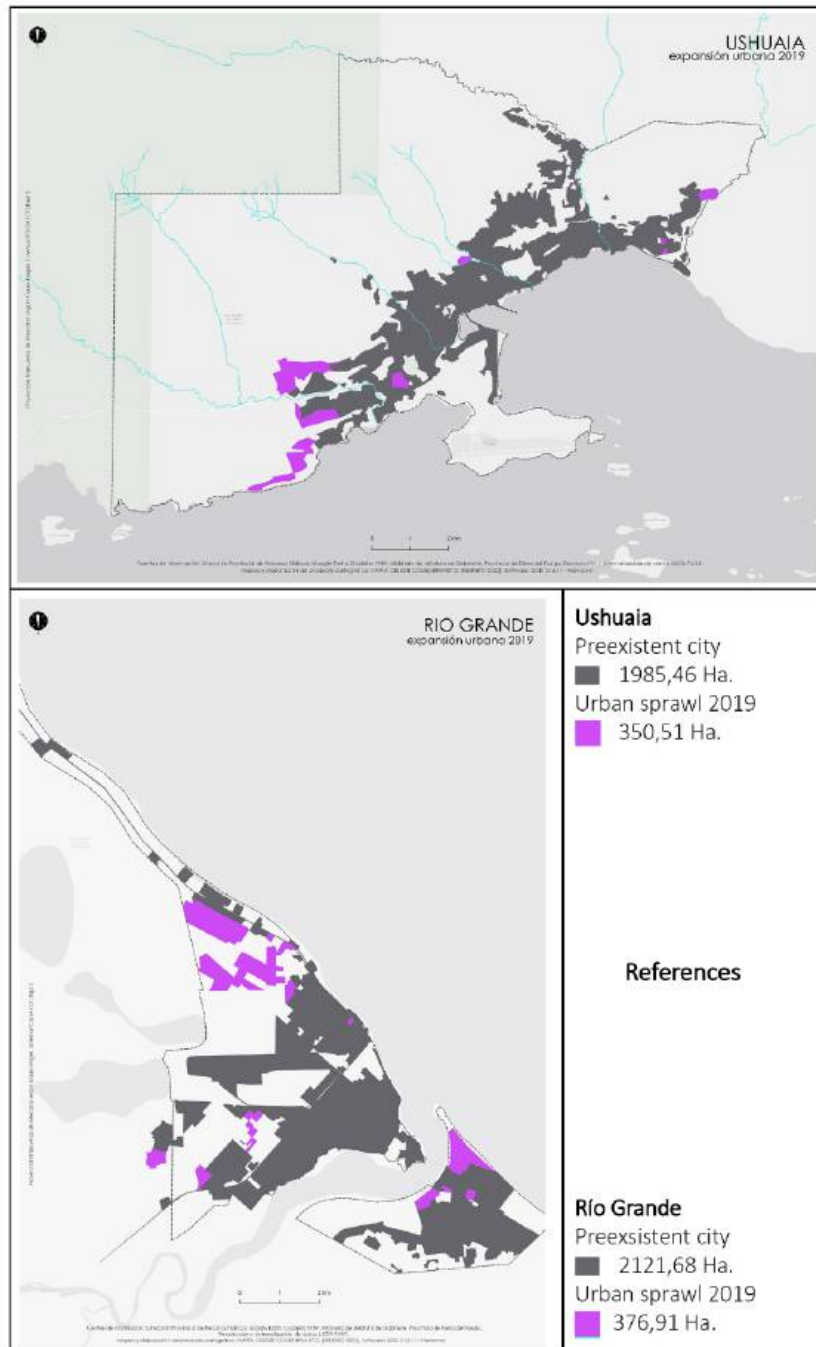


Figure 6.32: Expansion of Ushuaia and Río Grande. Period 2015- 2019. Source: Own elaboration

Cities would once again begin to consolidate different profiles, both in relation to productive activities and to the policies applied by local governments, which would lead to different patterns of urban inequality towards the end of the period.

6.6.1- Conditions of access to housing in Tierra del Fuego and the role of the State (2016 - 2019.)

As we have said, since 2016 and with a new national administration in the charge of President Mauricio Macri, a new stage of adjustment, opening of the economy, external indebtedness and deindustrialization began, which reoriented the political agenda once again towards the neoliberal model. In a new framework of poverty and growing unemployment, the production of urban spaces was characterized throughout the country by the deepening of inequalities (Orchani, et al, 2019).

The national State once again acquired a facilitator role, and with a renewed participation of multilateral credit agencies as well as the financial sector, it provided a new approach to housing policy (Barreto, 2018). In the first place, it hindered the Federal Housing Policy, while modifying the current administrative and regulatory structure. The Secretariat of Urban Development and Housing was formed by the existing Undersecretariat of Urban Development and Housing (SSDUYV), and the Undersecretariat of Habitat and Human Development (SHYDH), in addition to two coordination offices that executed programs financed by international organizations, the IDB and the World Bank (Administrative Decision 797/2016). In addition, the structure of PROCREAR, which until then had been financed with funds from the National Social Security Administration (ANSES) and the National Treasury, was modified. Private banks started providing loans at market rates, and it was these banks that decided who would receive them and under what conditions¹⁸⁷.

A number of new initiatives were launched at the same time to address both the need for new homes and the requirements of informal settlements. Regarding the first point, the SSDUV implemented the Public-Private Partnerships Program and the New Housing Construction Program, particularly in Tierra del Fuego. Also, the Rehabitar Program, aimed at improving the housing complexes previously built by the IPV. However, funds were drastically reduced with respect to previous periods, just between 2017 and 2018, by 24% (CIPPEC, 2019). For such reason, the production of new housing was scarce: 484 units in Ushuaia and 184 in Río Grande. The execution was concentrated mainly to complete works of the previous period and in some small-scale punctual interventions, such as transit and waiting housing, relocations, and housing destined to families who had land but could not afford the building expenses (E.7, 4/3/18).

In relation to informal settlements, one of the most important actions at the national level was the creation of the National Registry of Popular Neighbourhoods (RENABAP), Decree No. 358/20170, which had the purpose of "surveying and identifying the properties owned by the state or by individuals where the popular neighbourhoods are settled¹⁸⁸, the existing constructions in such neighbourhoods and the data of the people living in them" (Elorza, Monayar and Alvarado, 2018: s/n).

¹⁸⁷ The new PROCREAR, called Solución Casa Propia, "eliminated the subsidy to low interest rates and combined mortgage credit from private banks (at market rates) with savings from families and a bonus from the national government, in a scheme of cooperation between the government, banks and real estate developers". (Barreto, 2018: s/n).

¹⁸⁸ A popular neighborhood is defined as an informal urbanization of at least eight family members, where at least half of them do not have title deeds and access to two basic services.

In this sense, recognizing settlements served as an initial step to encourage regularization efforts in the registered communities and to give residents a measure of "security" in the face of impending evictions. The complexity and diversity of problems that develop in these settlements, however, were not taken into account in the criteria for settlement recognition. As a result, the RENABAP was not able to appropriately define care policies (Elorza, Monayar, and Alvarado, 2018: s/n). 47 communities in all, including 29 in Ushuaia and 14 in Río Grande, with 2,385 and 2858 families residing in each, were registered in TDF (RENABAP's official website, 2022)¹⁸⁹).

In terms of concrete actions on settlements in TDF, PROMEBA continued (in its three main lines: property regularization, infrastructure and environmental sanitation, and socio-community equipment). Also Nuclei of Inclusion with Development of Opportunities (NIDO) were installed. The IPV completed new housing for relocation, both in the sector of the southern margin of Río Grande and in the Colombo neighborhood in Ushuaia.

From the Secretariat of Habitat and Provincial Territorial Planning, a document called "Needs Model for TDF" was generated, which was the first planning document in terms of habitat demand, linked to the economic issue. A complete report was also made on the situation of the southern margin, which proposed, as a first step, to promote a general plan for the laying of services, which is still in process.

Although there are still no official statistics that allow a comparison with respect to the sub-periods of studies presented above, it is presumed, based on interviews with public stakeholders, spatial analysis and field visits, that settlements stopped growing due to expansion, nor did new ones emerge. This seems to be due to different reasons. On the one hand, deindustrialization and the high rates of unemployment and layoffs apparently caused a lower migratory dynamic towards the cities. In addition, different interviewees stated that in the framework of the regularization processes, it was agreed with the settlements' referents that these should stop growing in order to be able to materialize the infrastructure and regularization plans foreseen (E.14, 9/12/18; E. 15, 28/5/18; E.16, 22/06/19).

Although most of the settlements began a process of consolidation, both due to the installation of services and the individual improvements of the houses that took place over time, they underwent processes of densification (E.21, 28/6/2021). A new population has to give up formal rentals and start looking for choices in the unofficial housing market due to the financial insecurity of many families. Due to the increasing socio-housing conditions brought on by high unemployment, urban inequality become even more pronounced. Regarding private formal production, we see in Figure 6.33 that the area authorized for construction declined considerably in Río Grande with respect to the previous period, an issue probably linked to lower industrial dynamics. In Ushuaia it was also lower, although it showed some increases between 2017 and 2018.

¹⁸⁹ <https://www.argentina.gob.ar/desarrollosocial/renabap/tabla>

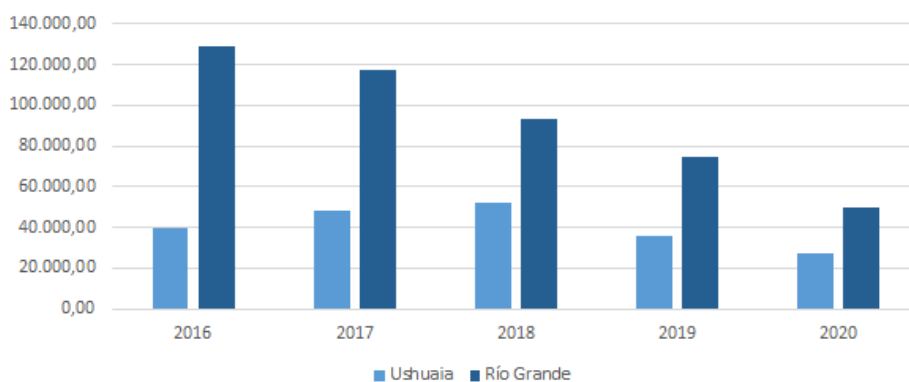


Figure 6.33: Surface authorized for new constructions and extensions (m2). Ushuaia and Río Grande. Period 2016- 2019. Source: Own elaboration based on data from Provincial Directorate of Statistics and Censuses, 2021.

Regarding the destination, we see in Figure 6.34 that in Ushuaia housing was predominant, although between 2019 and 2020 tourist construction has grown again. Within the framework of virtual platforms, many homes have been redirected to tourist activity for temporary rental. In Río Grande, and as shown in Figure 6.35, the area authorized for housing was also predominant, while both commerce and industry decreased considerably.

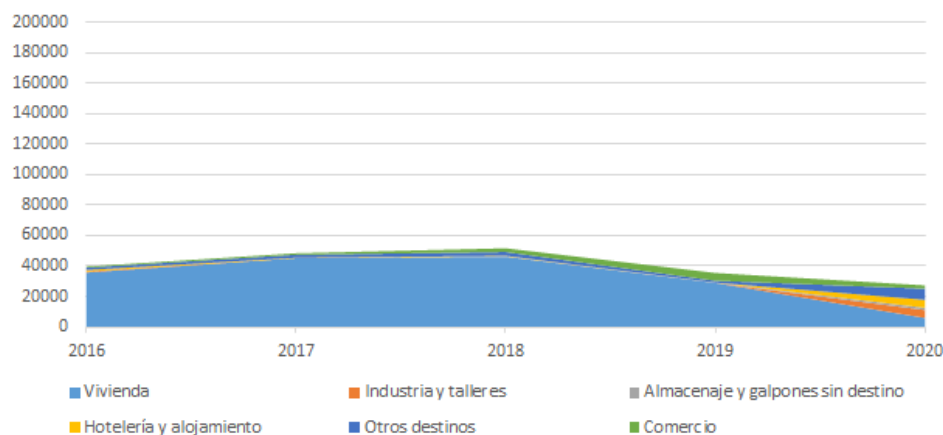


Figure 6.34: Area authorized for construction according to destination (m2), Ushuaia. Period 2016-2019. Source: Own elaboration based on data from Provincial Directorate of Statistics and Census, 2021

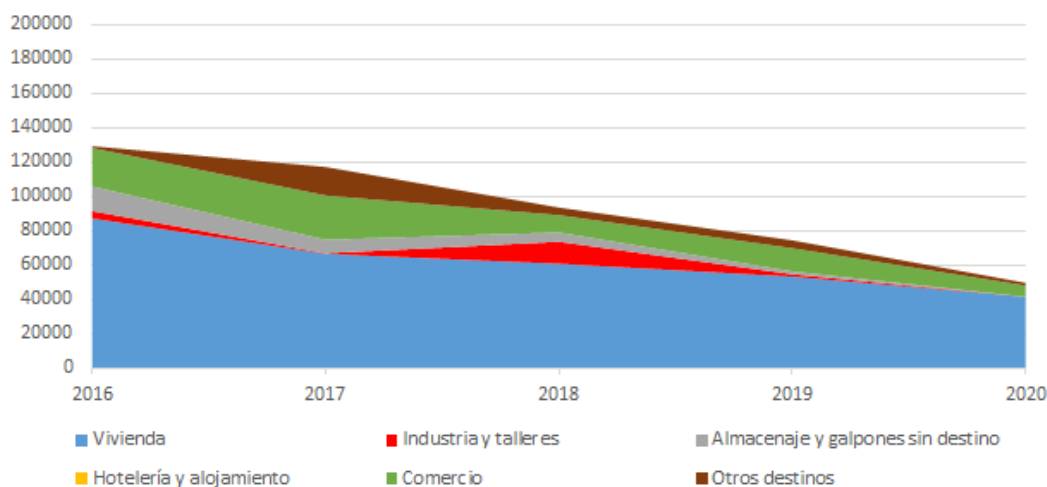


Figure 6.35: Area authorized for construction according to destination (m2), Río Grande. Period 2016-2019. Source: Own elaboration based on data from Provincial Directorate of Statistics and Census, 2021

6.6.2- Production of the Ushuaia's space (2016 - 2019)

The industrial crisis that began in 2016 was felt considerably in Ushuaia, which, despite not being the industrial capital of the province, had the largest industry, called New San. This industry lost more than half of its staff in just three years, from more than 3,500 employees in 2015 to 1,500 in 2018, according to one of its general managers (E. Bianciotto). However, a new currency devaluation process again results in the international tourism increase, which mobilize complementary activities, such as construction, commerce and domestic work. In interviews conducted in informal settlements during this period, different respondents stated that they had started working after the closure of the industries in those areas. Domestic work was mostly carried out by women (E.29, 2/25/18; E.30, 11/26/16; E.31, 11/28/16). In this sense, the crisis had a smaller relative impact than in Río Grande city.

Two factors particularly influenced the production of urban space in these years. On the one hand, a new municipal administration started in 2016, of Peronist denomination, assumed an active policy for building new neighbourhoods and reducing informality. In this sense, the leading role of the State was greater and had a different composition compared to the previous period. The second factor was the rise in tourism¹⁹⁰, which results in a new phase of the urban commodification process.

From the State there were different actions according to the level. The National State finished building the PROCREAR Plan homes that had started in the previous administration, providing the greatest number of housing solutions for the southwest of the city during the period under study. As

¹⁹⁰ National tourism also grew, since travelling abroad became more expensive.

mentioned, there were two typologies: multi-family housing and duplex housing, as shown in Figure 6.36.



Figure 6.36. PROCREAR homes, multi-family complexes and duplex homes. Ushuaia. Source: own registry.

The provincial State, through the IPV, continued the Barrancas del Río Pipo urbanization, while in the Andorra sector it produced some housing complexes. In this management, many houses were delivered to unions, and cooperatives¹⁹¹, while the residence time criterion was not prioritized. This resulted in protests from the sector of the population that had been registered in the housing demand registry for more than ten years.

Regarding the municipal State, in 2016 it produced the Environmental Urban Development Plan for the Middle Basin, dependent on the Secretary of Habitat and Territorial Planning of the city of Ushuaia. This sectoral planning instrument had a territorial perspective that led to the production of new neighbourhoods and attention to informality. Its goal was:

“...the regularization of self-managed neighbourhoods, as well as the urbanization and distribution of new land for sole and permanent housing, restoring the rights of those who do not have their own home to house their families and of those who live in informal land tenure conditions, in many cases in inadequate places and without services” (Co.P.U, Secretariat of Habitat and Territorial Planning of the Municipality of Ushuaia 2016: 7).

The plan involved four lines of action for the north of the city on the mountainside: comprehensive care for informal neighbourhoods, the generation of new urbanizations, the protection and conservation of environmental services, and the promotion of scientific-educational, sport and recreational activities, as well as tourist services compatible with the proposed uses. The process that the plan promoted gave rise to the disaffection of areas previously classified as Communal Forest and their denomination as Urban Area.

Regarding habitat production, this plan gave place to start the General San Martín urbanization, located west of the city on the way to the National Park, in which 500 plots with services

¹⁹¹ Among them, there are 128 ATE dwellings, 116 Ushipin dwellings, 64 Lakar dwellings, 60 RENACER dwellings, 80 URP dwellings, 48 APEL dwellings, 64 Ushipin dwellings, 56 Lakar dwellings, 30 URP dwellings, 36 Liam dwellings, 80 Leum dwellings, 32 housing and infrastructure CAM.POL.T.E.R., 58 Wakul homes, 24 Lakar homes, 10 homes Casa Base Work Cooperative.

were built. In turn, it projected the stratification of demand through the implementation of four financing modalities, from 12 to 60 monthly instalments.

The market, for its part, continued to generate new developments, while consolidating the renovation process of the central area, where the average square meter of empty land was 900 dollars. Regarding the new urbanizations, these were located mostly to the west of the city, on the Beagle Channel shore (figure 6.37), a few in the extreme east, and one in terraces on the mountain slope, to the north. All of them have privileged locations in terms of landscape. Several of them arose from the emergence of new investor owners, who bought large plots of land from the previous landowners (such is the case of the Costa Susana and Bahía Golondrina urbanizations).



Figure 6.37: New private urbanizations beside the Beagle channel, west of the Ushuaia city. Source: own record.

At this time, a differentiation between the type of plot offered by the market and the state plot became evident. While historically both of them had an average size of 600 m² (Zone R3), the latest municipal developed plots had areas of around 300 m². On the other hand, minimum plots in private urbanizations are still 600 m² in area, while in some urbanizations such as Bahía Golondrina they reach 1000 m².

A growing market is linked to tourism with the emergence of new temporary rental web platforms (Booking, Airbnb¹⁹²). Although many of them have existed for at least a decade, different authors underline their growth within the tourism market as of 2015 (Russo, 2014). The new forms of hotel supply incorporated a large part of the one- and two-bedroom homes previously offered in the long-term rental market. The available supply decreased considerably, to the same extent that prices began to rise, since temporary rent is charged per day. This has also affected the distribution pattern of permanent rentals, which are increasingly moving towards the periphery, while the central areas are being allocated more and more to tourism.

On the other hand, the informal settlements, as previously mentioned, did not continue to grow due to expansion, although a process of densification of previously occupied lots is observed, as

¹⁹² According to Russo, “AirBnB represents hybrid models of hospitality, both informal and commercial, and combines a room rental system with the use of a social search and management scheme. The structure of the market is aligned with the logics and operating mechanisms of virtual communities” (2014: 109)

illustrated in Figure 6.36. According to a report prepared by the Municipality of Ushuaia, in 2017, 1,700 families lived in settlements in the city.

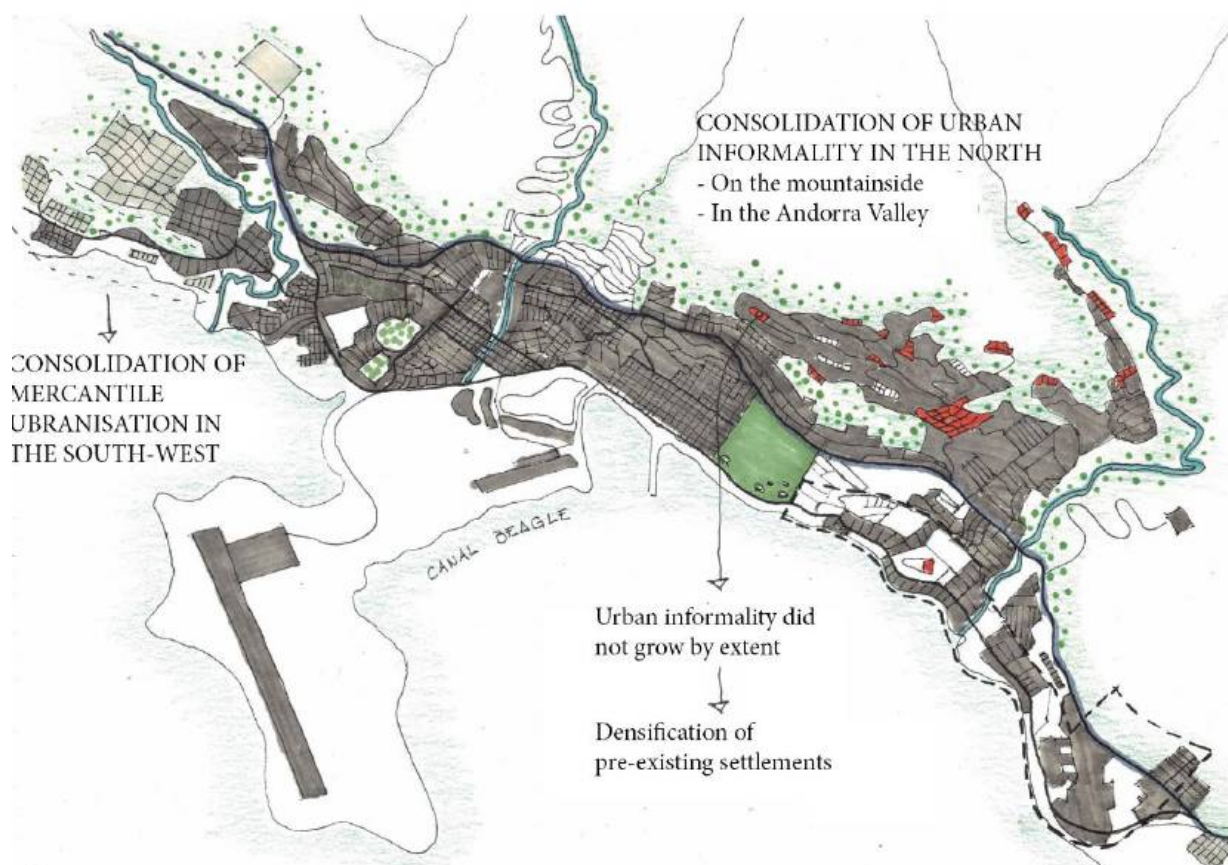


Figure 6.38: Informality in Ushuaia, 2016-2019. Source: Own elaboration.

As of 2016 and with the beginning of a new local management, the policies regarding informal settlements were modified, acquiring a perspective of tolerance. Policies such as the Comprehensive Proposal for the Urban Environmental Development of the City of Ushuaia and the declaration of Social Emergency in the Raíces neighbourhood (Municipal Ordinance No. 5412/17) account for this.

Regarding the patterns of space occupation, we see in figure 6.39 that the expansion in this period responded 100% to residential use, while no new productive spaces were developed. The prevailing logic was related to domain regularization, which representing 33.1% of the space produced. It was followed by municipal urbanization with 28%. Both respond to the municipal habitat policy of this period. The provincial level produced 9.4% of urbanization, concentrating in the Pipo urbanization, while the national level produced 5%, occupying a historic urban void with the PROCREAR Plan.

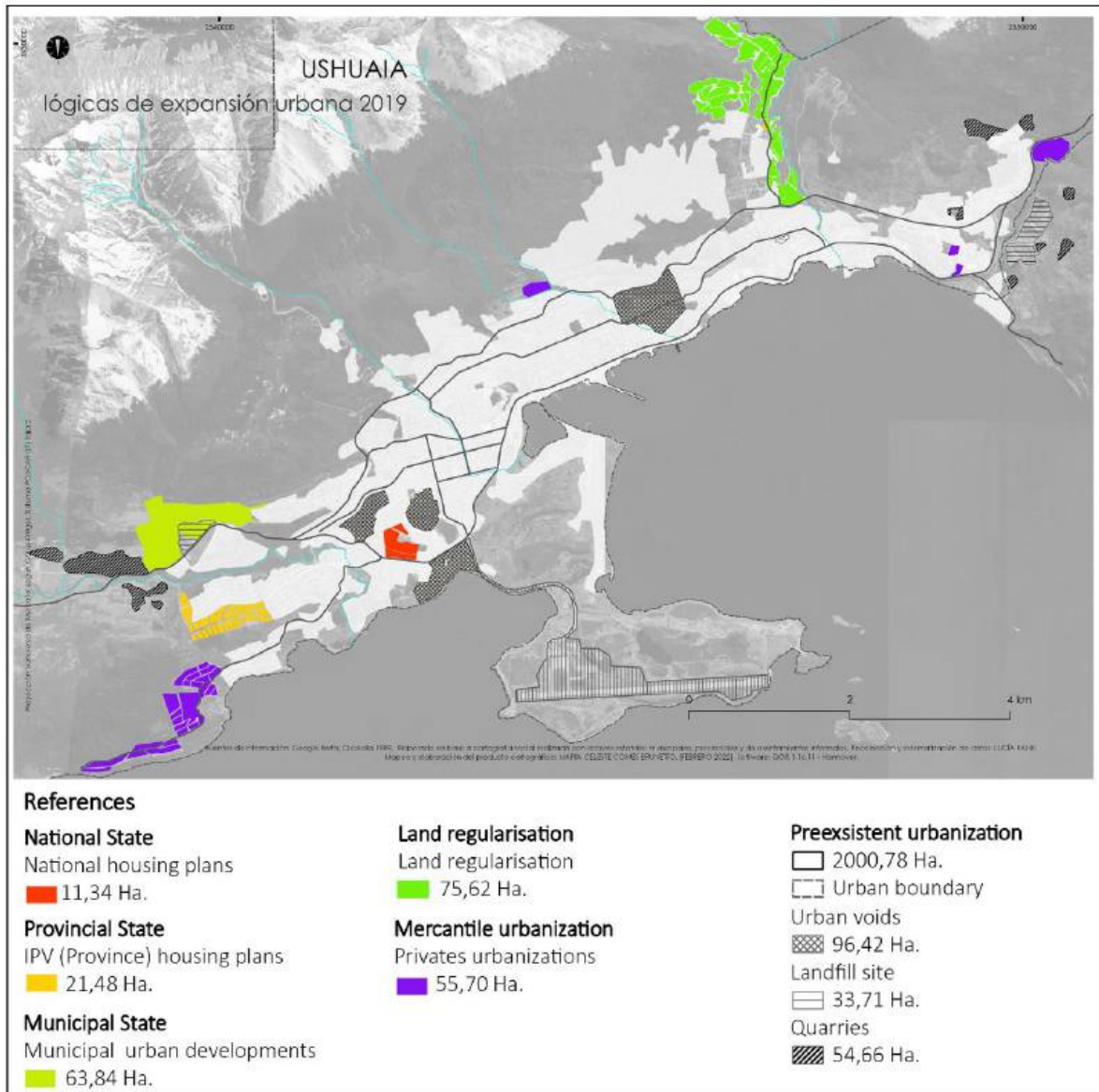


Figure 6.39. Logics of urban production. Ushuaia, 2019. Own elaboration

6.6.3- Production of the Río Grande space (2016 – 2019)

As of 2016, Río Grande, the industrial capital of the province, was strongly affected by the end of the productivist model and the loss of the industrialization cycle. The crisis also affected other sectors such as logistics and commerce, due to the low consumption capacity tied to the high rates of unemployment and precarious employment. Since Río Grande was not a tourist destination nor did it have important administrative functions at the provincial level, the economy stagnated sharply.

The reduction of demographic pressures in the urban space resulted in changes on dynamics of differentiation respect to those from previous times, and also from those of Ushuaia. From the State, at the national level, the PROCREAR Plan initiated in the previous stage was completed (figure 6.40)

and, as in Ushuaia, this was the largest housing policy of the period. The houses were built as multi-family housing complexes, and were located in the northern sector of the city, in a large urban void, completing the pre-existing fabric corresponding to Chacra II. Its extension, however, was smaller than in Ushuaia.



Figure 6.40: PROCREAR dwellings, multifamily complexes. Río Grande. Source: own records

From the provincial State, the IPV continued to complete the urbanization of Chacra X, however, its scale of intervention was much smaller than in the previous period, and also smaller than in Ushuaia. As in that city, housing was allocated mainly to unions. Typologically, only duplex houses were built.

Regarding the municipal State, it had an active role both as a producer, as a market regulator and also with regard to the care of informal settlements. In his role as a producer, it finished the construction of houses at the Bicentennial neighbourhood, located to the west of the city, and also promoted an infrastructure works plan (mainly gas lines), which benefited both the residents of the west and the settlers at the *Margen Sur* sector. In terms of market regulation, the most important action was the implementation of the aforementioned San Martín Norte Trust, through which, and with the Tax for Improvements, the Municipality was able to acquire new land, where a new neighbourhood was built for a construction trust between the ATE Union, the BTF and the IPV.

In relation to the market, this had two predominant forms of growth. On the one hand, the urbanization of the *Maria Behety* master plan, towards the north of the city, continued to be completed. New private developments also emerged on the south bank of the Río Grande, on previously productive suburban land. All these new urbanizations benefited from the provision of services to informal settlements, promoted by both the province and the municipality. On the other hand, small fractions of land began to be urbanized within the traditional urban voids of the city. In this case, and according to interviews with members of the technical team of the Municipality's Urban Development Directorate (E.21, 6/28/21), these allotments were fraudulent, due to the fact that they did not have any municipal approval. They consisted of rural land subdivisions without services that

were put up for sale with the promise of providing the infrastructure a few months later, which did not happen. According to the Municipality, the owner speculated that once the families moved, the State would provide them with the services. In this sense we see that the informal production of the city has also been carried out from the commercial logic.

Regarding the growth of informality, and like Ushuaia, this was lower than in the previous period and did not produce new neighbourhoods' development, but rather the consolidation and densification of pre-existing settlements (figure 6.41). A common growth dynamic has been the subdivision of the farms that previously corresponded to production. In this case, the fraudulent subdivision modality is also prevailing, and it is interesting that those who offer them are former residents of the informal productive urbanizations. The biggest problem, however, is the parcelling out of large plots in areas devoid of services and difficult to access.

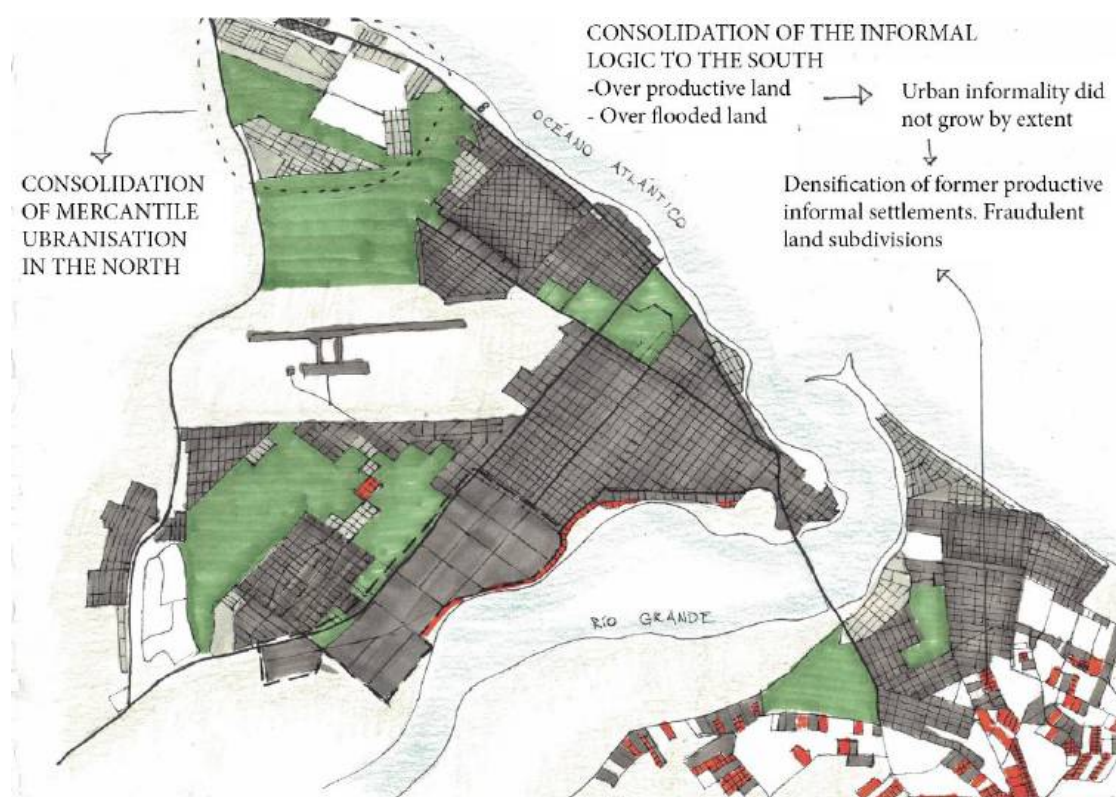


Figure 6.41: Río Grande Informality, 2016- 2019. Source: own elaboration

Regarding the number of households that live in informality, no updated data has been found, however a report by the Undersecretariat of Cooperation and Planning of the Municipality of Río Grande (2019) indicates that households in settlements located on *Margen Sur* represented in 2010 a 13% of the Río Grande's households, while this rate grew to 28% in 2016. In 2010, the population of

Margen Sur was 8,804 inhabitants distributed in 2,589 households, while in 2016 about 29,000 people lived in this sector in 8,540 households.

Policies on attending to informality continued to be, as in the previous period, one of tolerance and anchored in domain regularization and the provision of services. New urban facilities were also built on the *Margen Sur* sector, such as a health centre, sports fields and a community centre. However, the different actions did not reach all the neighbourhoods. On the other hand, On the other hand, there are no policies to address the precarious conditions of the vast majority of the housing units, but rather actions concentrated mainly at neighbourhood level.

In some cases, the lack of comprehensive diagnoses that contemplated the environmental perspective led to partial solutions that generated new problems. The Barrio Esperanza settlement is a particular case to be noted. This has been the subject of a regularization plan, accompanied by the laying of services. However, it is located on an old city landfill, an issue that has only been discussed in the last two years, generating different types of social and governmental conflicts regarding the cleanup of the site or its relocation.

Given the precarious conditions of ownership, the dynamics of relocation is so fast paced that the Municipality has installed a procedure for its realization: “This procedure is used to be able to move transportable housing from one point of the city to another. This must be done personally, at low cost and under the responsibility of the owner of the home to be moved” (Municipality of Río Grande website).

Regarding the patterns of space occupation, we see in Figure 6.42 that residential urbanization represented 99.4%. Within it, the predominant logic of city production was the market, representing 66.7% of the space produced, to the north, and to a lesser extent to the south and west of the city. It is followed by the ownership regularization policies, which accounted for 26.6% of the space's production in the period, both on the *Margen Sur sector* and on the north bank of the Rio Grande. Regarding the State as a producer, we see that although the nation's PROCREAR plan was an important policy in terms of quantitative housing production, because it was a high-rise group, it did not affect expansion, being equivalent to less than 1% of it in the period. Finally, the municipal State produced 2.8% of urbanizations, its role being lesser than in the previous period and it also having a smaller impact than in Ushuaia.

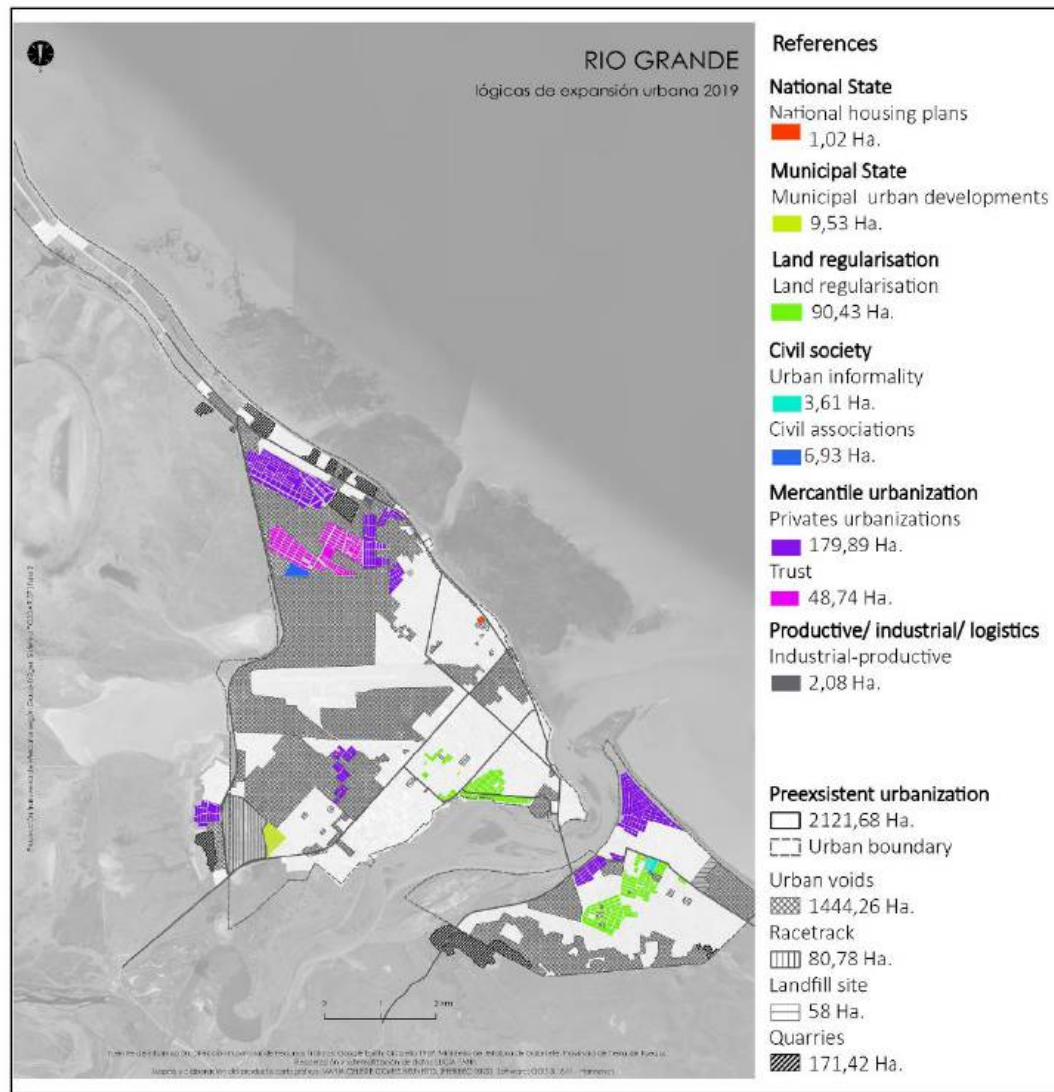


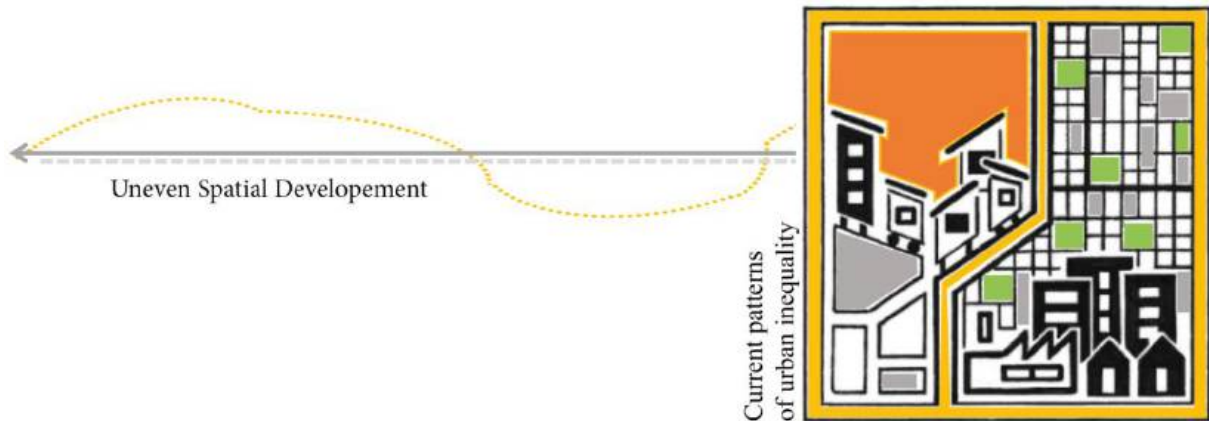
Figure 6.42: Production logics of urban space. Río Grande, 2019. Source: own elaboration

Based on the above, we can say that the dynamics of commodification and decommodification under which the urban expansion of Ushuaia and Río Grande took place were central to their internal differentiation within the DED processes. The role of the state, as indicated by Smith (2012 [1996]) and Brenner (2009a), was fundamental in defining the patterns of spatial occupation and the possibilities (and limitations) of the different actors in the cities. So were the dynamics of intra-urban valorisation, which, as we have seen, were more intense in Ushuaia. Faced with a lack of options, informality has grown in both cities, particularly (though not exclusively) at times of industrial boom.

The analysis presented in this chapter has been complex, and we will discuss its results in more detail in the next chapter.

Chapter 7:

Current configuration of urban inequality patterns



The current configuration of spatial patterns of inequality in Ushuaia and Río Grande emerges as the last "instant" of the process of Uneven Spatial Development in Tierra del Fuego. In this sense, it could be considered the spatial synthesis of the historical process of occupation of the Tierra del Fuego space and its cities, of the territorial impacts of industry, of the last years of crisis, the rise of tourism and deindustrialization. Also, and in a complementary manner, of the dynamics of mercantilization and decommodification that determined the location and possibilities of the different actors in the city.

Three issues at least can be observed in terms of urban inequality: the homogeneous landscapes of inequality in relation to the patterns of occupation of space; the dynamics of urban mercantilization and elitist development; and, finally, its counterpart, the spaces of urban vulnerability. The resulting patterns of inequality in each case show similar aspects linked to the cycles of industry and housing policies applied at the provincial level, and other different ones, linked to the pre-existing structuring of the territory and the dynamics of differentiation internal to the cities.

With the aim of understanding the current configuration of cities emerging from the USD process presented in the previous chapters from different aspects, a comprehensive, synthetic-comparative analysis of the main dynamics studied at the urban scale is carried out first. This is not intended to describe again the processes already addressed, but to reinforce their reading in terms of temporal, inter-urban and multidimensional transformation. The overview of the process previously carried out for each temporal sub-period, and the interrelationships found between the topics worked on, allows for an analysis of the patterns of inequality currently observed in a non-fragmented manner.

We will then present, in the first place, some of the main points on which the analysis of USD is based in a comparative perspective, in the production of the urban spaces of Ushuaia and Río Grande. The relationship between demographic growth associated with industry and urban

expansion, as dynamics of "leveling" in the cities, is discussed. Next, the dialogues identified between the logics of production of urban space are synthesized, establishing transversal links between them. The data presented are the result of the statistical synthesis (Annex 6) of the spatial analysis carried out in Chapter 6.

Afterwards, the current patterns of inequality are analyzed through an interpretative reading of the configuration of homogeneous landscapes, according to the different actors that produced each city. Its realization was based again on the results of Chapter 6, which were complemented with the observation made in the field visits, with the graphic and photographic record, and images extracted from Google Maps. An analysis of land and rent affordability conditions is then incorporated, complemented with the spatial analysis of urban vulnerability conditions, both issues developed in previous work by the author, within the framework of her master's studies (Fank, 2021). Lastly, as we move towards the end of this research, we return to the theoretical concept of Smith (2012 [1996]) presented at the beginning of "urban border", seeking to make progress in a Latin American reinterpretation.

7.1 The relationship between the industry and the urban expansion in the universalization dynamics

As mentioned before, population growth associated with the industry translated into the growth for expansion of Ushuaia and Río Grande. While, between 1972 and 2019, population grew over 1000%, urban spaces grew 1067% and 500%, respectively, as shown in Figures 7.1 and 7.2. These figures confirm what Smith (1984) had initially explained in its theoretical discussions in relation to the impacts of the capitalist activities expansion within urban spaces.

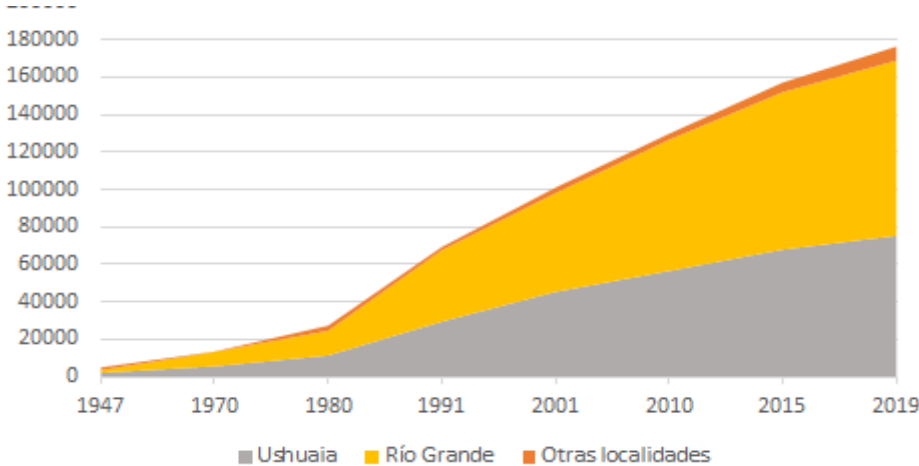


Figure 7.1: Population growth in Ushuaia and Río Grande. Source: Self-research based on the basis of data provided by INDEC, 2010

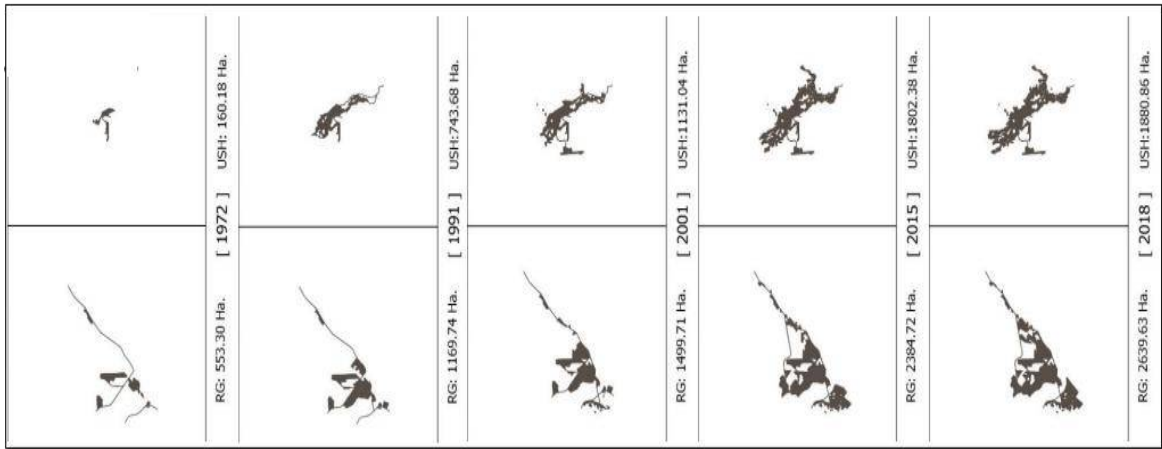


Figure 7.2: Urban expansion in Ushuaia and Río Grande, according to industrial periods. Source: Self-research

However, the dynamics of economic growth for expansion were not linear in time, nor was it the same in the cities. There are some prominent differences considering the industrialization and deindustrialization cycles that have occurred up to now and also concerning the relationship that each city established with the industry. After analyzing Figure 7.3, which compares the urban expansion dynamics in the two cities, we can claim that the most significant growth dynamic started in both cities after 1980, with the population permanent settlement. In subsequent periods, Río Grande showed more fluctuations in its expansion than Ushuaia, based on the positive or negative phases of the industry. In Ushuaia, growth was more stable thanks to industry and tourism and due to its role as the political and administrative capital. We can state that the relationship each city established with the industrial dynamics determined the differences in their growth behavior.

It should be noted that both cities showed their best dynamics of expansion during the positive phases of industrialization, between 1980 and 1991, and later, between 2003 and 2015.

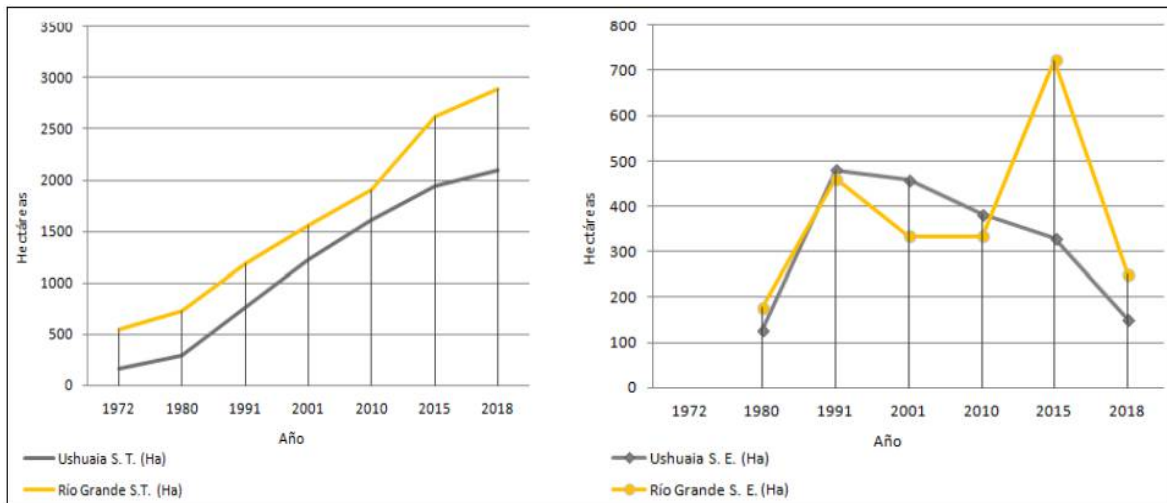


Figure 7.3: Total urban expansion (left) and the urban expansion according to the industrialization phases (right). Source: Self-research

Different factors like the geographic characteristics, specific location of productive capital, as well as the infrastructure available, impacted directly on the patterns of expansion. It is important to mention the principle of place, cited in Brenner (2009 a), for the analysis of USD, considering the possibilities and limitations of each city which determine the current scheme of productive activities within the territory. Since the beginning of the study period, Río Grande showed a larger urbanized area, linked to a more dispersed occupation of space, favored by the topographical characteristics, mainly plains, with better conditions for industry. It showed a more significant territorial extension, if we consider the large empty internal urban spaces. Another fundamental factor in the configuration of expansion was land property, as most of the land belonged to private owners. Ushuaia's growth, in turn, was conditioned by the Andean mountain range, as well as by the presence of wetlands in the flat areas, which limited industrial expansion. Also, as Ushuaia is surrounded by sea and mountains, these landscape conditions paved the way for subsequent tourism development.

7.2 About the dynamics of commodification and decommodification in the differentiation processes (the logics of the State, the market and the civil society applied to the production of urban spaces)

The production logics of urban space determined different ways in which the dynamics of commodification and decommodification influenced the USD process and the configuration of patterns of inequality.

As shown in Figure 7.4, during the first industrialization cycle, between 1972 and 1991, the State was the most important actor in the production of both cities (64% and 64,5% of the space produced in Ushuaia and Río Grande, respectively), followed by the logic of necessity (mainly due to the informal production of the city). Mercantile dynamics were not registered during this period. Since 1991, differences started to arise regarding the production of the cities, which lasted during the whole industrial cycle. With tourism on the rise, commercial practices started to grow in Ushuaia. In turn, State actions regarding housing production were reduced (31% of the space produced), and the logic of necessity increased. In Río Grande, on the other hand, no mercantile dynamics emerged, and the State continued being the principal actor (69%). At the same time, as migration was less intense, informality decreased.

From 2003 to 2015, during the last industrialization cycle, mercantile production increased in both cities and in this context, with a new migration wave linked —once again— to industrial employment, informality was chosen as the predominant logic of production of the urban space, much more than State production (23,5% and 21% of the space produced in Ushuaia and Río Grande, respectively). The last deindustrialization process, between 2016 and 2019, produced a considerable increase in Río Grande's market regarding new urbanizations. Meanwhile, in Ushuaia, all the attention

was on the renewal of the central area, through densification and shop-building construction aiming at tourism. The State, in turn, increased the urban space production in Ushuaia (69%), while it had low activity in Río Grande (9% of the space produced).

Thus, we can see that both cities show similar space production dynamics during the industrial boom and differences during industrial crisis periods.

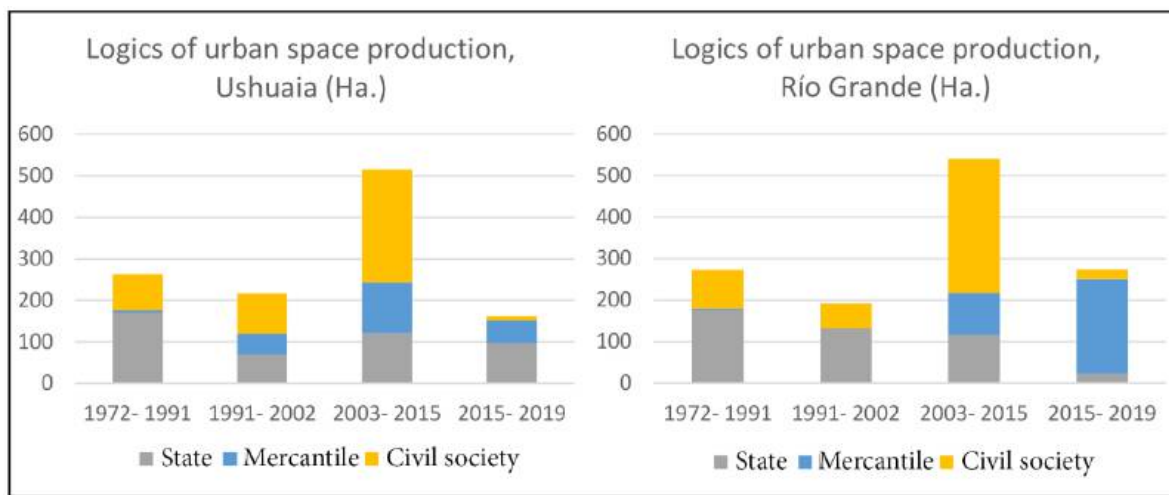


Figure 7.4: Production logics of the urban space, 1972-2019. Ushuaia and Río Grande. Source: Self-research

The different production logics of the urban space determined some ways in which the dynamics of commodification and decommodification influenced the USD process and the configuration of patterns of inequality.

Regarding the State, it has influenced the production of the urban space in each city in 4 ways: as a producer, as a planner, as a regulator or facilitator of the commercial practices of the city and through tolerance or repressive practices, toward informal settlements. From its actions, we can conclude:

On the one hand, in general terms and from an intra-state perspective, we can mention the following points associated with the multi-sector aspect of policies that influenced the production of the urban space. Essentially, the lack of articulation between the productive policies and the urban and housing policies applied in TDF and its cities. Since industrial promotion was encouraged by the National State (and also by the sub-national State, at that time) as a strategy for settlement, it is surprising that the territorial effects of such population growth were not anticipated during these years. In a context of great migrations and lack of housing production, the investment times and the rhythm of capital, as well as the economic crises, caused a mismatch between the housing needs and the houses available. Something similar occurred during the last years in Ushuaia, where tourism had an impact on the land and rental markets. From this point of view, one of the strongest conclusions taken regarding the role of the State is related to the sectoral disarticulation, which becomes evident

in the decoupling between the time and expectations of the productive policy and the time of urban-housing policies. The lack of a comprehensive approach on the part of the State about TDF's territorial development led to certain inconsistency between productive growth and its urban effects, reinforcing inequalities.

In closely analogous terms, a second question to be considered is the complexity coming from the federal organization, considering that the different levels of the State (national, provincial and local) have proceeded in almost the same way (not necessarily articulated) within the urban spaces. While the principal productive policies were applied at the national level, the sub-national provincial level was the State actor that most influenced the housing production in TDF's cities, although it was strongly conditioned by the changes in the national housing policy. Concomitantly, at the local level, the cities' governments were the ones that had the greatest impact on urban policies, both in terms of urban planning and in terms of regulation (or facilitation) of commercial practices in the cities. On the one hand, there is determination on the part of the national State in the productive dynamic and the housing policies conditions promoted by agencies such as INTEVU/IPV during the different periods. There is also a strong disarticulation between the policies directly associated with housing promoted by IPV and the urban policies applied by the cities' governments. Regarding informality, both the provincial State and the local governments took action towards it, but in both cases the economic resources came from the central national government. This inter-scale complexity of the State action caused juxtaposition, disarticulation and contrast among housing and urban policies that contributed to the reproduction of urban inequalities. This became evident in the local governments' willingness of consolidating the empty urban spaces, while the Instituto Provincial de Vivienda, in turn, produce new urbanization areas outside the urban borders. The vision and practice (not always coherent) of these actors also had an influence on the informal settlement developed during each period.

In intra-state comparative terms, as Figure 7.5 shows, the subnational/provincial state level was the most influential actor in the production of space in both cities. Between 1972 and 2002, it played a central role in the growth for expansion as a producer of housing complexes. Between 2003 and 2015, the provincial government had a significant activity in Ushuaia and a predominant one in Río Grande while its activity was low in both cases between 2016 and 2019, especially in Río Grande. Regarding the local government, it almost did not participate in the production of the cities until 2003. From that moment, as mentioned in Chapter 6, policies that facilitate access to land were launched and the local government gained a protagonist role. Historically, the national State did not have much influence as a housing producer, however, its influence increased in 2012 with the PROCREAR Plan which did not place in Ushuaia y Río Grande until 2016.

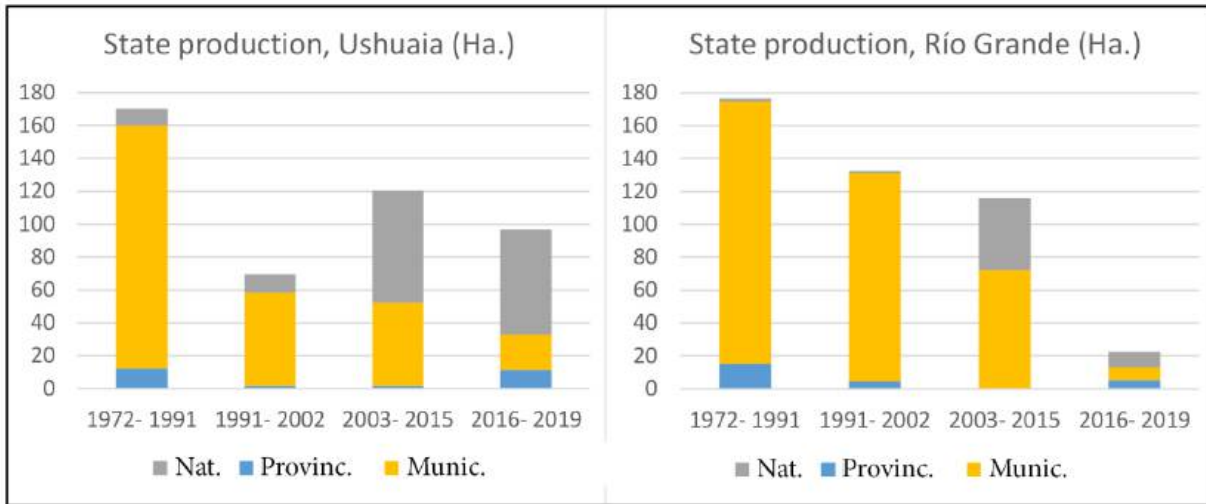


Figure 7.5: State production of city in Ushuaia and Río Grande according to the State level. 1972-2019. Source: Self-research

Regarding the sub-national provincial level, Figure 7.6 summarizes the actions taken during the different industrialization and deindustrialization cycles identified, in relation to both the access to housing and the action toward informality. The periods of greatest housing production coincide with the periods of industrial boom. During these times, big housing complexes were built in both types, multi-storey buildings and duplex houses. However, it becomes evident, as mentioned above, a decoupling between migration and the time of housing production. Furthermore, the policies related to actions toward informality began in the 90s with a repressive idea of the problem, and they suffered modifications until 2003 when the policies of tolerance were launched. Housing emergency was used in both ways, first as an eviction practice and years later as a banning mechanism.

The great-scale housing complexes produced by IPV caused segregation within the space, as they were associated to urban programmes, as it is the case of Monte Gallinero neighborhood in the 80s and “640 viviendas” in Ushuaia, or Chacra II and Chacra IV neighborhoods, in Río Grande. The distribution of lands for these projects depended on the fiscal lands available to be granted to IPV. Also, when the government purchased the lands from private owners, such purchases were subject to the will of the owners, generally in peripheral rural lands. Urbanization areas unrelated to urban stains are clear examples of the disarticulation between local urban policies and provincial housing policies.

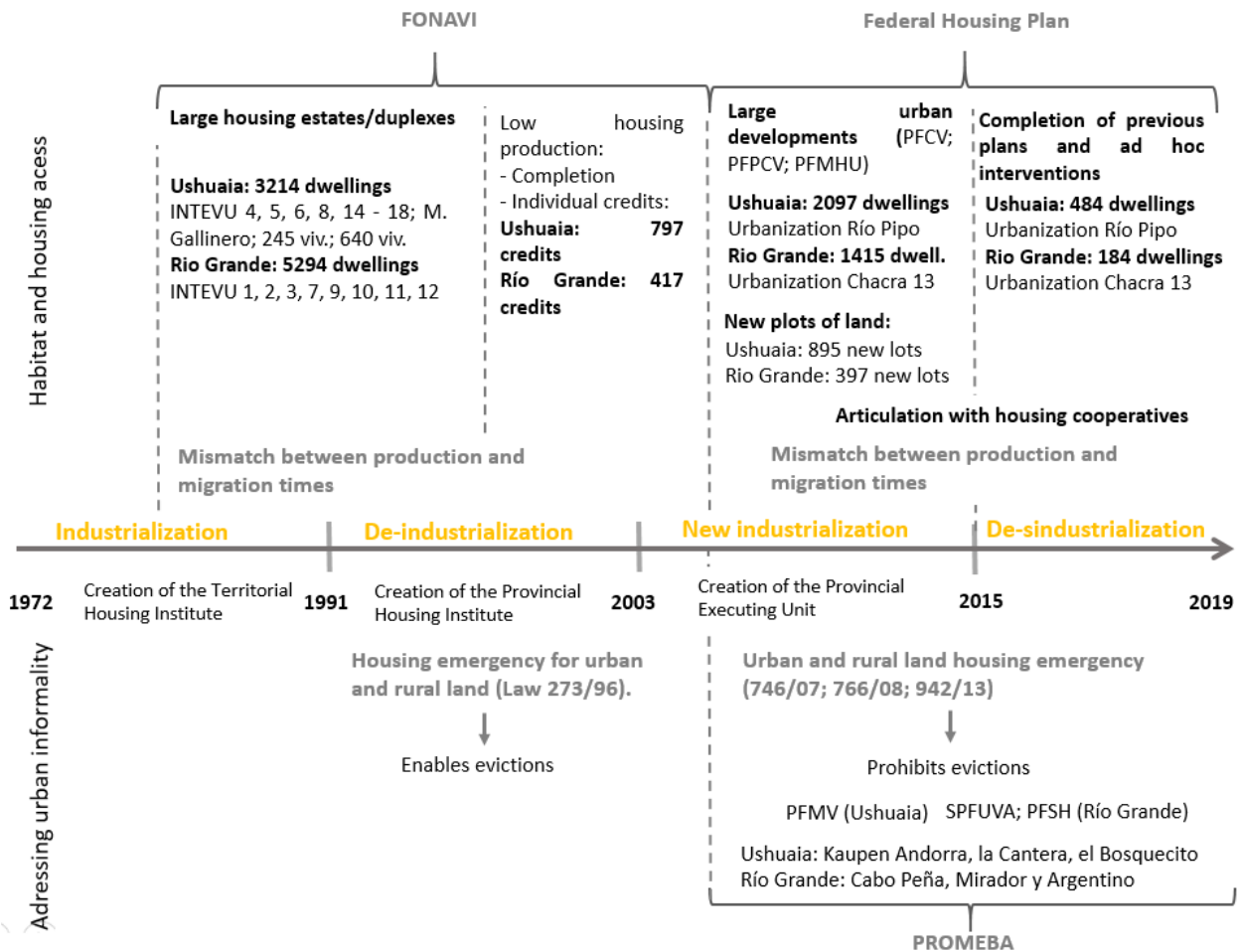


Figure 7.6: Synthesis of main provincial policies related to access to housing and action towards informality, regarding industrial cycles. 1972-2019. Source: Self-research

Regarding the role of the local governments in providing new housing solutions, such was very limited until 1991. This situation was caused due to a weak institutional capacity resulting from a small administrative structure and a lack of fiscal land. Since 1991, both cities consolidated in terms of institutional structure and were able to attend to the housing demands; however, none of them provided new solutions until the mid-2000s. By that time, significant access-to-housing policies were identified in Río Grande involving new subdivisions and housing programmes. In the case of Ushuaia, this did not happen until 2016, as shown in Figure 7.7.

In relation to the planning instruments and urban management presented in Chapter 6, actions were taken at a time different from the migration waves that influenced the occupation of the space.

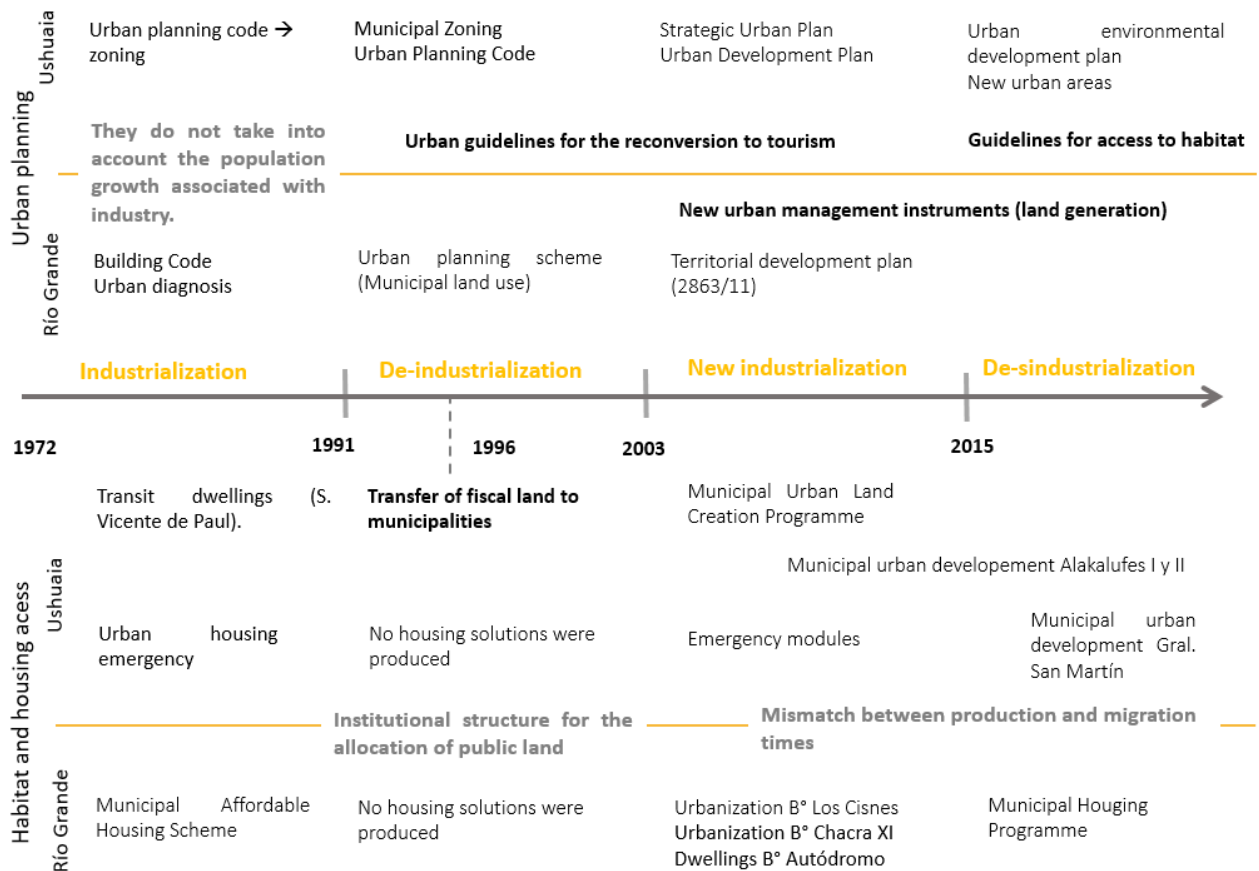


Figure 7.7: Synthesis of main local policies related to urban planning and access to housing, regarding industrial cycles. Ushuaia and Río Grande, 1972- 2019. Source: Self-research

In Ushuaia, the instruments developed between 1991 and 2015, among which we can find the programmes *Plan de Ordenamiento Urbano* [Urban Organization Plan] and *Plan Urbano Estratégico* [Strategic Urban Plan] were based on the touristic city project disconnected from the access to housing mechanisms. Nor was the industrial dynamic taken into account as a fundamental variable for urban growth. Not until 2016, with the *Plan de Desarrollo Urbano Ambiental de la Cuenca Media* [Medium Catchment Area Environmental Urban Development Plan] was the question of the access to housing approached from the perspective of urban planning. However, there were no urban management instruments that guarantee the compliance with planning instructions.

In Río Grande, the programmes *Esquema de Ordenamiento Urbano* [Urban Organization Scheme], 2001, and *Plan de Desarrollo Territorial* [Territorial Development Plan], 2011, were the most important planning instruments but were put into work very late. In both cases, the programmes were sanctioned as urban legislation ten years after their completion. For this reason, they had little influence in the territory, since the urban growth did not reflect what had been planned.

In both cases, the urban plans of the early 2000s did not contemplate the last reindustrializing cycle, and with it, the city project of the local states was once again disconnected from the productive territorial project of the National State.

Following what Smith (1996/2012) initially explained in its theoretical discussions, the commodification process worked as a dynamic of universalization in terms of prices of the urban space in both cities, at the same time that they were fundamental in defining internal patterns of inequality. In Ushuaia, the city's commercial production represented 23% of the urban expansion between 1991 and 2002; 24% between 2003 and 2015, and finally, 34.5% between 2016 and 2019. In Río Grande, urbanizations were not developed due to commercial logic between 1991 and 2002; between 2003 and 2015, the space produced by the market represented 19%, while between 2016 and 2019, 83%. However, the forms of commercial production were not the same in each case, and in this line of thought, inter-urban differences are also distinguished.

In Ushuaia, the landscape and natural conditions played a fundamental role in the definition of commercial developments as exclusive urban environments, and also in the urban renewal processes of the central area. Over time, the market took at least three different forms which have overlapped. The first moment in the 90s, with the production of exclusive urban environments (Country de Preto and Casas del Sur neighborhoods). At the same time, it began a market dedicated to tourism, materialized in the construction of hotels, and new ventures such as the *Trencito del Fin del Mundo* and *Cerro Castor*. In recent years, the tourism market has adopted new characteristics linked to temporary rentals, an issue that has caused large processes of exclusion of the local population as prices went up. Finally, there was a market associated with the industrial dynamic, which began to grow in 2003 in relation to real estate speculation on the land and housing, in the absence of state answers. The land and rental market prices analyzed in 2020, in relation to salary capacity, are highly unaffordable for the population receiving low incomes.

In Río Grande, the last market in the enumeration was the largest one, and in this case, private ownership of most of the available land was a key element. In this city, the rental market shows worse affordability conditions than the land market. Most commercial urbanization patterns took advantage of the provision of services provided by state urbanizations. A strong speculative logic is also observed as there is a considerable number of empty urban spaces owned by private owners within the city. In recent years, many of them have started a process of subdivision, generating an informal production within the commercial logic.

In relation to the land market, it was mainly promoted by patrimonial owners, i.e. historic owners of lands granted by the National State for rural exploitation. In Ushuaia, those urbanizations promoted by private investors began to grow.

Regarding the state policies on the commercial production of the city, no regulation instrument has been developed yet; on the contrary, many times the capital concentrated sectors received support.

Private initiatives were accompanied by policies of distinction, which sought to consolidate Ushuaia’s image as a tourist city (Figure 7.8).

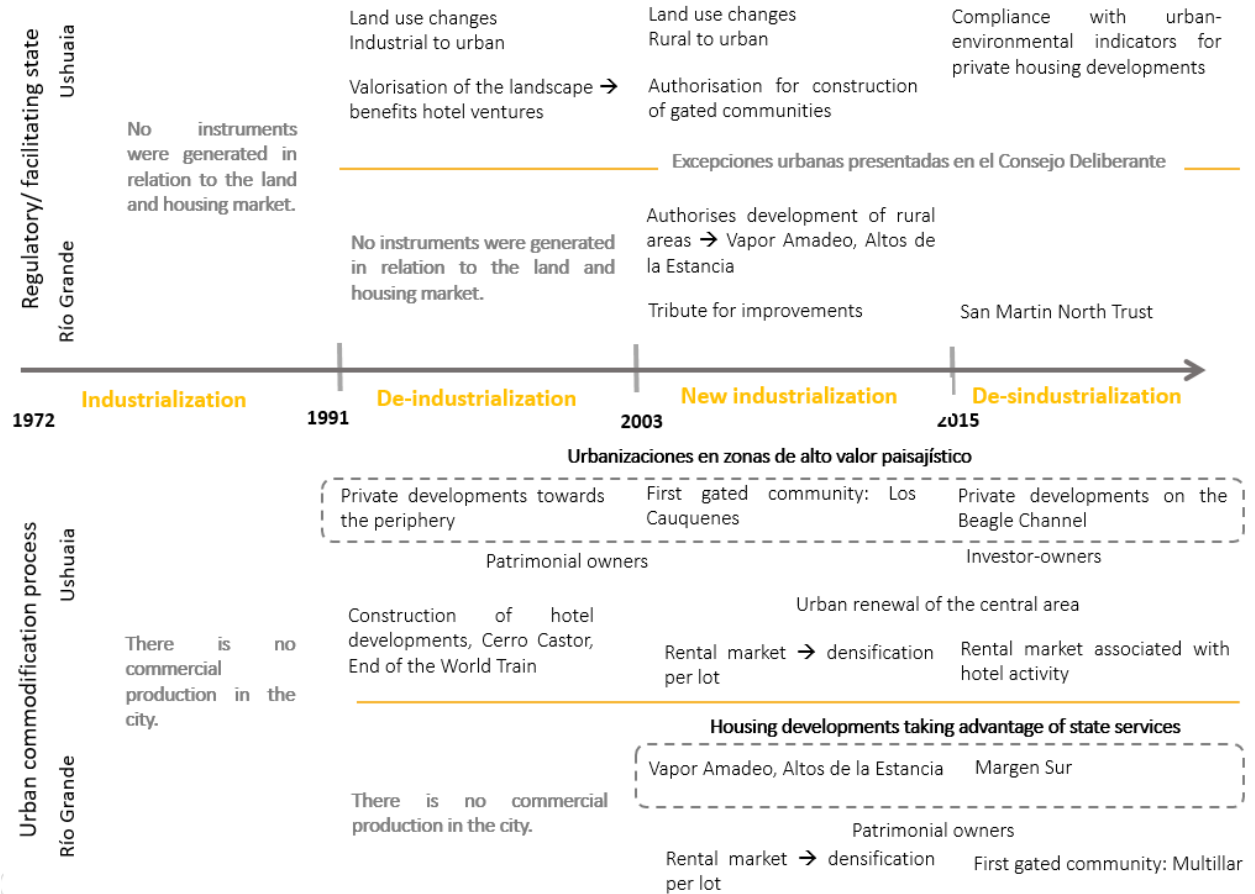


Figure 7.8: Synthesis of main local policies of market and market dynamic regulation/facilitation, regarding industrial cycles. Ushuaia and Río Grande, 1972- 2019. Source: Self-research

On the other hand, in Río Grande, market regulation instruments were developed, such as *Tributo por Mejoras* [Tribute for Improvements] and *Fideicomiso San Martín Norte* [San Martín Norte Trust]. These programmes allowed the city to recover part of the urban surplus value, and in some cases, set maximum prices for subdivisions. The great commercial production of the city between 2016 and 2019 is largely explained by the State’s promotion of urbanization developments through private means, considering that 20% of the subdivisions generated correspond to the local State as surplus value.

As a result of this difference between the two cities, Ushuaia shows higher prices and worse affordability conditions in relation to land. It deserves mention the role of the local policymakers, *Concejos Deliberantes*, which have promoted private urbanizations without observing the urban legislation in both cities. In this sense, there is also a strong disarticulation of powers (executive and

legislative) at the local level. As regards the rental market, there is no instrument to regulate prices and this translates into an unaffordable market for those who have low incomes in both cities.

Regarding the informal production of the city, it became a characteristic way of access to land and housing both in Ushuaia and in Río Grande in a context of great demographic growth expressed in the expansion of cities during the 1980s. As shown in Figure X, in Ushuaia, it meant 31,5% of the space produced between 1972 and 1991, while in Río Grande, 34%. As of 1991, differences are perceived in the processes of informal urban production in each case.

Between 1991 and 2002, urban informality decreased slightly in Río Grande, representing 29% of the space produced, thanks to the slowdown in demographic growth, the supply of housing produced by IPV and the regularization processes initiated. In Ushuaia, informality continued to grow and reached 45% of the expansion during the period, thanks to the lack of clear policies on the management of public land. The relationship with the industry, the emergence of tourism, as well as the urban planning capabilities of each city were key factors in this differentiation.

As of 2003, with reindustrialization and growth of real estate speculation, informality processes have intensified in both cities until 2015. In Ushuaia, it represented 52% of the expansion, while in Río Grande, 60%, being the historical period of greatest growth in both cases. The growth of informal production in this period can once again be associated with a new decoupling between industrial policy and the time of housing policies, and also with the forms of industrial employment. While in the formal housing market guarantees of stable employment are required, many of the industrial contracts responded to temporary employment modalities (discontinuous personnel contracts). The State, on the other hand, requires two years of residence in TDF to become a beneficiary of the housing policy, resulting in a considerable amount of the new migrant population without formal opportunities to access a house. This is why we consider the State responsible for promoting informal occupation of the space whether directly or indirectly (through industrial temporary employment legislation).

Between 2016 and 2019, with a new economic and demographic slowdown resulting from the industrial crisis that began with the *macrismo*, and also, as a result of a greater offer of housing solutions (commercial solutions in Río Grande and state-owned in Ushuaia), informality was considerably reduced.

Depending on the productive cycle, we can claim that in Río Grande the periods of greatest informal growth were the industrial ones, while in Ushuaia, growth was linked to the internal commercial dynamic of space and the policies that favor it.

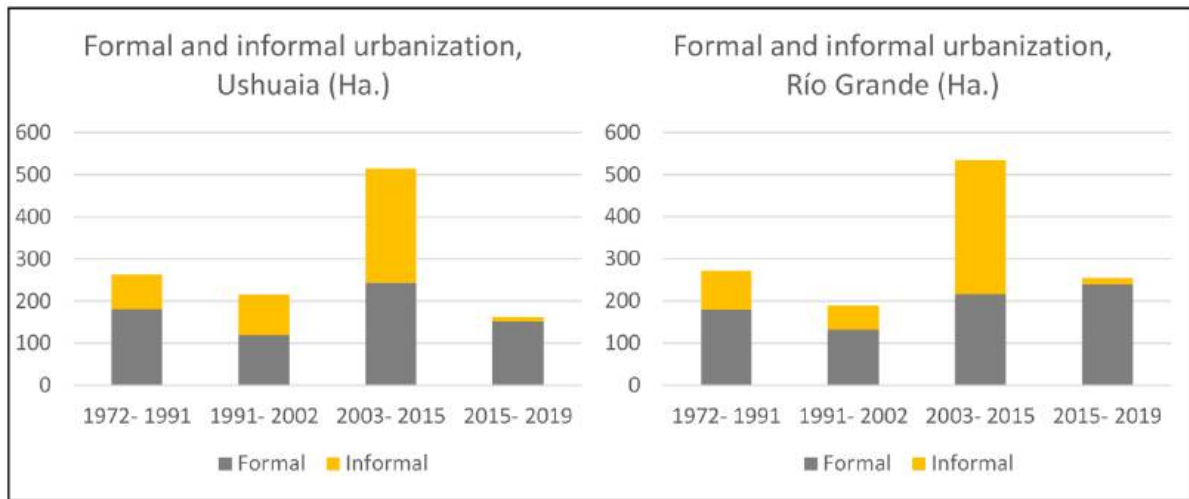


Figure 7.9: Formal and informal production of city, 1972-2019. Ushuaia (left), Río Grande (right). Source: Self-research

Although in the beginning, it seemed that there were no major differences between the formal and the informal city, this became a central issue in the patterns of differentiation over time. Until 1991, informality was not equated specifically to a socioeconomic position, as it was associated with the new migrant condition.

In Ushuaia, although until 1991 there were certain differences in terms of layout, fabric and laying of services between the informal/formal-state occupation, there were no great differences in terms of location, and the settlements grew interstitially. In Río Grande, and given the private ownership of the land surrounding the urban area, the settlements originally grew on the periphery of the urbanized space, in areas of high environmental risk, such as the riverside.

During the 90s, there appeared informally-produced spaces in both cities for primary production, as an alternative to industrial unemployment. Also, in the case of Ushuaia, there appeared new middle-class informal neighborhoods, linked to the idea of ecological neighborhoods. The lack of availability of fiscal land, as well as urban beautification policies linked to tourism in Ushuaia, led to the establishment of settlements on the urban periphery.

As of 2003, the informal production of the city brought about processes of social segregation that were expressed in the spatial distribution of informality. Not only new migrants were living in the settlements, but also low-income citizens with precarious employment conditions. Another difference is that while in the 80s informality used to be individual in origin and dispersed in the territory, the settlements after 2003 were established collectively and in peripheral and hard-to-reach areas.

Given the policies of intolerance applied by both local governments at the beginning of the decade, the settlements were located outside the consolidated urban areas, in areas of environmental risk. In the case of Ushuaia, the settlements were established over the northern mountain, while in Río Grande, the occupation took place on the southern margin of the river. The geographical conditions

worked as physical barriers, which show the differentiation between a formal and an informal city. The relative isolation from the rest of the city caused great stigmatization of the inhabitants of informal settlements, based on the recognition of a single homogeneous social subject in relation to their location and grouping in space. Some similarities between settlements can be appreciated as of 2003, for example, the peripheral locations outside from the more consolidated urban stain and the precarious living conditions.

It deserves a mention about the over-time consolidation and deepening of the processes of inequality associated with the informal production of the city.

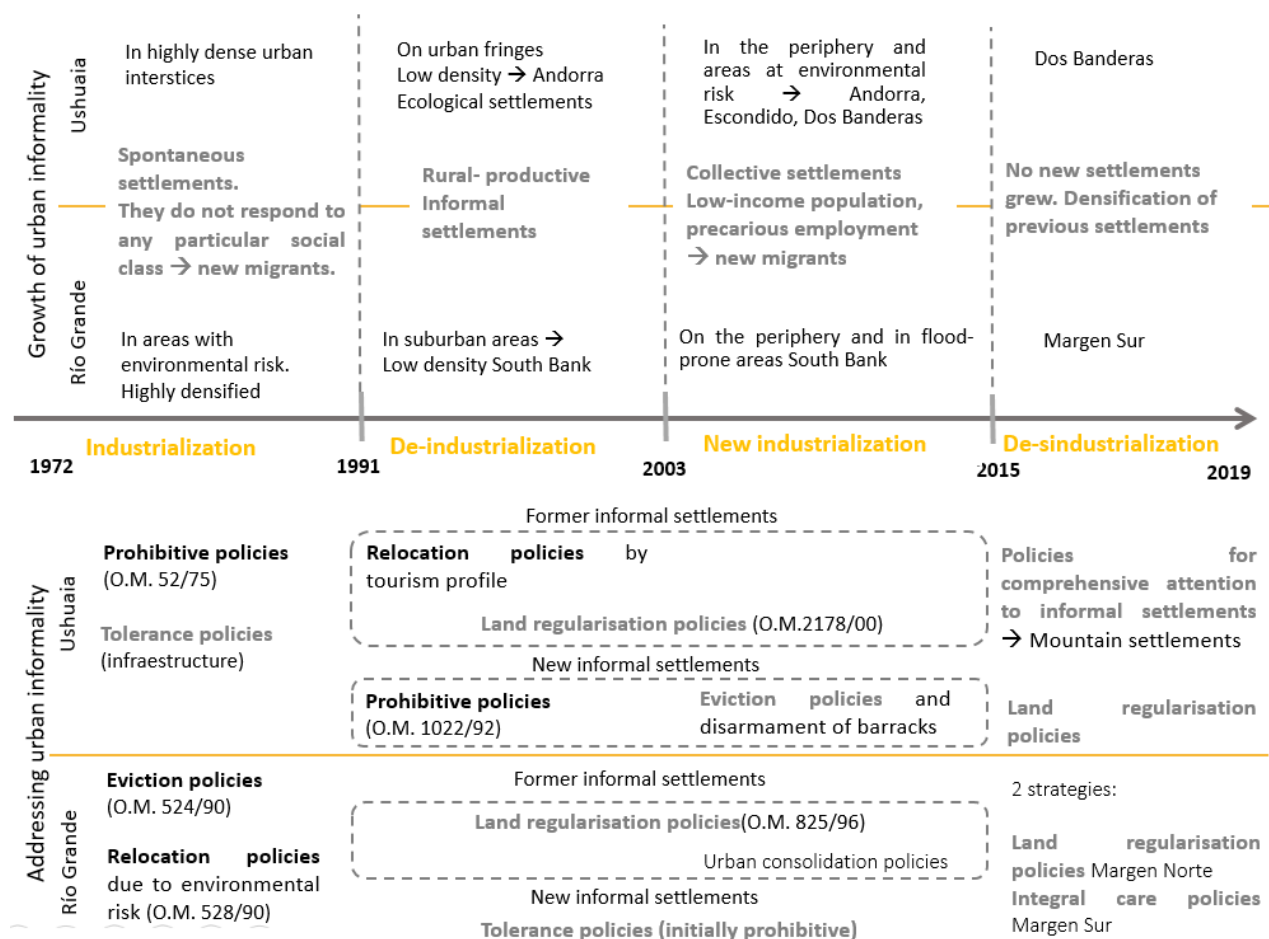


Figure 7.10: Comparative synthesis of the sub regional policies of access to housing and actions towards informality.

The informal production of the city shows two states in TDF's cities. One of them is latent, where informality grew steadily due to a real lack of housing options resulting from the inaction of the government regarding urban and housing policy (either as a provider of housing or as a market regulator). The other state is more intense and takes place during the periods of economic valuation, associated with the industry, tourism or housing speculation.

Regarding the policies to cope with informality applied by the local government, these changed over time in both cases and in relation to the duration of the informal settlements. In Ushuaia, between 1972 and 1991, there was an ambiguous policy in relation to the settlements, since while, on the one hand, the occupation was prohibited, on the other hand, there was a laying of services. In Río Grande, while the first actions consisted on the relocation due to environmental problems, there was a level of intolerance towards new settlements. Between 1991 and 2002, in Ushuaia and linked to the image of a tourist city, the policies of action towards informality consisted, in general, in the relocation and, in some cases, the regularization of old settlements; in the case of new occupations, there were prohibition policies. In Río Grande, there were fundamentally policies of tolerance, however, few resources were allocated to regularization. Between 2003 and 2015 in Ushuaia, a prohibitive and intolerant vision prevailed with respect to new occupations, which materialized in the application of relocation programs and eviction policies. Concomitantly, the ownership regularization was applied in the areas without “landscape value.” In the case of Río Grande, although policies were initially prohibitive, given the great growth of the settlements on the southern margin of the river, and the lack of real alternatives, the local State showed tolerance and even incorporated informal production as a legitimate way to access housing. Only in 2016, in both cities, the policies regarding the settlements became comprehensive, surpassing the attention in terms of ownership regularization and provision of ex-post services.

We can say then that the time criterion was important in the recognition of the State of the informal production of city. The time spent by the individuals defined their affirmation as citizens, with some basic needs covered, such as public services which must be provided by the State. However, this vision is a direct attack on informality as a way of reproduction during urgent times of need linked to migratory movements produced by industrial dynamics.

7.3 The homogeneous landscapes of inequality

In Ushuaia and Río Grande, as in many Latin American cities, the different logics of spatial production have shaped over time more or less homogeneous sectors in terms of location, layout, fabric, availability of infrastructure, which represent a first “visible” layer of intra-urban inequality.

The greatest differences can be observed in 2020, between the patterns of occupation of formal and informal space, and also within the formal patterns, between the city produced by the State and the mercantile one. Analyzing the first point, we see in Figure 7.11 that in the case of Ushuaia the informal expansion represented 41% of the residential space generated from 1972 on. On the other hand, in Río Grande it represented 37,2%. In both cities, the largest informal extension has been close to industrial areas, mostly in areas that cannot be developed due to their environmental vulnerability. In Río Grande, close to the river (south and north banks), while in Ushuaia, mostly in the northeast,

both on the mountain slope and in the interior of the Andorra Valley. The lack of basic services and the difficult conditions of accessibility constituted a first factor of inequality.

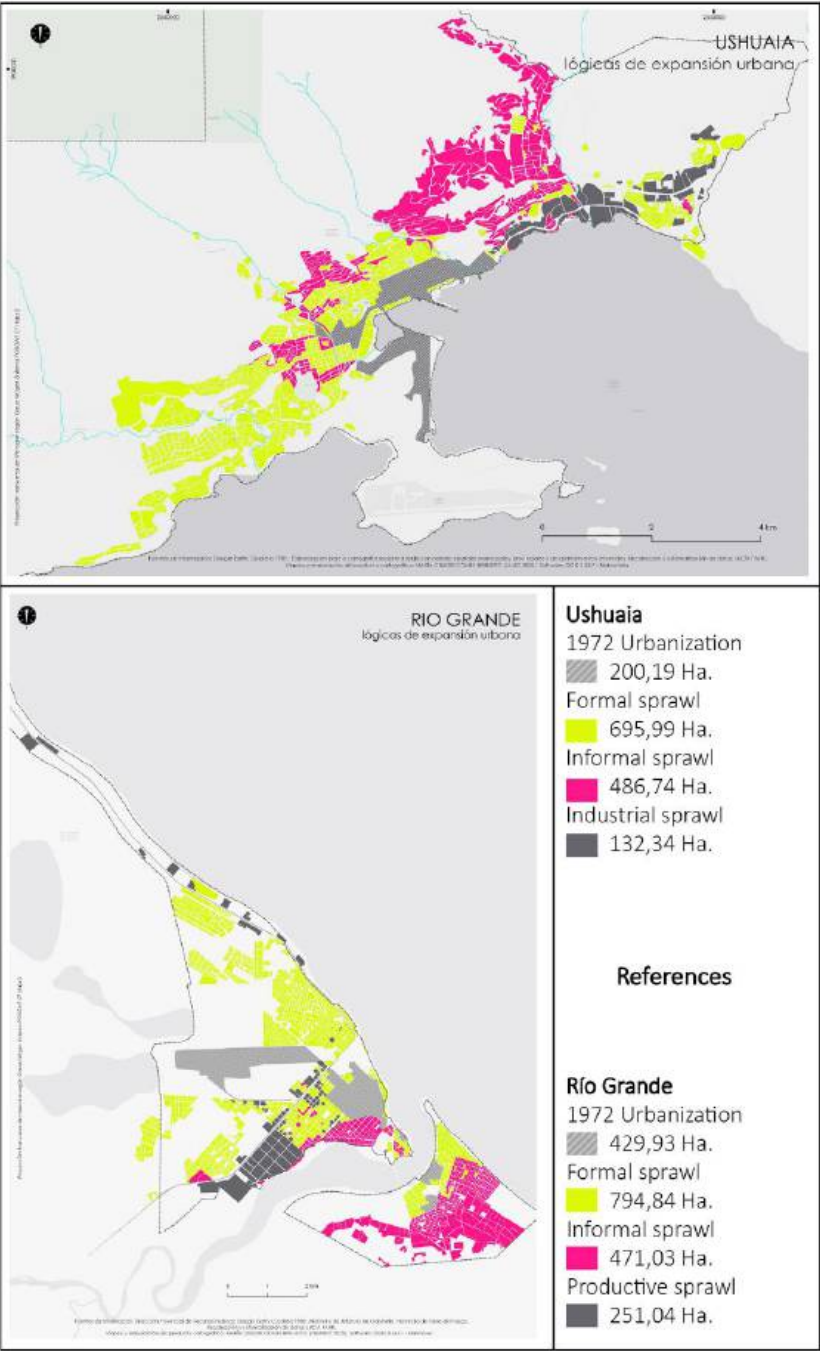
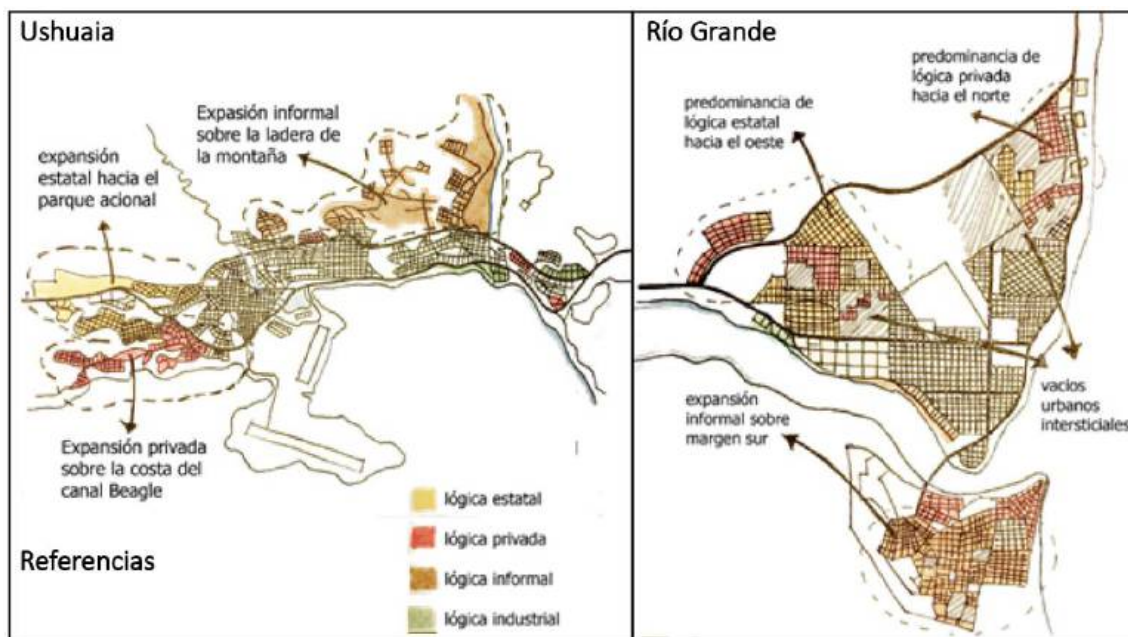


Figure 7.11: Historical patterns of formal and informal space occupation. Period 1972- 2019. Source: own elaboration.

Until the 1990s, the patterns of formal and informal occupation of space did not show major differences in terms of location, and the urban fabric showed a certain heterogeneity between the neighborhoods produced by the State and those produced by the logic of necessity. From 2003

onwards, coinciding with the growth of urban mercantilization dynamics, territorial homogenization trends have been consolidated, as illustrated in Figure 7.12.



Figures 7.12: Predominant patterns of expansion according to occupation logics, Ushuaia and Río Grande. Period 1972- 2019. Source: own elaboration.

Regarding informal occupation in the two cities, clearly differentiated zones of formal and informal habitat were formed. In both cities, most of the settlements were geographically isolated from the rest of the urban fabric; in Río Grande, because of the river and a single connecting bridge, and in Ushuaia, because of the steep relief. In this sense, and returning to the theoretical discussion on typologies of informality, it is possible to see a clear differentiation between the settlements of the 1980s and those after 2003 with respect to their location and the type of fabric they generate, from interstitial to peripheral.

Regarding the logic of state occupation, the production of large housing complexes in both cities has resulted in a homogeneous conformation, relatively detached from the existing urban areas. In Ushuaia, the production of housing, both by the Provincial Housing Institute -IPV- and the Municipality, predominated towards the west, located along Route 3, and physically separated from mercantile urbanization. In Río Grande it also predominated towards the west, separated from the rest of the city by large urban empty spaces. Accessibility conditions, as well as the availability of services and commercial and recreational infrastructures, were in both cases, less than in the sectors produced by the market. It is worth noting the difference in the national state logic, more integrated to the pre-existing urban fabric.

In both cases, the city produced by the market showed privileged conditions, both in terms of location and accessibility and availability of services. In Ushuaia, market production consolidated and extended the occupation begun in the 1990s in the far west, on the Beagle Channel, in an area of high landscape value. It also developed smaller urbanizations in the east end with the same characteristics. Large lots of between 600 m² and 1000 m² predominate, for single-family homes, combined in some developments with hotel projects. In Río Grande, the city's mercantile production grew predominantly towards the north, driven by a private Master Plan to transform rural sectors into urban ones. Also, taking advantage of the services provided by the State, towards the west. Single-family houses predominate, although the lots are smaller than in Ushuaia, being normally 240 m². The landscape, in this case, has not been a particularly valued quality.

Another difference between the two cities is the urban renewal process initiated in the central area of Ushuaia, which, as we have seen, was originally driven by the Strategic Plan (2003), and then continued by the private-mercantile logic. As can be seen in the Figure 7.13, in Ushuaia 40% of the space corresponding to the urban fabric in 1972 changed, as a result of the construction of new high-rise buildings. This process did not take place in Río Grande.

New high-rise buildings (4 to 6 storeys) in the central area of Río Grande. Coincident with pre-1972 urban fabric.



Incipient densification process

New high-rise buildings (4 to 10 storeys) in the central area of Ushuaia. Coincident with pre-1972 urban fabric.



New high-rise buildings account for 40% of the surface area of the central area

↓
URBAN RENEWAL PROCESS

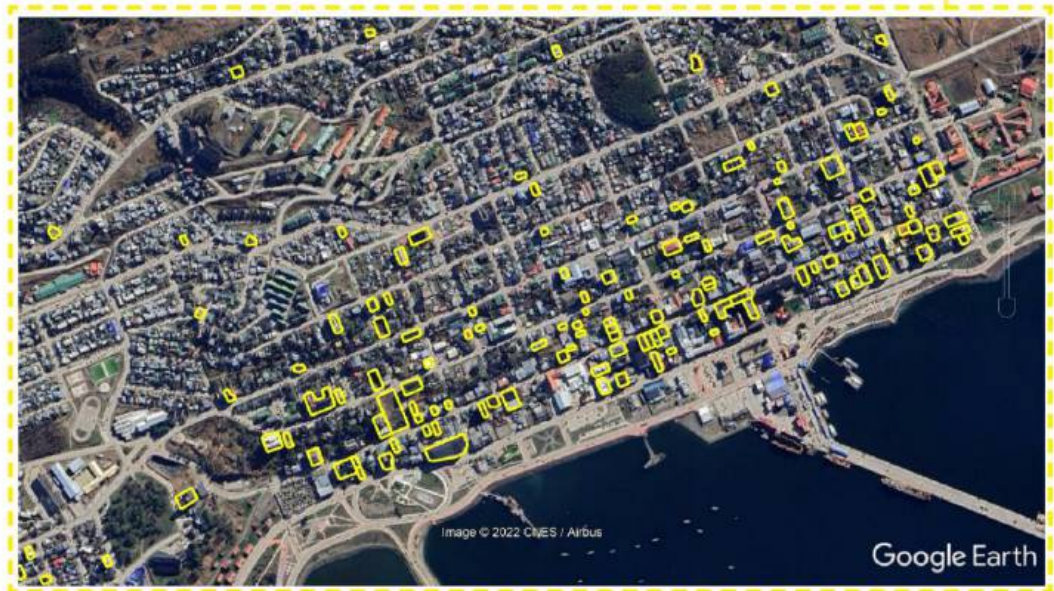


Figure 7.13: Densification of central areas. Río Grande and Ushuaia. Period 2003- 2020. Source: own elaboration based on Google Earth images and on-site tour.

This renovation seems to be particularly associated with tourism activity. By observing Figure 7.14, it can be noticed that most of the tourist infrastructure is concentrated in the central area, corresponding to the pre-1972 urban area.

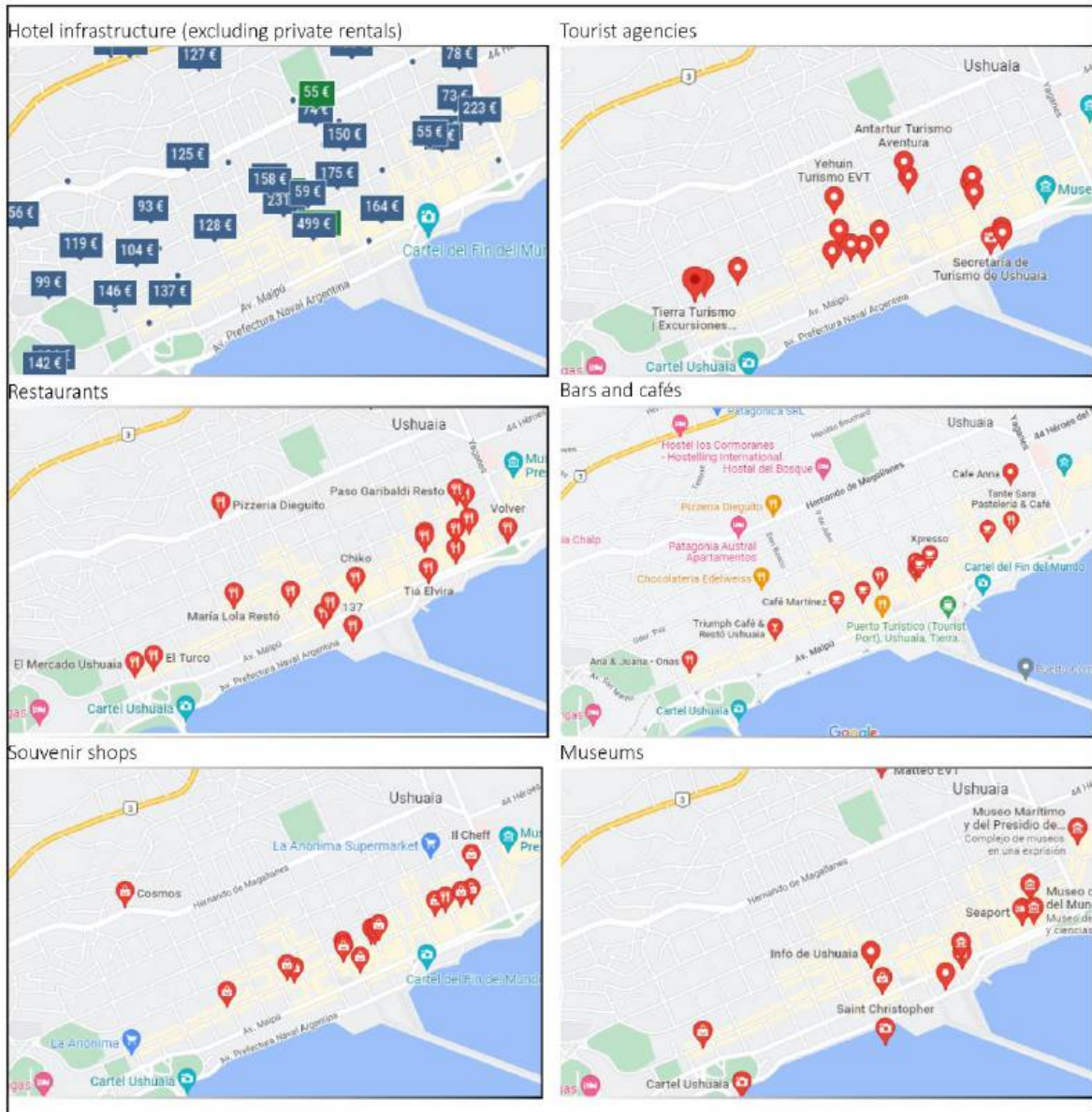
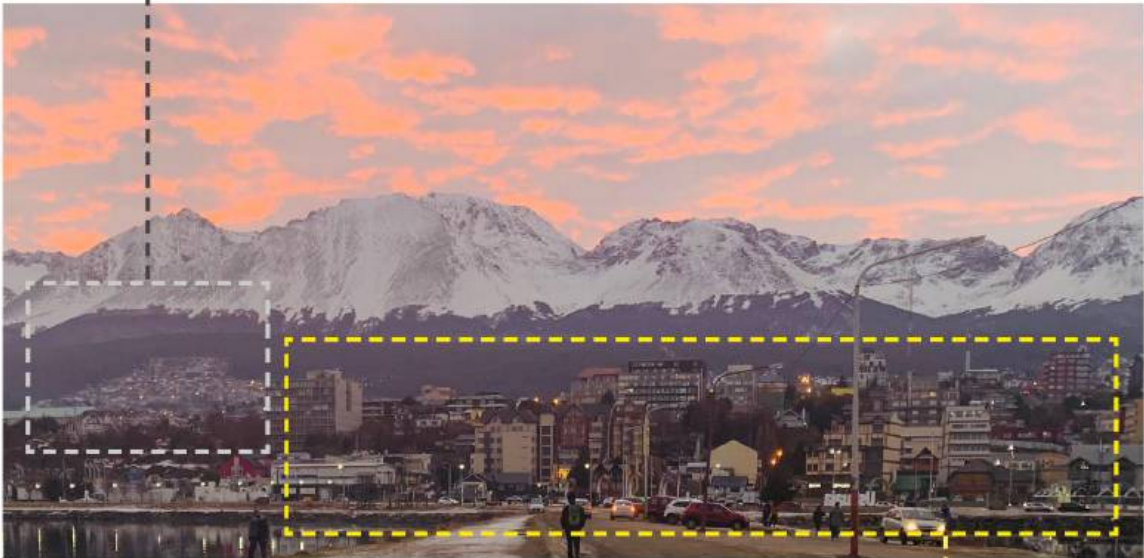


Figure 7.14: Location of tourism infrastructure in the central area of Ushuaia. Source: Google maps, 2020.

The greatest inequalities in terms of homogeneous landscapes are found in both cities between commercial and informal urban developments, although this is more visible in Ushuaia. As shown in Figure 7.15, in the central sector of Ushuaia, well differentiated landscapes were formed between the central tourist axis on the sea and the informal upper neighborhoods above Route 3. In the first case, good quality constructions and urban services can be observed, while in the second case, the habitat shows precarious conditions.



Informal settlement "El Escondido"

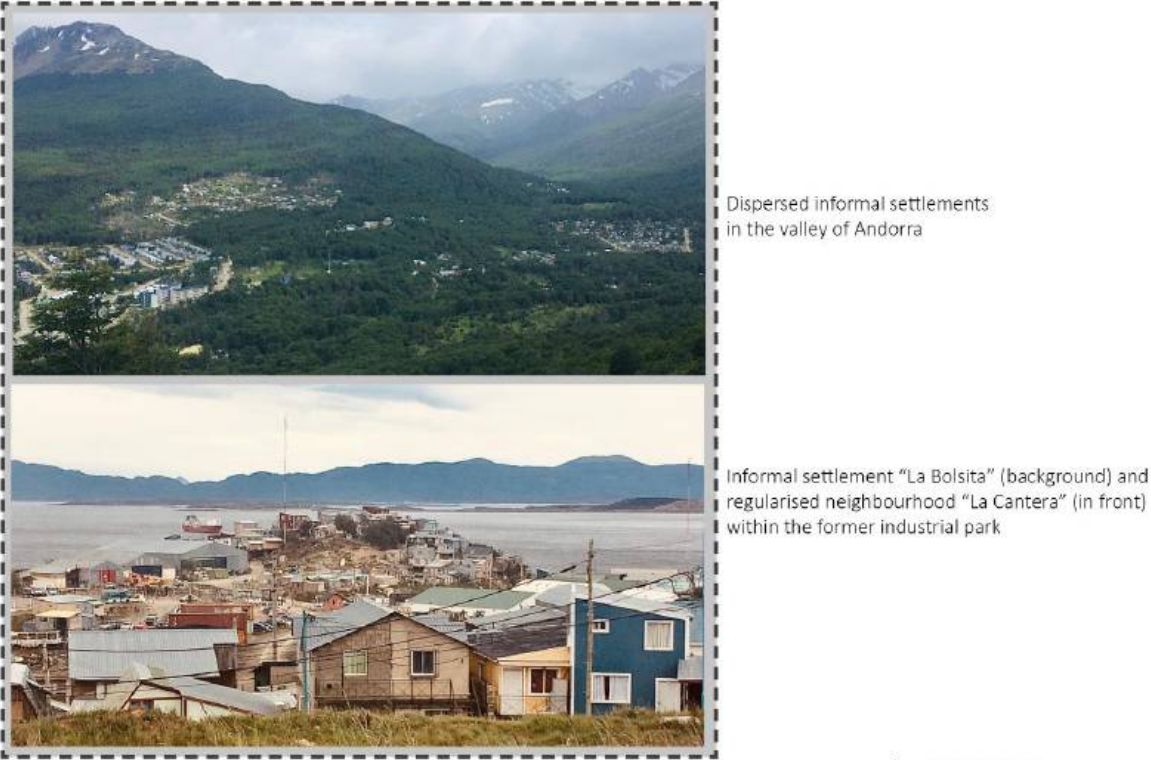


Ushuaia downtown/ waterfront



Figura 7.15: Paisajes desiguales en el área central de Ushuaia. Source: own elaboration

In the expansion sectors, we see that in the west, formal mercantile occupation was consolidated, while in the east, industrial and informal expansion predominated (Figure 7.16).



EAST SPRAWL ↑

↓ WEST SPRAWL

Exclusive towers over Pipo river



gated community "Cauquenes"



Figure 7.16: Uneven expansion sectors in the east and west. Ushuaia. Source: own elaboration

In Rio Grande, the greatest inequalities are observed in the landscapes on the north and south banks of the Rio Grande. To the north, the established city; to the south, the informal city (Figure 7.17).

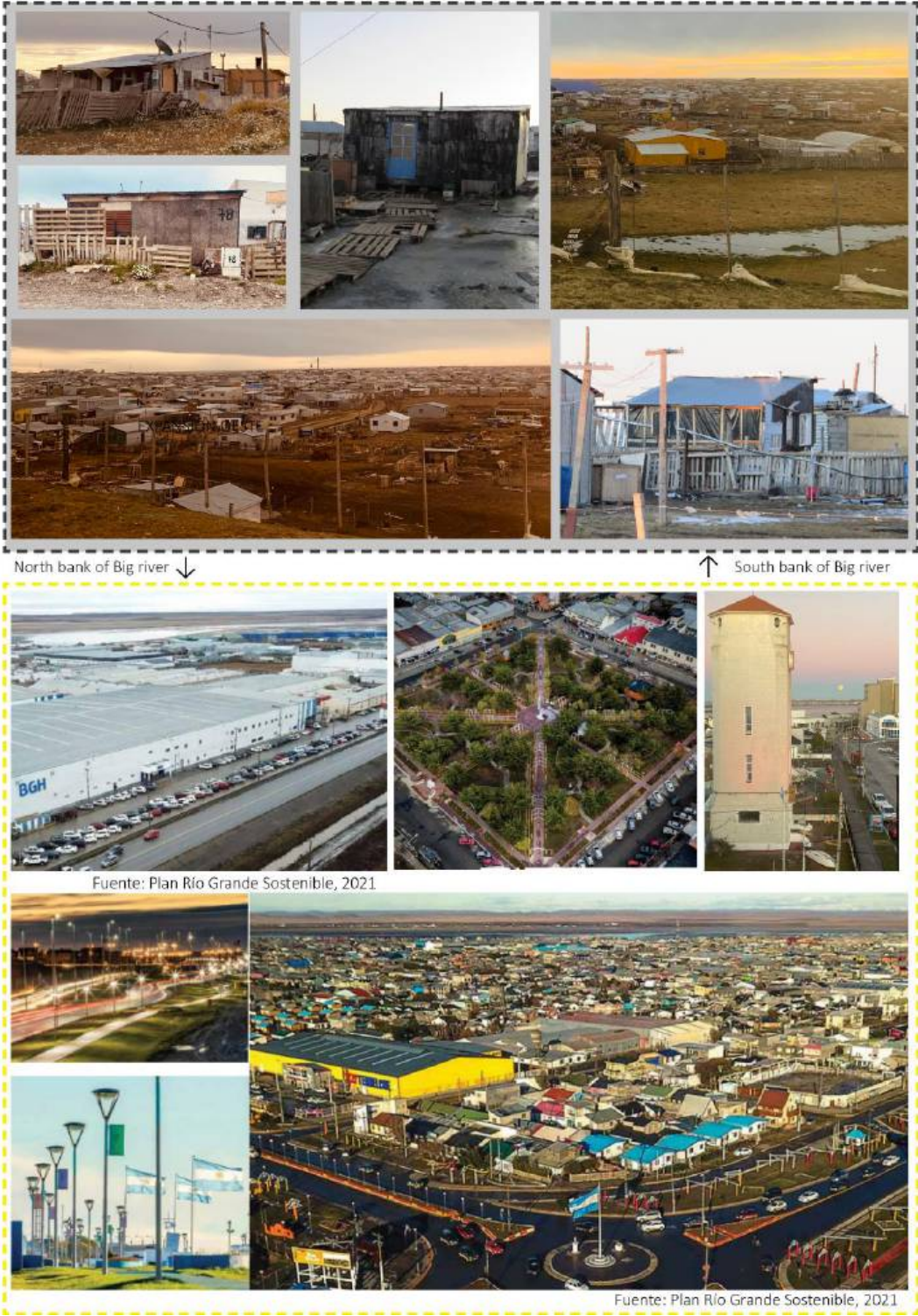


Figure 7.17: Unequal landscapes on the southern and northern banks of the Rio Grande. Source: Prepared by the authors.

7.4 Dynamics of commodification and urban elitization

As we have already stated, the mercantile logic of city production began to grow strongly after 2003 in Ushuaia as well as in Río Grande, although in the former it had already begun in the 90s. In order to understand its impacts, a study carried out by this author, in the framework of the Master's thesis "Vulnerabilidad urbana en asentamientos informales de Tierra del Fuego: una propuesta metodológica para su medición en las ciudades de Ushuaia y Río Grande" (2021), allowed to characterize the conditions of affordability in the access to land and rents in 2020. For this purpose, degrees of vulnerability were established based on the relationship between the population's ability to pay and the price offers available in the market.

According to parameters established by different agencies that have previously worked on affordability indicators (UN-HABITAT; OCDE, 2017), the price of housing should not exceed 30% of income, considering the amount of other expenses that a household must meet, while if it reaches 40% it is already considered unaffordable. In the case of access to land, the range of vulnerability was defined according to the number of years that should be allocated to the payment of the land, considering 30% of the minimum vital and mobile salary (MVMS, in Spanish: SMVM)¹⁹³. Of this time and expressed in savings, the lot should in no case exceed 35% of the value of the affordable housing (considering that the construction of the house and its facilities are subtracted). In other words, if 30% of the salary is spent, the purchase of the land alone represents 35% of the time needed to pay for it¹⁹⁴. In the case of affordability in the rental market, the range of vulnerability was defined according to the monthly payment capacity, considering that a rent does not imply vulnerability if it does not exceed 30% of the MVMS, while it represents a state of maximum vulnerability if it exceeds 40%.

Regarding wages, the minimum living and mobile salary (MVMS) put into effect by Decree No. 610 in October 2019 was used. We worked with a MVMS of 23,625 pesos, equivalent to 385.72 dollars.

Regarding land prices, prices located in different areas of Ushuaia and Río Grande were collected and systematized, taking as a reference the period of time of the offers from the last two weeks of February 2020 and the first two weeks of March 2020¹⁹⁵. In order to establish similarity criteria

¹⁹³ The MVMS is considered the lowest within a formal labor framework, although a large part of the population does not receive it. In the case of Tierra del Fuego, the MVMS is 40% higher than in the rest of the country, due to a coefficient of 1.4 applied for being an unfavorable zone.

¹⁹⁴ A base of non-vulnerability is considered if up to 20 years are spent on accessing housing (land plus housing), since these are generally the number of years considered in most mortgage loans. At the other extreme, vulnerability is considered high if more than 35 years are spent paying for the lot, given that this would imply a large part of a person's productive life.

¹⁹⁵ A total of 31 land prices were surveyed for Ushuaia, extracted from consultations (via web pages and telephone inquiries) to eight real estate agencies and one private developer with available properties in the city. For Río Grande, a total of 33 prices were collected from five real estate agencies. The real estate agencies consulted in Ushuaia were: Sur Propiedades, Kaiken Propiedades, Innovar, Pilar Propiedades, Latitud Propiedades, Somos Patagonia, Comslar and Iwoka Propiedades

among the surveyed properties, a medium lot size¹⁹⁶ was established, which was 579 square meters for Ushuaia based on 28 lots and 266.1 square meters for Río Grande based on 30 lots. For the selection of homogeneous distributions, prices were spatialized in QGIS. The value of the medium lot in Ushuaia was US\$186.7 per square meter, while in Río Grande it was US\$62.2 per square meter.

For the calculation of the final price of the lot, 10% was subtracted from the median price in each case, considering an overvalue generally established by the real estate companies as a negotiation margin on prices. The final price was then US\$ 168 per square meter for Ushuaia and US\$ 56.63 per square meter for Río Grande (Table 7.1).

Table 7.1: Land prices in Ushuaia and Río Grande, February 2020

<i>City</i>	<i>Number of lots</i>	<i>Lot medium value (m²)</i>	<i>Minimum value (US\$/m²)</i>	<i>Maximum value (US\$/m²)</i>	<i>Medium value US\$/m² (-10%)</i>
Ushuaia	28	579	56,9	1.250	168 US\$/m ²
Río Grande	30	266,1	39,38	583,3	56,63 US\$/m ²

Source: Own elaboration

The analysis shows that the median value of a lot in Ushuaia would cost US\$97,272, while in Río Grande it would cost US\$15,069. In principle, this difference in the price of land seems to be related to geographical differences, the productive profile and urban policies of each city (Fank, 2019). Geographically, because in Ushuaia, being a city surrounded by slopes and sea, it is more complicated to urbanize, which has an impact on the availability and price of land. Secondly, the crisis linked to deindustrialization had less impact on Ushuaia than on Río Grande. Finally, Río Grande had a better and more complete land policy generated at the state level, which probably caused a decline in the real estate market.

Considering a minimum salary of US\$385.72, the price of the lot is equivalent to 252.18 full minimum salaries in Ushuaia, and in Río Grande, 39.06 minimum salaries. It was previously noted that, as an indicator, the percentage of the salary destined to the payment of the lot should not exceed 30% of the salary, which is equivalent to US\$115.716. Considering a payment of \$115,716 per month, in the case of Ushuaia it would take 840.6 months to pay for the lot, which is equivalent to 70 years.

In Río Grande, the following real estate agencies were consulted: Mac Rae, Del Norte Propiedades, Andrade D’Oria & Asoc. Inmobiliaria Latitud RG and Inmobiliaria Tierra del Fuego.

¹⁹⁶ For this purpose, a variation coefficient was applied as a function of the standard deviation of the surveyed values. Large lots were left out of the analysis.

In the case of Río Grande, it would take 130.2 months to pay off the lot, equivalent to 10.85 years, as shown in Table 7.2.

Table 7.2: Affordability in relation to land in Ushuaia and Río Grande

<i>City</i>	<i>Medium lot value (US\$)</i>	<i>MVMS (US\$)</i>	<i>30% MVMS (US\$)</i>	<i>MVMS required</i>	<i>Number of years (30% MVMS)</i>
Ushuaia	168 US\$/m ²	385,72	115,716	252,18	70
Río Grande	56,63 US\$/m ²	385,72	115,716	39,06	10,85

Source: Own Elaboration

The results indicate that Ushuaia exhibits high vulnerability in relation to access to land, given that, excluding housing, 70 years of savings capacity would be required to purchase it. In the case of Río Grande, 10.85 years of savings for land, considering that it represents 35% of the total cost of access to housing, implies that 31 years would be required for full access to housing. Therefore, Río Grande has a low average of vulnerability with respect to access to land.

In relation to location, and as shown in Figure 7.18, the highest land prices are concentrated in the central areas of the two cities. In Ushuaia, they also rise in some sectors to the west, on the coast in gated and semi-gated neighborhoods. The prices offered in this city coincide with the urbanizations produced by the mercantile logic, while in Río Grande, sectors produced by the state logic are also marketed.

Regarding their location in relation to informal settlements, we observe that in Ushuaia the available offers are far from the settlement areas, in the center and on the coast. In Río Grande the situation is different, and although most of the available offers are located on the north margin, there are also offers on the south margin, in the new lots developed by private owners using the services provided by the State.

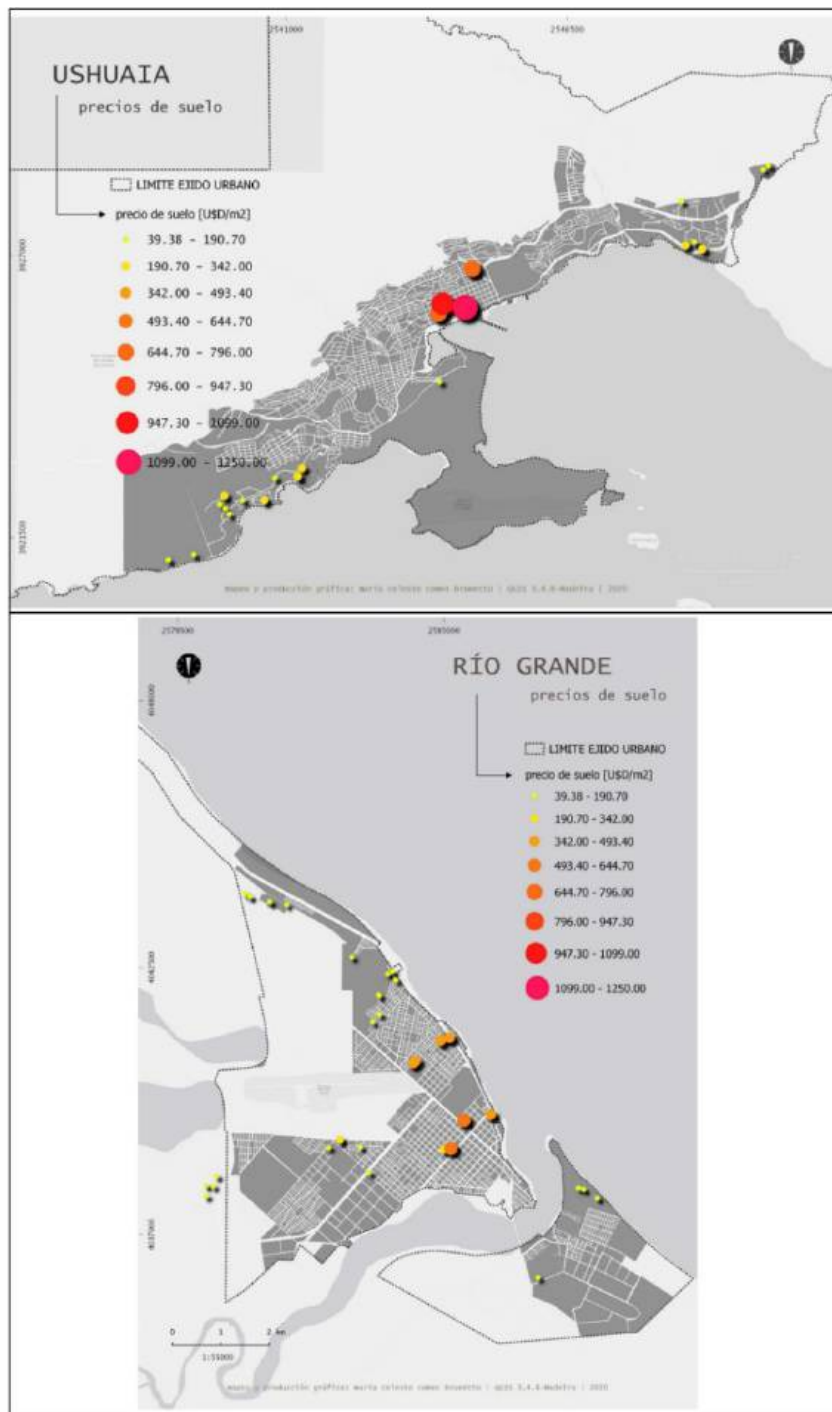


Figure 7.18: Map of land prices, Ushuaia, and Río Grande. February 2020. Source: own elaboration.

In relation to the rental market, for the measurement, a relationship was established between the rental value and the percentage it represents over the MVMS. Since the value of the WVMS is 385.72 dollars, we proceeded to collect and systematize rental prices of 1 and 2-bedroom apartments homogeneously distributed in different areas of Ushuaia and Río Grande. The offers of the last week of February 2020 were taken as a referential unit of time. A total of 18 one-bedroom rental prices and

18 two-bedroom rental prices for Ushuaia were collected from eight real estate agencies¹⁹⁷, OLX website and a private sector developer. An issue to highlight in the case of Ushuaia's rental market is the amount of properties for temporary rental tourism in the city. For the same dates, 230 accommodations were found on Airbnb, 142 of them one-bedroom, while on Booking, 418 (200 one-bedroom).

In the case of Río Grande, 22 prices for one-bedroom rentals and 35 prices for two-bedroom rentals were surveyed, based on consultations with 6 real estate agencies. In this city, only 5 properties for temporary rental were found on Airbnb, while 11 properties were found on Booking. For the selection of homogeneous distributions, prices were spatialized in QGIS. The results of the survey are summarized in Table 7.3.

Table 7.3: Prices of 1 and 2-bedroom rentals in Ushuaia and Río Grande.

	<i>One-bedroom rental</i>		<i>Two-bedroom rental</i>	
	<i>Quantity surveyed</i>	<i>Medium price (US\$)</i>	<i>Quantity surveyed</i>	<i>Medium price (US\$)</i>
Ushuaia	18	293,87	18	432,65
Río Grande	22	175,88	35	244,89

Source: Own elaboration

As can be appreciated, in Río Grande there is a greater availability for permanent rental than in Ushuaia, and with lower prices. If we look at the average prices for long-term rentals, in Ushuaia it is US\$ 293.87 for a one-bedroom rental and US\$ 432.65 for a two-bedroom rental. The minimum and maximum values found in that city are \$228.57 and \$473.46, respectively, for one-bedroom rent, and \$261.22 and \$653, respectively, for two-bedroom rent. Regarding temporary rentals, the average rent for a room on Airbnb was \$50 per night, which represents a daily price of more than 500%. Comparing the amount and prices of offers available for temporary rentals with the permanent ones, we can assume that the trend in property owners is turning to tourism. This issue could increase the problems of access to habitat already existing in the city.

¹⁹⁷ The following real estate agencies were consulted in Ushuaia: Aoniken, Austral Propiedades, Sur Propiedades, Kaiker Propiedades, Innovar, Pilar Propiedades, Iwoka Propiedades, Somos Patagonia. In Río Grande, the following real estate agencies were consulted: Mac Rae, Inmobiliaria Latitud RG, Andrade D'Oria & Asoc., Del Norte Propiedades, Río Grande Soluciones Inmobiliarias, Inmobiliaria Tierra del Fuego. Since the prices offered by real estate agencies have been used as the basis of data, informal market situations are excluded.

In Río Grande, the median price for one-bedroom rentals is \$175.88, while the average two-bedroom rental costs \$244.89. The minimum and maximum values are \$122.44 and \$408.16, respectively, for one-bedroom rentals, and \$138.77 and \$408.16, respectively, for two-bedroom rentals.

Observing tables 7.4 and 7.5 on affordability in relation to one- and two-bedroom rents, respectively, it can be noted that in both Ushuaia and Río Grande the rent represents, in all cases, more than 40% of MVMS, which implies a high degree of vulnerability for both cities. It should be highlighted that in the case of Ushuaia, vulnerability is even higher, if we consider that the rent for one room represents 76% of the SMVM, against 45.6% in Río Grande, while the rent for two rooms represents 112%, against 63.5% in Río Grande.

Table 7.4: Affordability of one-bedroom rentals

<i>City</i>	<i>Quantity</i>	<i>Medium price</i>	<i>MVMS</i>	<i>% of the MVMS</i>
Ushuaia	18	293,87	385,72	76,18
Río Grande	22	175,88	385,72	45,59

Source: Own Elaboration

Table 7.5: Affordability of two-bedroom rentals

<i>City</i>	<i>Quantity</i>	<i>Medium price</i>	<i>MVMS</i>	<i>% of the MVMS</i>
Ushuaia	18	432,65	385,72	112,16
Río Grande	35	244,89	385,72	63,48

Source: Own Elaboration

As regards location, it is possible to observe in Figure 7.19 that in Ushuaia the highest rents, both for one and two bedrooms, are found in the peri-central areas, and also, towards the west, in high category, semi-enclosed neighborhoods.

On the other hand, as shown in Figure 7.20, most of the temporary rentals are concentrated in the historic center. Considering their high price and the amount of offers available in this market, we can assume that this is generating the displacement of the wage-earning population from the central areas of the city to lower-value peripheral areas. This issue is particularly interesting for further

research in subsequent works, since it is considered a new USD dynamic, which is generating new configurations of inequality.

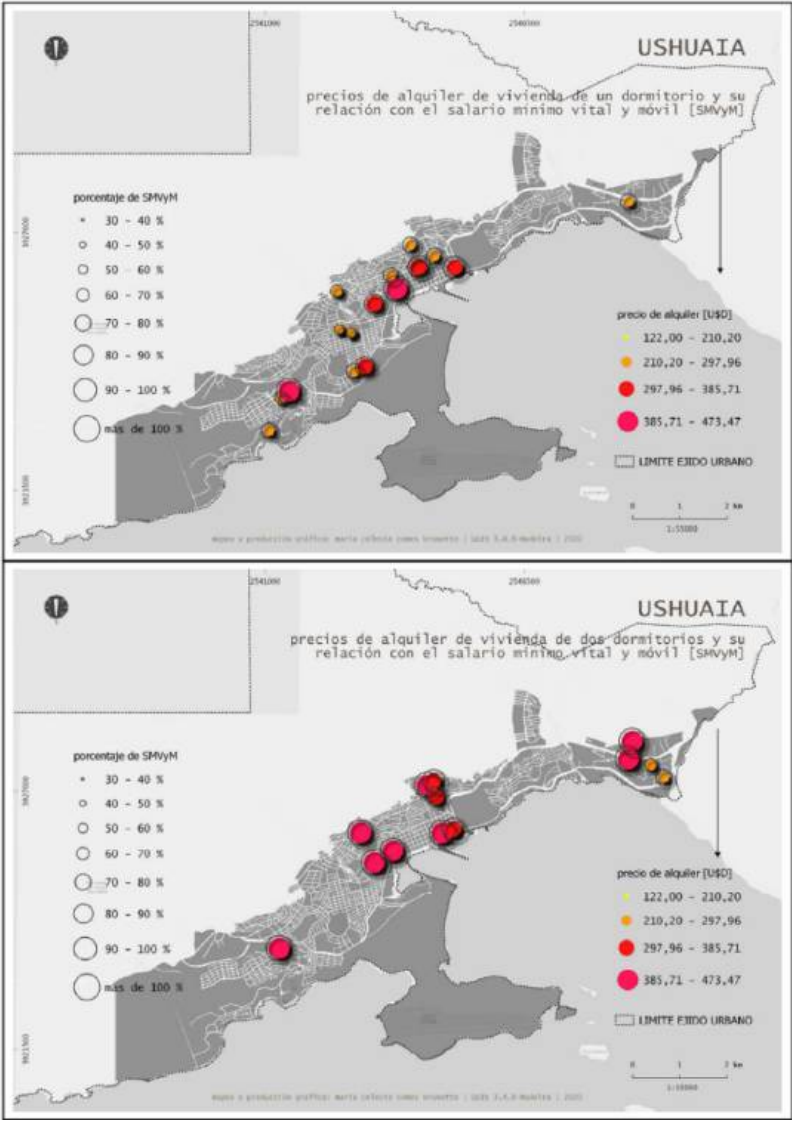


Figure 7.19: One-bedroom and two-bedroom property rents (US\$) and their relationship to the MVMS, Ushuaia, February 2020. Source: Own elaboration



Figure 7.20: Temporary rentals available on Booking and Airbnb, Ushuaia. February 2020. Source: Booking.com and Airbnb, 2020.

In the case of Río Grande and as shown in Figure 7.21, rents are located in the peri-central areas of the city, while the most economical rents are found in the area of the southern bank of the river, where most of the settlements are located.

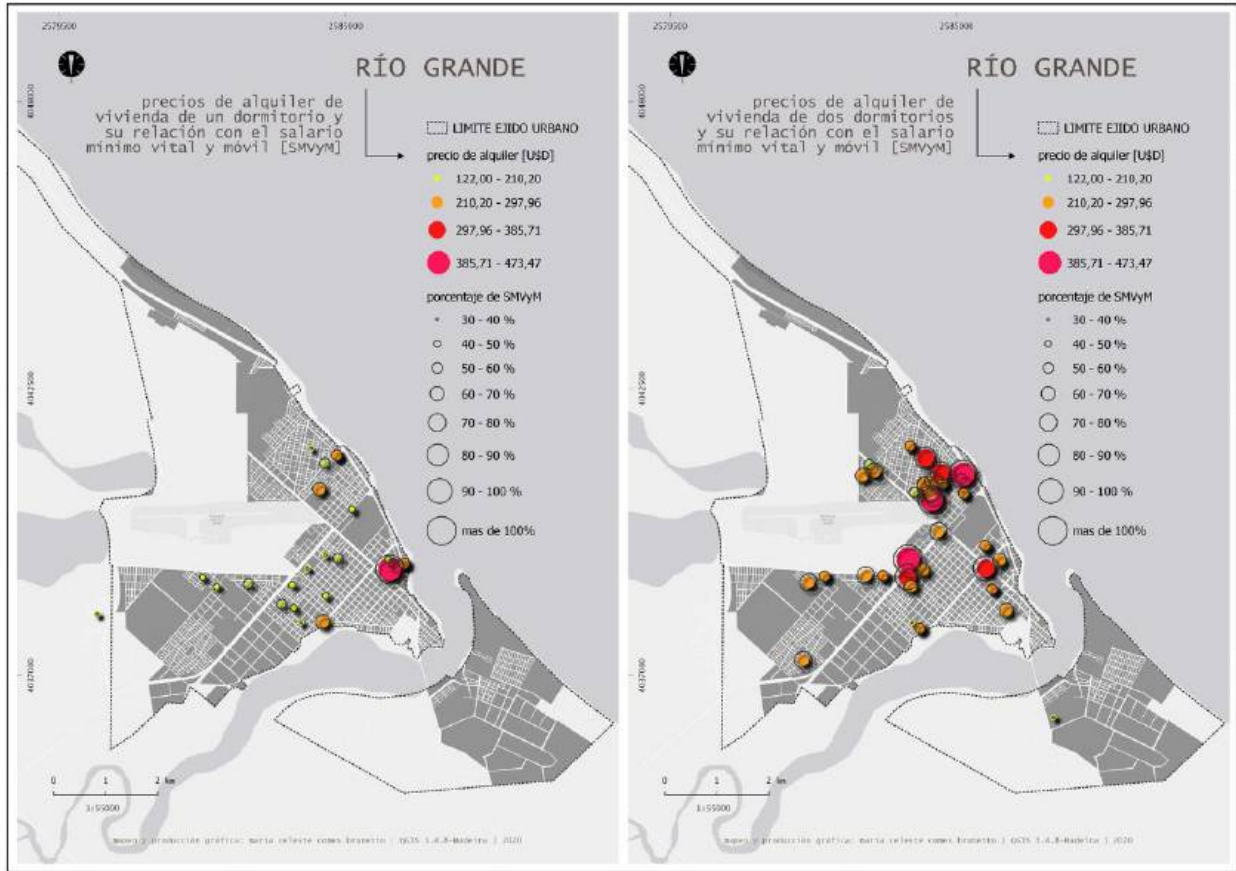


Figure 7.21: Rents for two-bedroom properties (US\$) and their relationship to the MVMS, Río Grande, February 2020. Source: Own elaboration.

7.5 Urban vulnerability and informal settlements

Regarding urban vulnerability, its analysis was the result of the aforementioned Master's thesis (Fank, 2021), in which vulnerability levels¹⁹⁸ were identified in the different census areas of Ushuaia and Río Grande. In addition, the composition of informal settlements was characterized. For this purpose, and based on a right to the city perspective (Lefebvre, 2017 [1968]), an urban vulnerability index was designed and implemented (UVI, in Spanish: IVU), considering dimensions, variables and

¹⁹⁸ The objective of this work was to develop a methodology for measuring urban vulnerability in informal settlements in cities of Tierra del Fuego, seeking to identify the comprehensiveness of the problems associated with living conditions in them, from a perspective of the right to the city.

indicators specific to the context, agreed upon with representatives of the State, academic institutions and civil society. A summary of the methodology implemented is presented in Annex 7. The dimensions and variables taken into account for the study of urban vulnerability were ten, listed as follows:

- 1- sociodemographic conditions (population under 9 years of age, population 65 years of age and over, disabled population);
- 2- socioeconomic conditions (employment and unemployment rate);
- 3- quality of housing (considering the quality of construction, housing conditions, overcrowding and UBN);
- 4- housing possession conditions (irregular possession);
- 5- affordability conditions (access to land and to the rental market);
- 6- access to infrastructure (basic utilities of water, gas, electricity, sewer and garbage collection);
- 7- access to urban facilities (schools, hospitals, sports centers and public spaces);
- 8- environmental conditions (homes located in areas with low drainage capacity, on urban solid waste landfills, on wetlands, in flood zones, exposed to wind gusts or snowfall, on wooded slopes);
- 9- State capacities (existence of programs for access to land and housing, financing instruments, planning, redistribution of costs and benefits, citizen participation, promotion and development, institutional structure for dealing with urban informality and specific policies);
- 10- civil society capacities (existence of organizations at local and neighborhood level working on issues related to access to housing).

The results of the application of the UVI, considering these ten dimensions, show that in both Ushuaia and Río Grande the level of urban vulnerability is higher in informal settlements than in the rest of the city, as shown in Figures 7.22 and 7.23. In the case of Ushuaia, the highest level of urban vulnerability found was medium-high and corresponds to areas occupied by post-2003 settlements to the north, located both on the mountainside (El Escondido and Cerro Dos Banderas) as well as in the Andorra Valley.

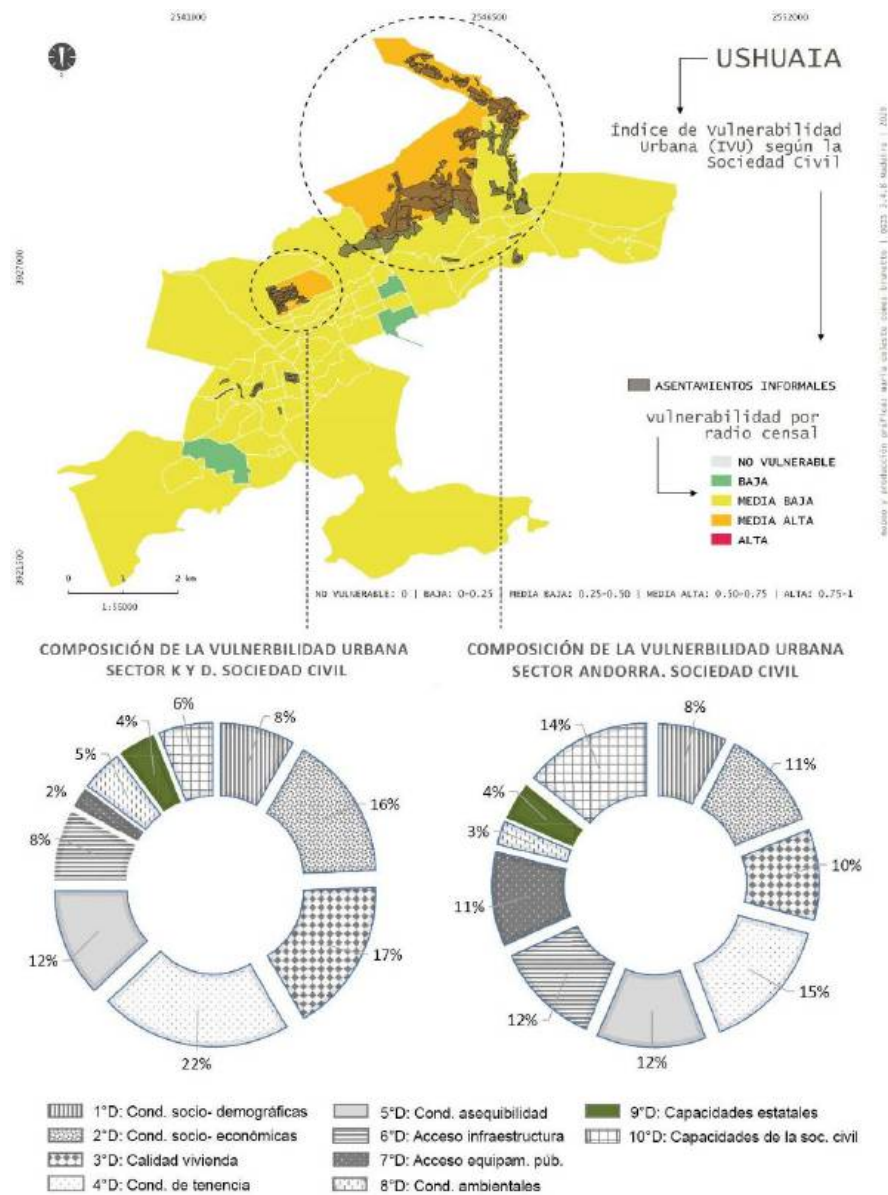


Figure 7.22: Urban vulnerability by areas registered by census and analysis of its composition in informal settlements. Ushuaia, 2020 Source: Fank, 2021

Regarding their composition, although in both cases the most serious dimension of vulnerability is irregular possession, there are differences in each case (Figure 7.22). We can observe that while in the sector corresponding to the El Escondido neighborhood other relevant dimensions of vulnerability are housing quality and socioeconomic conditions, in the cases of the settlements located in the Dos Banderas and Andorra hills, it is the lack of access to infrastructure and affordability conditions. Location plays an important factor, as it even allows for better regularization conditions in certain sectors than in others.

In the case of Río Grande, the highest level of urban vulnerability found was elevated, and as in Ushuaia, the most vulnerable sector corresponds to an area conformed by farms urbanized after 2010 (Figure 7.23). The rest of the settlements after 2003 showed a medium-high level of vulnerability.

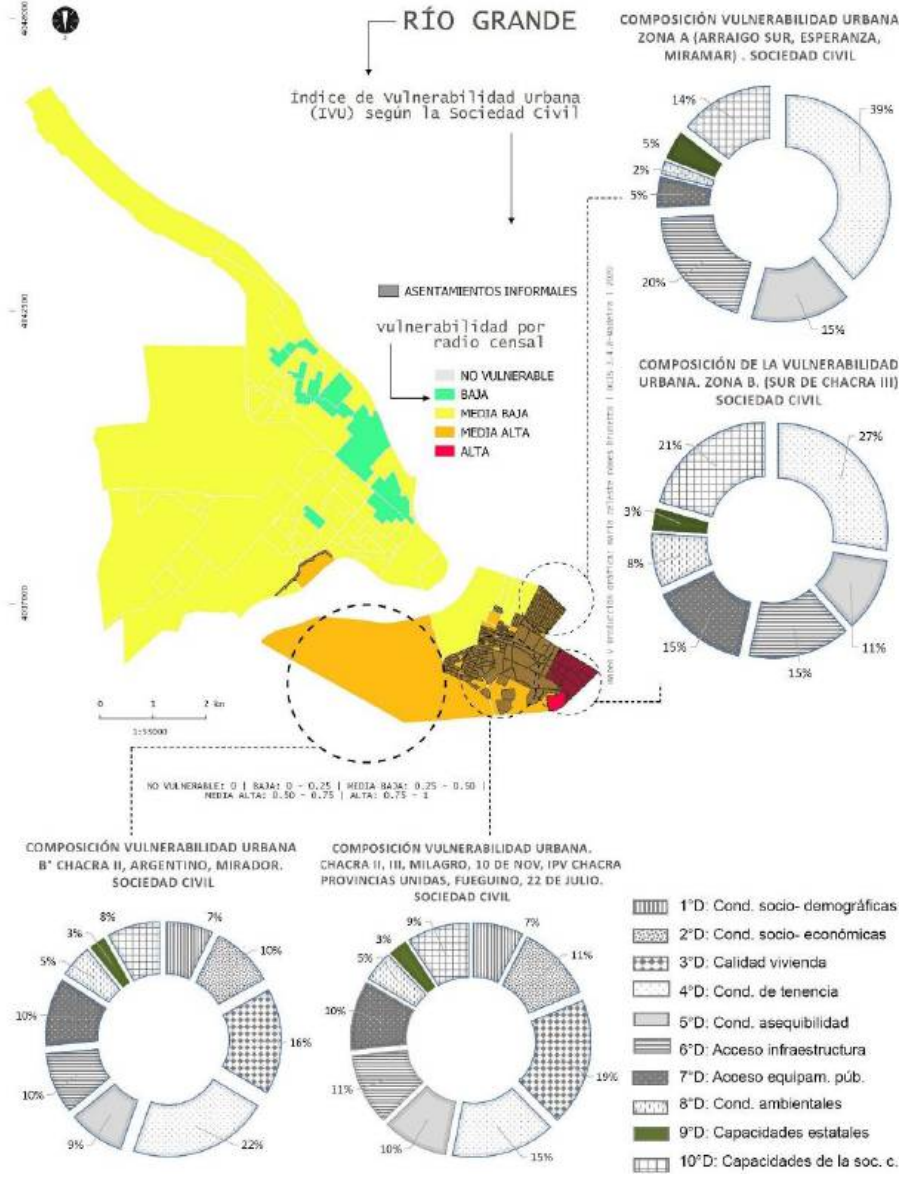


Figure 7.23: Urban vulnerability by areas registered by census and analysis of its composition in informal settlements. Río Grande, 2020. Source: Fank, 2021

Concerning its composition, in the case of the most vulnerable sector, the main dimensions have to do again with the conditions of property possession, the lack of access to infrastructure, as well as the lack of organizational capacities on the part of the civil society. In other sectors, such as in 10 de

Noviembre and Provincias Unidas settlements, the quality of housing represented higher vulnerability values while also showed a lower availability of equipment and worse socio-economic conditions.

Urban inequality in Ushuaia and Río Grande in 2020 was expressed in clearly distinguished patterns of differentiation with respect to the occupation of formal and informal space, although this took on more extreme forms in Ushuaia, which had policies that favored the commodification of urban spaces.

We can therefore consider that in both cities, informal settlements have grown in areas that are not attractive to the market, close to industrial areas, and are the areas that show the highest rates of urban vulnerability, due to the lack of basic services, the difficulty in accessing public facilities and the environmental problems they present. Natural barriers such as the river or the mountains have strengthened the segregation of settlements. At the same time, they have functioned as social barriers, discursively delimiting two cities in one: in the case of Ushuaia, "those from above" and "those from below", and in the case of Río Grande, "those from the south margin" and those from "the center". These types of expressions emerged in different interviews, both to representatives of the State (E.19, 14/8/15; E.20, 15/08/15), as well as in the settlement representatives (E.25, 26/5/18; E.30, 26/11/16).

In both cities, the most pronounced differences are observed between settlements that grew in the last industrializing cycle, between 2003 and 2015, and also between 2016 and 2019.

In both cases, the inequalities observed seem to be strongly related to the policies that produce, regulate and plan access to habitat, as well as to the economic dynamics that have reinforced processes of intra- and inter-urban differentiation.

7.6 Informality as an urban boundary

The idea of urban border was introduced at the beginning of the theoretical discussions in the elaborations on DED by Smith (2012 [1996]). The author uses the allegory of the Wild West in allusion to the "conquest" of central areas in pursuit of capital accumulation, under which the working class is forced to move to other sectors less attractive to the market. A central issue in this concept is the ideological baggage, the subjective boundary that is constructed around the poor sectors.

The border implies the recognition of one's own space with respect to a subject-other, and draws a dividing line between the two. In Smith's (2012 [1996]) account, this line is crossed, insofar as those who draw this division seek to advance on the other side. The author identifies two subjects in his text: the pioneers and the natives. Among the former are the real estate developers who go in search of new spaces of accumulation, while the natives refer to those who historically inhabited poor central areas.

The contemporary imaginary of the urban border treats the current population of depressed urban areas as a natural element of their physical environment. The term "urban pioneer" (...) suggests the existence of a city that is not yet inhabited; like Native Americans, the urban working class is seen as less than social, a part of the physical environment (...).

Something similar happens with the informal city, insofar as it is invisibilized in the processes of city production and planning (denied even in urban maps); permanently displaced along with the frontier to sectors that are not attractive for conquest on the part of capital. The pioneers, however, would in this case not only include market developers, but also state actors. It was observed that differential policies were consolidated for the formal and the informal city. While the former are directed towards planning and urbanization (facilitating market practices), the policies that addressed informality were limited until 2016 to its legal dimension, denying the processes of informal city production.

When the recognition of the urban "native" appears, the inhabitants of the settlements, appears first, as in Smith's (2012 [1996]) account, an idea of domestication. The existence of a boundary is then recognized, yet with different characteristics, but equally ideological and sometimes material, between the formal and the informal city: "*the ideological border rationalizes the social difference and the exclusion as natural, inevitable*" (Smith, 2012 [1996]).

In some cases, urban pioneers and State accomplices reproduce dynamics very similar to those described by Smith (1996/ 2012) for the phenomenon of gentrification: to colonize, domesticate and finally displace the poor and low-income sectors, in pursuit of a potential rent. Displacement can be "by hook or by crook", through increases in rent, land and service prices, or "by crook", with practices ranging from symbolic violence, the rhetoric of security, to the justification of physical violence and harassment.

In other cases, exclusion policies have been so strong that settlements have been built directly on the informal side of the border, on the other side of the river or hidden in the forest. Delimited by land values that make access impossible, by poor connectivity and by the rhetoric of security (Secchi, 2015), the formal city becomes impenetrable, while settlements have no choice but to locate themselves on the peripheries of urban spaces. In any case, repressive and stigmatizing practices are the same.

In addition to the physical, environmental, and socioeconomic differences that are normally constituted on one side of the formal/informal city and the other, there are symbolic practices that constitute informal spaces as unsafe areas, "*on the margins of civilization*" (Smith, 2012 [1996]:47). On the informal side of the border, it is worth highlighting the increase in spatial segregation and social

exclusion, the processes of criminalization of the inhabitants of informal settlements that gave rise, in Ushuaia, to repressive policies and their constant vulnerability to the possibility of forced evictions.

However, beyond any rhetorical and symbolic construction regarding the "right" side, *every border has two sides*.

It is noteworthy the self-management capacity of the subjects who establish their own conditions of urbanity despite the problems that often arise due to the location and the lack of technical and economic resources involved in this form of city production. The informal production of habitat has been in Tierra del Fuego a form of struggle for urban space (Harvey, 2012), a social movement (not always unique, and not always formally organized) that disputes its right to the use of the city, beyond any mercantile variable involved. From this side of the border, the inhabitants of informal settlements can also be considered pioneers, migrants who produced their own living conditions under hostile circumstances. In recent years, from 2016 onwards, a different recognition by the State, of their existence, can be observed. This recognition has been gained through social organization and the conquest of at least, new spaces of legitimization of the right to habitat. These spaces are still more discursive than real. There is still a long way to go to dispute the boundaries of urban space.

Contributions to the discussion of unequal spatial development in the cities of Tierra del Fuego.

The analysis of the uneven spatial development in Isla Grande de Tierra del Fuego's cities involved the challenging task of understanding the capitalist production of space and urban inequalities that capitalism produces in the extreme point of the habited world, or in the words of Silvia Valiente (2012), in the "periphery of the periphery."

As analyzed in Chapter 4, the geographic characteristics of TDF, those connected to its insular position, the severe climate conditions and its southern location, conditioned and favored specific ways of occupation across time. After 10,000 years of native communities' settlement, its strategic position and the valuation of its resources promote the different island capitalist occupation stages and the complete disappearance of ancestral peoples. During at least a century, various and opposed economic, political and religious projects of spatial structuring, with their own tensions among foreign economic agents and the central political power, which molded, in tandem with geography, the origins and differences between the urban cores, Ushuaia and Río Grande.

Tierra del Fuego's delimitation as a Special Economic Zone (SEZ) in 1972 by the National State, as a strategy to promote the permanent settlement of Argentinian citizens, meant TDF's complete incorporation into the last stage of global capitalism and started a new chapter in the production of space and USD among the Isla Grande, which lasted 50 years. This process was central in the analysis of this research. As described in Chapter 3, the analysis was approached through universalization and differentiation processes at different scales, which are the basis of current patterns of urban inequality.

At the national level, the promotion and creation of SEZs across the country delimited a new map of USDs where scale production and regional spaces, according to Harvey (2007 a), played an important role. New industrialized territories were encouraged, combined with the deindustrialization of historic industrialized urban centers (AZPIAZU, 1988). The global context of productive restructuring made it possible to insert these spaces into global value chains to the same extent that national industries disintegrated. Thus, TDF's delimitation as SEZ in 1972 was central to the mobility of industrial capitals coming from the center of the country, establishing a new pattern of industrial localization in Argentina.

At the provincial level, a process of "universalization", following Smith (1984; 1996/ 2012), of the industrial conditions took place, from granting fiscal and customs benefits to some

economic activities developed within TDF's jurisdiction, particularly the industry. Although local actors hoped to promote development with a balanced production and population growth, this was not what happened. Networks (both transport and communication) and the new forms of production at a global scale (Harvey, 2007a) enabled the consumer electronics industry to grow within the end of the world in almost the same way it occurred in other places such as Manaus or Ciudad Juárez (although scale-limited). The territorial administration of the nation-state (Brenner, 2009 a) played a fundamental role in this process and consequently in establishing the industrial conditions and the space occupation in TDF. Its delimitation as SEZ was both an economic and territorial project based on a geopolitical strategy materialized with industrial settlements and a new population in the only two cities in TDF, Ushuaia and Río Grande. It is a case, as Smith (1984) and Brenner (2009 a) post it, of homogenization of the spaces created by the productive dynamics in the expansion of capitalism, which caused profound transformations in the internal structure within the economic, sociodemographic and spatial dimensions.

In the economic sphere, industrial activity rapidly replaced other economic activities, such as hydrocarbon and livestock industries, as principal contributors to the Gross Geographic Product, positioning at the end of the production process, dedicated to the assembly of parts, pieces and components. This idea is central in understanding the urban implications, as the actions carried out under this type of maquiladora required, as we already mentioned, a considerable amount of workforce. And considering the small population at the time, the industrial activity promoted a significant internal migration. The industrialization process, however, was not a linear one. On the contrary, we can identify positive and negative cycles related to the crisis of capital and political policies regarding the industrial or financial spheres that took place at a national level. There is a first industrialization period between 1972 and 1991; a second deindustrialization period comprising the years between 1991 and 2002, a third reindustrialization period between 2003 and 2015; and finally, a fourth period between 2016 and 2019, in which a new deindustrialization process took place. In Chapter 5, we analyzed how these cycles prove TDF's productive scheme's strong dependency on national central power decisions, as industrial promotion depends to a great extent on national economic policies. As a result, the power of the industry in terms of economic activity and employment in Tierra del Fuego has fluctuated over time. In turn, the industrialization and deindustrialization cycles impacted directly on USD inter and intra-urban dynamics in terms of both universalization and differentiation.

At the demographic level, the population increased 940% during the last 50 years, transforming the urban centers from towns to intermediate cities. The period of greatest growth coincided with the first industrial cycle, between 1972 and 1991, while in the following years, TDF always maintained a high population growth concerning the national average. Internal migration has been, since 1970, a central component in TDF's demographic growth.

In the territorial sphere, population growth translated into an urban expansion in the two cities studied for this work, Ushuaia and Río Grande. Here, the industry is understood as a “universalizing” dynamic. However, the impact caused by the productive transformation were not equal in both cities, as it was not the case at an intra-urban level. Initially, the geographic conditions represented such an important factor of differentiation and favored the industrial settlement in Río Grande as it has a relatively better location and plain surfaces. Later, other dynamics consolidate differences and similarities in each city’s production processes and inequality patterns. On the one hand, from the interurban perspective, the industry was the principal factor of differentiation, playing a more central role in Río Grande’s economy. For this reason, the city was strongly affected by the productive activity cyclic crisis and was more sensitive to its peak periods. Although Ushuaia has also been affected by the industry, the fact that it is the Administrative Capital and that tourism emerged in the 90s made the city more independent from industrial activity, especially during the deindustrialization periods. Tourism, however, started a new USD dynamic in this city triggering new differentiation processes.

On the other hand, at an intra-urban level, industrialization resulted in the expansion of the cities, in which dynamics of commodification and decommodification intervened. These dynamics established similitudes and differences over the USD process, delimiting different patterns of inequality in each case. The analysis offered in Chapters 6 and 7 seeks to decipher, in a comparative way, the principal logics that affected, in the words of Brenner and taking up Lefebvre, the “politics of space.” This concept was a critical factor in the concrete formation of USD, particularly in the configuration of urban inequality on each case study.

With regard to the **mercantile logic**, and following Smith (2012 [1996]) at the beginning of the theoretical discussions, we see that this operated as a dynamic of equalisation in terms of land prices and rents in both cities, while at the same time it was key in defining the internal patterns of inequality. In Ushuaia, landscape and natural conditions played a fundamental role in the location of commercial developments as exclusive urban environments, and also in the processes of urban renewal in the central area. In Río Grande, on the other hand, the provision of services promoted by the state was the most important factor in the territorial definition of mercantile expansion.

With respect to **state logic**, it was shown that the state has influenced the production of space and urban inequalities in TDF and its cities both indirectly, through economic-productive policies, and directly, through urban-housing policies. Within the latter group we recognised four forms of action: as a producer, as a planner, as a regulator or facilitator of the city's mercantile practices, and through practices of tolerance or repression of informal settlements. Different conclusions can be drawn from his actions:

- On the one hand, on a general level and in an intra-state key, we can mention as a differentiating dynamic, issues related to the multisectoriality of the policies that influenced the growth of cities. Specifically, the lack of articulation between economic-productive policies and the urban-housing policies applied was verified. Given that industrial promotion was promoted as a national state strategy for population growth, it is striking that its territorial effects were not anticipated over time, which led to a mismatch between housing supply and housing needs. In this sense, one of the strongest conclusions regarding the role of the state has to do with sectoral disarticulation, expressed in the disconnection between the times and expectations of productive policy and the times of urban-housing policies. The state's lack of a comprehensive approach to territorial development in Tierra del Fuego has led to a certain incongruence between productive growth and its spatial effects, which has increased inequalities. Something similar has happened in recent years in Ushuaia in relation to the effects that tourism is having on the land and rental market, without any regulatory norms.
- In line with the above, a second issue that was observed is the complexity that arises from the federal organisation, considering that the different scales of the state (national, provincial and local) have acted simultaneously (and not necessarily articulated) in urban spaces. While the main productive policies were implemented at the national level, the provincial level had the greatest impact on housing production in the cities of TDF, albeit conditioned by changes in national housing policy. In turn, at the local level, it was the municipalities that had the greatest influence on urban policies, both in terms of planning and regulation (or facilitation) of commercial practices in the city. There was an over-determination of the national state in the productive dynamics, and also in the housing policies that were later implemented by the Provincial Housing Institute (IPV) in different periods of time. At the same time, there was a strong disarticulation between the production of housing, mainly carried out by the IPV, and the urban policies that the municipalities began to apply. In terms of addressing informality, this has been promoted by both the provincial state and the municipalities, although in both cases funding has depended almost exclusively on national central power. This inter-scale complexity of state action led to different situations of overlapping, disarticulation and opposition between housing and urban policies, which contributed to the reproduction of inequalities. This was expressed, for example, in the municipalities' desire to consolidate urban vacuums, while at the same time the IPV generated housing developments outside urban areas. Also, in the vision and practices (not always congruent) that these actors had regarding informal settlements at each moment.
- At the intra-urban level, we can affirm that in Ushuaia urban policies have favoured mercantile practices more than in Río Grande, and with it, the dynamics of differentiation within the city. In the last case, the application of urban management instruments has been fundamental in

defining better conditions of affordability in relation to land and rents. In terms of dealing with informality, while in Ushuaia a repressive-prohibitive vision predominated, in Río Grande, policies of tolerance and regularisation did. However, in both cases, the aforementioned time decoupling and intra-state disarticulations led to limited action in terms of the time and requirements of population and urban growth. This also resulted in the ineffectiveness of planning instruments.

With respect to the **logic of need**, we observe that this grew, fundamentally embodied in the informal production of the city, in the face of the lack of possibilities of access to housing through formal channels, be they mercantile or state-run. From the analysis carried out, we can affirm that the informal city in Ushuaia represents 40% of the space produced between 1972 and 2019, while in Río Grande, it represents 39%.

The analysis done, allows to corroborate that the current patterns of urban inequality (presented in chapter 7) emerged as a result of the dynamics of commodification, the role of the state, the relationship that each city established with industry and other emerging activities such as tourism, as well as the particularities of geography, environment and possibilities for expansion in each case. These patterns crystallised in the great differences between formal and informal city production, became more acute after the successive cyclical capital crises, and changed over time until their current form.

Until 2003, the main inequalities were between the formal city, mostly produced by state logic, and the informal city. They were related with the difference in access to the provision of basic services and precarious housing. Since 2003, with the last industrial boom and the emergence of city commodification dynamics, inequalities in space (both formal and informal) have deepened.

As shown in chapter 6, associated with its 'irregular' condition in access to habitat (Herzer, Di Virgilio et al, 2008) and a legalistic and/or mercantilist conception of urbanisation, the informal city in Ushuaia and Río Grande revealed greater disadvantages in comparison to the formal city, linked to its location in increasingly peripheral and undeveloped areas. In the case of Ushuaia, due to the occupation of the mountainside. In the case of Río Grande, due to its location on flood-prone land. They also stand out for their lack of access to basic urban goods and services (Clichevsky, 2009), precarious housing conditions and differential attention from the state, which, as we have seen, in some cases led to the criminalisation of the inhabitants. These factors generated, as we analysed in chapter 7, greater vulnerability with respect to those who live in the formal city (Lefevre et al., 2016).

On the other hand, it was shown that from 2015 onwards, tourism has determined a new layer of inequality in Ushuaia. This refers to the process of revaluation of the central area and also to real estate speculation associated with temporary rentals. In the face of this, new social sectors do not have access to housing. In this sense, we verify what Smith (2012) and Brenner (2009a)

have stated, that in the face of new dynamics of revaluation, inequalities are reinforced. Figures II and III summarise the current patterns of urban inequality in Río Grande and Ushuaia according to the analysis carried out in this research.

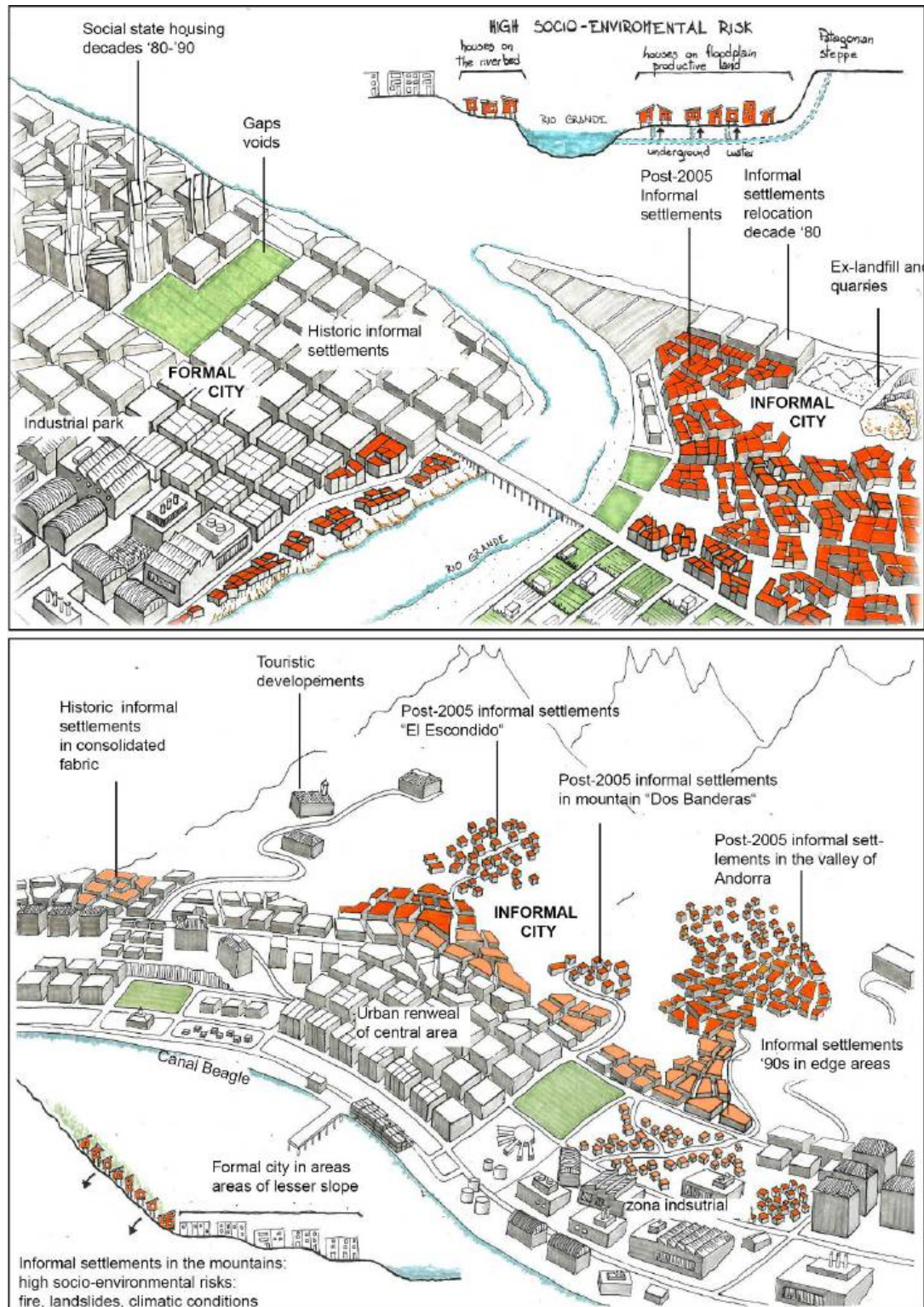


Figure II: Patterns of urban inequality in Ushuaia and Río Grande

Contributions to the theoretical discussion of USD

As commented at the beginning of this thesis, the research question began with an empirical problem; Why did urban inequalities grow in two of the richest cities in Argentina, benefited through fiscal instruments for their population and economic development? This question opened the three great challenges of this thesis.

The first of them aim at articulating two fields of work that are generally approached from different disciplinary epistemologies, the economic dimension and the spatial dimension of the territory, both crossed by the political dimension. The second refers to the multi-scalarity that emerges from the empirical problem addressed, considering that many of the economic processes that affect the cities in the study find their origin outside of them. The third is linked to the difficulty that arises from the observation of these processes in spatial, historical and comparative terms.

The general theory of Uneven Spatial Development provided a valid interpretative framework to analyze the multiple dynamics that influenced the production of urban inequalities in Tierra del Fuego. It allowed articulating different fields of work, and in turn, understanding them in their procedural form. The contributions from Latin American urban studies provided important analytical elements to understand the specific characteristics of the USD process from a regional perspective. On the one hand, the particularities that emerge from the process of territorial structuring within the framework of Capitalism, especially considering the production of Special Economic Zones. In this sense, and as analyzed in Chapter 2, the meaning of being a Latin American industrial region does not imply the same as being in the North. On the other hand, it provided elements for the understanding of the internal processes of cities, and the particular forms that inequality acquires, considering both the commodification and decommodification dynamics involved in its production. In this way, it allowed the generation of situated knowledge.

In the other direction, the case study allowed us to arrive at some contributions to the theoretical discussions of USD, which emerge directly from the comparative analysis. As we said at the beginning, critical theory seeks as its ultimate goal to transform reality, and in this sense these contributions include some general recommendations.

- 1) *The importance of the role of the State in defining the patterns of urban inequality.* Within spaces of strategic geopolitical importance, the State acquires particular relevance both in relation to its own multi-scalarity, and to the intersectorality of the policies that intervene in the definition of SEZ. From the background study and also from the case study carried out, it can be deduced that the scale of the nation-state is the most relevant in the productive dimension of the territory. In turn, it is the local governments (and in the case of Argentina,

also the sub-regional level of State), which have the greatest responsibilities in defining the policies that address the urban and housing dimension. Its study, as well as its articulation in other practical cases, is central in a commitment to understanding and reducing territorial inequalities. In this sense, it would be interesting to start building cross-cutting policies that take into account the multiple impacts of their implementation. Also, policies that strengthen the role of local states in the decision-making processes on the economic-territorial projects of the nation-state, and of other capitalist actors.

Moreover, the way in which the State produces city is also a central element in the study of the USD. The existence, orientation and (dis)articulation of planning policies, production of city, regulation or facilitation of commercial practices, as well as the way they act on the informal city, directly affect the configuration of inequality patterns.

Regarding planning policies, it is necessary not only to discuss their existence or not, but also which are the city objectives they pursue. We saw that in the case of Ushuaia, the consolidation of its urban profile as a tourist city directly collaborated with the processes of intra-urban exclusion. It is essential to think about planning in its necessary articulation with economic projects in the territory and also with existing and future habitat demands.

In relation to the market, we affirm that the existence of regulatory instruments improves affordability conditions, while reducing spatial inequalities. The experience of Río Grande in the application of the Tribute for improvements and other instruments for capturing urban surplus value, used for the generation of public land, are interesting to think about its replicability in Ushuaia. However, it remains to delve into new instruments that regulate the rental market.

In relation to housing production policies, their approach, on many occasions, purely quantitative, opens the way to a disengagement from urban policies and the inadequacy of the solutions offered with respect to real needs. Another central issue in this line refers to the decoupling between the time of capital, the time of the State, and the time of necessity. Apparently, the production of housing is not the best or only alternative to the urgent demands for housing, an even more difficult issue if we consider regional promotion policies in parallel, which pursue positive migratory processes. Promoting studies that delve into these different temporalities can be a way of generating new instruments in different terms. In relation to the policies that address the existence of informal settlements, their approach in terms of prohibition and intolerance directly affected the consolidation of urban inequalities between the formal and informal city. It is necessary to think of new instruments that contemplate the multiple layers of associated urban vulnerability, and not only a legal perspective anchored in ownership regularization.

For all said above, it is necessary to promote studies and policies that advocate a comprehensive understanding of the multiple forms and times in which space is produced.

- 2) *The distinction of different (and superimposed) layers of urban inequality, which emerge from the different dynamics of capitalist valuation of space.* Different spatialities of inequality are distinguished, associated with economic dynamics in cities: industrial dynamic, commodification dynamic and touristic dynamic.

While the industry had a greater impact on migrations, due to the amount of intensive labour that it requires, the dynamics of real estate speculation, as well as tourism, were critical in deepening the inequalities that had been incipient until then, between the commodified city and the de-commodified one.

Associated with the industrial dynamics of the maquiladora type, particular phenomena of urban expansion arose, which implied, as of 2003, the emergence of a certain dynamic of real estate speculation, fundamentally reflected in the rental market and the densification by lot of existing subdivisions (to build new rental units). This form of commercial occupation of space associated with the industry seems not to have been located in a specific urban environment.

On the other hand, there are dynamics of commercial valuation of space that do not seek to exclusively satisfy the need for housing, but rather aspects related to the distinction and elitization of certain social classes in urban environments. This type of market has been located in privileged urban environments.

Finally, we can distinguish a third type of commercial valuation associated with tourism, which has fundamentally impacted the renovation and densification of the central area of Ushuaia, and also the structure of the rental market.

It is interesting to understand the different spatialities that the market produces, to the extent that it allows the generation of new public policy instruments that directly aim at mitigating their effects on the dynamics of differentiation.

- 3) *The specific patterns of inequality, which stem from the formal and informal production of city, and the different complexities that living in one or the other entails.* It is a Latin American contribution to the study of USD, the identification of the particular dynamics of commodification and de-commodification involved in the production of inequalities, especially, in environments that have been benefited by state policies of regional economic promotion. In this region urban border mentioned by Smith in the theoretical discussions does not have to do exclusively with the reconversion of central areas, but with a particular dynamic of exclusion of the sectors that do not manage to enter the market and must build their habitat through informal means.

It also represent a contribution to the theory, the own methodological construction, based on the identification of different components and dynamics of the USD. This constitutes a by-product of the thesis, which deserves its replication in other case studies, in order to continue strengthening the field of comparative urban studies.

In the future, it is expected to continue working on deep studies of the USD from critical comparative studies. First of all, it would be interesting to replicate the methodological scaffolding built in other cases and, at the same time, delve into new research that allows us to understand particularly the role of the State in the production of urban inequalities. Finally, we pretend continue delving into the effects of the USDs that arise from the tourist dynamics.

USD in Tierra del Fuego. New (and future) chapters.

In 2021, a new series of measures emerged that would open a new chapter in the industry-city relationship in Tierra del Fuego. The Decree of Necessity and Urgency 727/2021 extended the Industrial Promotion Sub-regime until 2038, with the possibility of extending the projects until 2053. In addition, Presidential Decree 725/2021 created a fund to expand the productive matrix, 60% of which is destined for production, while 40% is destined for land use projects, including infrastructure, logistics and housing projects (Art. 6 item B). Unlike the previous instances, in this last extension the local actors, representatives of different areas of the Province and the local governments of Ushuaia and Río Grande, were also invited to the national instance to discuss the future of TDF's industry. Even the author of this thesis, who was already working as an advisor in the Habitat and Land Management Office in the Municipality of Río Grande, had the opportunity to participate in the dialogue process proposed by the National Ministry of Production, to discuss the impacts of the industry in the cities, and based on this, jointly outline modifications in the new stage. Many of the intermediate results of this thesis were presented in those instances, and have had their effect on the incorporation of housing issues to the expansion fund of the productive matrix (to which the TDF-based industrial companies contribute in a direct way).

In terms of policy design, the mere fact of having thought about the new extension in an articulated manner between the different levels of the State, and transversally regarding its socio-territorial effects, marks an advance in relation to what we have been commenting on throughout this thesis, in terms of the production-space decoupling, and the scalar disarticulation within the State, which was observed during the last 50 years.

Among the main modifications, it deserves mention the scenario of greater economic predictability provided by the 30-year extension, as well as the incorporation of new projects and promoted industrial products. Also, greater sanctions for companies that do not comply with labour obligations, as well as the incorporation of local governments to the Commission of the

Special Customs Area, an agency with maximum regulatory competence for the promotion of the industrial activity. Although everything seems to indicate that a new industrialization cycle is beginning, this is subject to national political dynamics, and to a real possibility that a financial-deindustrializing government will again assume the national power. Some reflections emerge from this new productive situation, according to its possible differential impacts on cities.

Considering the effective possibility of new industries locating in TDF in the coming years, new needs could arise in the cities, particularly in Río Grande, the main industrial centre. In this sense, the municipality is already generating actions for the improvement of the existing industrial park and the creation of a new one. However, in terms of access to housing, taking into account the predominance of commercial logic in recent years, the lack of land available from the state, and the great demand for housing that currently exists (5,000 applicants on the municipal register), if this demand were to grow again abruptly, it would be difficult to meet.

As part of the reflections that have been made on this situation, in 2022, for the first time in the city's history, a Sub-Secretariat of Habitat and Territorial Planning was created in the city. This space seeks to build long-term habitat policies in coordination with other economic and social policies, and aiming to solve the structural problem that the state shows regarding the availability of land in the city. Work is also beginning to be done on policies to meet the qualitative housing demand, and, on the other hand, socio-urban integration actions have begun to integrate the neighbourhoods on the south bank with the neighbourhoods on the north bank of the Río Grande. It is imperative to contemplate the times of the housing policy, and articulate actions with the Instituto Provincial de la Vivienda, the main producer of new housing solutions in the province.

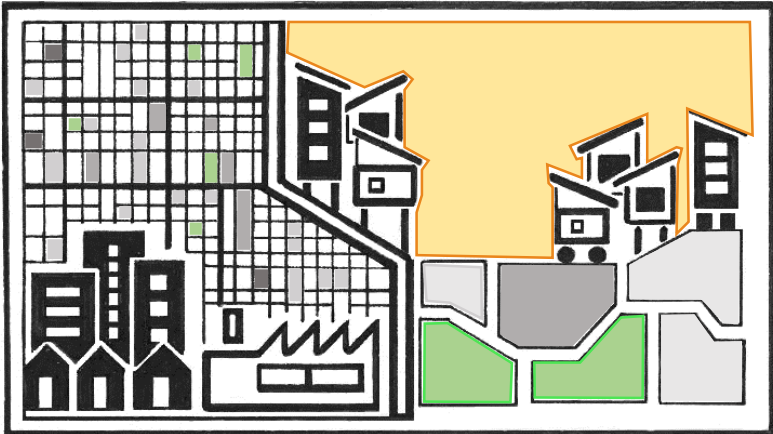
In Ushuaia the situation seems different, given its increasingly marked orientation towards tourist activity. Tourism is generating strong pressure on the rental real estate market, which will probably begin to move to the land market sooner or later, as the ventures of cabins, duplex houses and apartment towers grow, for temporary stays. The current situation in this regard is already difficult, considering the high land prices, and in 2022, the scarcity of rental offers available in the formal market. If we add some kind of demographic pressure to this, the alternative would probably be the informal production of housing. Therefore, it is important to build rental market regulation policies, and on the other hand housing access policies.

The question of the location in the city of the different actors is important for reducing the patterns of urban inequality. An important point of work in this sense is the urbanization of urban voids in both cities. In Río Grande, this has been incorporated as a fundamental action of the Strategic Plan carried out in 2021. In the case of Ushuaia, the situation seems different. Given the recognition of the “lack” of space available for urbanization, the expansion of the local government territory is being discussed in the provincial policy-making body. We understand here that this

would not solve the current housing problems on its own, but would probably enhance the dynamics of commodification of the city's coastal spaces.

It is necessary for the state and the academy to make room for joint and critical discussion about the cities we want, and also those we can build. As Corti (2019) says, "no city is better than its most vulnerable neighbourhood" (75), and therefore, development can only be bottom-up.

The path towards the construction of fairer cities is long and uneven, but this is why we need to keep insisting. With this research and those to come, we hope to continue building alternative ways of thinking and conquering urban borders for the common good.



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Annex 1: Secondary sources used for the documentary analysis

A.1.1 Understanding the process of occupation of Tierra del Fuego and its cities

Trabajos de investigación referidos a las condiciones geográficas y naturales.			
Año	Autor	Título	Editorial
2017	Coronato A., Mazzoni E., Vázquez M., Coronato F.	Patagonia. Una síntesis de su geografía física	Publicación digital. Ed. UNPA.
2000	Iturraspe R., Urciuolo A.	Clasificación y Caracterización de las Cuencas Hídricas de Tierra del Fuego	Actas XVIII Congreso Nacional del Agua. Ed. Univ. Nac. De Stgo. Del Estero
2008	Iturraspe R., Urciuolo A., Guerrero V., Gaviño Novillo M., Collado L., Sarandón R. Burns S.,	Report on basin response for Argentina	Deliverable 18, Proyecto EPIC FORCE
1992	Meglioli, A.	Glacial Geology of Southernmost Patagonia, the Strait of Magellan and Northern Tierra del Fuego	Ph.D. Disserta-tion, Lehigh University, Bethlehem, USA, unpublished
2000	Rabassa, J.; Coronato, A.; Bujalesky, G.; Salemme, M.; Roig, C.; Meglioli, A.; Heusser, C.; Gordillo, S.; Roig, F.; Borromei, A.; Quattrocchio, M.	Quaternary of Tierra del Fuego, Southernmost South America: an updated review.	Quaternary international, 68-71(1)
1998	Roig, F.A.	La vegetación de la Patagonia.	INTA Colección Científica. Tomo VIII. Buenos Aires.

Documentos históricos referidos al proceso de expansión y ocupación de la Isla Grande.			
Año	Autor	Título	Editorial
2014	Alonso Marchante, J. L.	Menendez, Rey de la Patagonia	Catalonia
1985	Bondel, S. C.	Tierra del Fuego (Arg.): La organización de su espacio	CONICET
2001	Borrero, L. A.	<i>Los Selk'nam (Ona)</i>	Buenos Aires, Galerna

1989	Canclini, A.	Así nació Ushuaia. Orígenes de la ciudad más austral de mundo	Buenos Aires, Editorial Plus Ultra
2019	Cao, H. y D' Eramo, D.	Tierra del Fuego: la última y diferente provincialización.	
2013	Casali, R.	Movilidad y uso del espacio: análisis demográfico de la trayectoria selk' nam ante la colonización. Tierra del Fuego, Argentina, 1890-1930	Anuario del Instituto de Historia Argentina (13)
1972	De Imaz J. L.	Los hombres del confin del mundo. Tierra del Fuego.	Editorial Universitaria Buenos Aires
1963	Gaignard, R.	La valorización pionera de Tierra del Fuego	Boletín de Estudios Geográficos. N38, Vol. X
1999 a	Orquera, L. A. y Piana E.	Arqueología de la región del Canal del Beagle (Tierra del Fuego, República Argentina)	Publicaciones de la Sociedad Argentina de Antropología.

A.1.2 Understanding extra-urban DED dynamics. 1972-2019

<i>Trabajos de investigación referidos dinámicas productivas</i>			
<i>Año</i>	<i>Autor</i>	<i>Título</i>	<i>Editorial</i>
1988	Azpiazu, D.	La promoción a la inversión industrial en la Argentina. Efectos sobre la estructura industrial, 1974-1987	Documento de trabajo, núm. 27. Buenos Aires: CEPAL.
1987	Azpiazu, D. Nochteff, H.	La industria de bienes de consumo electrónico y el régimen de promoción fueguino	Documentos e Informes de Investigación N° 70
2007	Filadoro, A.	Impactos del régimen de promoción en la estructura industrial de Tierra del Fuego	La Plata, mimeo
2004	Garófalo, A.	Régimen especial fiscal y aduanero, Ley 19640. Antecedentes, configuración y aplicabilidad del subrégimen industrial. Tierra del Fuego,	Cámara Fueguina de la Pequeña y Mediana Industria (CAFUPYMI).
2018	Sánchez, M.	La industria de la electrónica de consumo en Argentina: un aporte al estudio de su desarrollo a partir del análisis de su localización	Revista de Historia de la Industria, los Servicios y las Empresas en América Latina, 22

2019	Deluca, J. P.	Promoción industrial y modelo de acumulación subnacional". América Latina: el caso de Tierra del fuego, Argentina.	No publicado
2008	Mastrocello, M.	La economía del fin del mundo: configuración, evolución y perspectivas económicas de Tierra del Fuego.	De los Cuatro Vientos,
1992	Nochteff, H.	Evolución reciente del complejo electrónico en la Argentina y lineamientos para su reestructuración	CEPAL, Documento de Trabajo N° 42, Buenos Aires.
1988	Ciccolella, P. J.	La promoción industrial en Tierra del Fuego: Sus efectos económicos y sociales	Tesis de Grado en Geografía, (UBA)

A.1.3 Understanding intra-urban DED dynamics. 1972- 2019

<i>Trabajos de investigación referidos a políticas crecimiento urbano de Ushuaia y Río Grande y políticas habitacionales</i>			
<i>Año</i>	<i>Autor</i>	<i>Título</i>	<i>Editorial</i>
1988	Ciccolella, P. J.	La promoción industrial en Tierra del Fuego: Sus efectos económicos y sociales.	Tesis de grado en Geografía, Universidad Nacional de Buenos Aires.
2016	Finck, N.	La política municipal de producción de suelo y vivienda social en la Patagonia Austral. El caso del municipio de Río Grande, provincia de Tierra del Fuego, AIAS".	Tesis de maestría defendida en el marco de la maestría en Desarrollo Local de la UNSAM.
2019	Finck, N.	Políticas urbanas y habitacionales en localidades intermedias: el caso del Municipio de Río Grande (TDF, AIAS) Argentina.	CLACSO
2018	Finck, N.; Martínez, M.; Lobato, S. y Moreno Russo, M. F.	El acceso a la tierra pública. El caso de los municipios de Tierra del Fuego, AIAS (período 2005-2015)".	Políticas sociales y cuestión social en la Argentina del Siglo XXI.
2017	Lobato, S.	La política de suelo urbano en los gobiernos locales. El caso de Río Grande, Tierra del Fuego, Argentina.	Revista de Estudios Políticos y Estratégicos

2019	Martínez, A.; Finck, N.; Lobato, S. (). “	Ciudades fueguinas. La expansión urbana en perspectiva comparada (1996-2016).	Encuentro en el extremo. UNPAedita.
2015	Pérez, V.; E. Debia, S. Lobato y Martínez, A.	Políticas habitacionales y mercado de suelo: asentamientos informales en Tierra de Fuego, trabajo presentado en el	Seminario internacional ”, UNGS

Annex 2: List of interviews

Sector Público. Nivel Territorial/ Provincial				
Ref.	Fecha	Entravistado/a	Nombre	Uso*
E. 1	16/8/2015	Ex Director del Instituto Provincial de Estadística y Censo (década 2010- 2020)	Daniel D' Eramo	D. O.
E. 2	14/11/2018	Ex Director del Instituto Provincial de Estadística y Censo (década 1990- 2000)	Miguel Mastrocello	D. O.
E. 3	13/12/2018	Ministro de Economía de la Provincia (década 1970- 1980)	Mariano Viaña	D.P.
E. 4	11/12/2018	Ministro de Economía de la Provincia (década de 2000- 2010)	Rubén Banghe	D.P.
E. 5	19/6/2019	Ex Director de Industria y comercio (1990- 2010)	Rodolfo Di Leo	D.P.
E. 6	10/12/2018	Ex Secretario de Pequeña y Mediana Empresa (década 2010- 2020)	José Luis Artaza	D.P.
E. 7	4/3/2018; 20/6/2018	Técnica del IPV especializada en regularización dominial del Barrio Colombo (1995- 2018)	Mariana Granja	D.U.
E. 8	16/12/2018	Presidente del IPV (década 1980- 1990)	Diego Navarro	D.U.
E. 9	24/3/2018; 06/6/2018	Vicepresidente del IPV (década 1980- 1990)	Omar Deluca	D.U./D .O.
E. 10	20/3/2022	Secretario Provincial de Hábitat y OT (chequear cargo)	Olaf Jovanovich	D.U.

*Use of the interview within the thesis:

D.O: Dynamics of historical occupation of space.

D.P: Productive Dynamics (particularly referring to the functioning of industry and tourism).

D.U: Process Urban Dynamics (referring to the process of urban growth, urban-housing policies applied and the situation of informality).

Sector Público. Nivel Municipal				
Ref.	Fecha	Entrevistado/a	Nombre	Uso
E. 11	12/12/2018	Ex intendente de Río Grande (periodos 1983-85; 1985-87; 1987-89; 1989-91)	Esteban Martínez	D.U.
E. 12	24/4/2017; 15/12/2018	Dirección de Ambiente y Desarrollo Territorial (Ushuaia)	Máximo Lobo	D.U.
E. 13	9/12/2018; 21/06/2019	Asesora en Planificación Urbana (Río Grande)	Karina Valdeiglesias	D.U.
E. 14	16/08/2015; 9/12/2018	Director General del Área Técnica (Río Grande)	Pablo Driussi	D.U.
E. 15	28/5/2018	Directora Casa de la Juventud; ex trabajadora social Proyectos de regularización dominial (Río Grande)	Ana Andrade	D.U.
E. 16	22/04/2017; 14/12/2018; 22/06/2019	Director de Hábitat (Ushuaia)	Gabriel Palacios	D.U.
E. 17	15/12/2018	Técnico en Obras Particulares Ushuaia	Reservado	D.U.
E. 18	12/8/2015	Secretaría de Hábitat y Ordenamiento Territorial de Ushuaia (período 2016- 19)	Teresa Fernández	D.U.
E. 19	14/8/2015	Consejala de Ushuaia, U.C.R. (Período 2011-2015; Ex Directora de Planificación Urbana)	Viviana Guglielmi	D.U.
E. 20	15/8/2015	Subsecretaría de Planeamiento y Proyectos Urbanos de Ushuaia (Período 2011-15)	Jorge Cófreces	D.U.
E. 21	28/6/2021	Directora Desarrollo Urbano (Río Grande)	Carola Vestidelli	D.U.

Sector Público. Universidad Nacional de Tierra del Fuego				
Ref.	Fecha	Entrevistado/a	Nombre	Uso
E. 22	13/12/2018	Docente Investigador de la Licenciatura en Economía (Ex Secretario de Industria de la Provincia)	Juan Ignacio García	D.P.
E. 23	18/12/2018	Docentes Investigadora de la Licenciatura en Economía	Silvina Romano	D.P.
E. 24	12/8/2015	Licenciatura en Sociología	Ayelén Martínez	D.U.

Referentes de asentamientos informales				
Referencia	Fecha	Entrevistado/a	Nombre	Uso
E. 25	26/5/2018	Referente Margen Sur Paola	Paola M.	D.U.
E. 26	21/6/2019	Referente Sector Chacras	Mario J.	D.U.
E. 27	26/5/2018	Referente Barrio Austral	Elvira S.	D.U.
E. 28	22/6/2019	Referente Colombo	Susana P.	D.U.
E. 29	25/2/2018	Referente Colombo	Guillermo T.	D.U.
E. 30	26/11/2016	Referente Raices 4	Patricia G.	D.U.
E. 31	28/11/2016	Referente La Cima	Roberto S.	D.U.

Representantes de gremios y sindicatos				
Ref.	Fecha	Entrevistado/a	Nombre	Uso
E. 32	10/12/2018	Representante de la Cámara Argentina de la Industria Nacional	Reservado	D.P.
E. 33	9/12/2018	Representantes de la Cámara de Comercio de Ushuaia	Reservado	D.P.
E. 34	12/12/2018	Representante de la Cámara de Comercio e Industria de Río Grande	Reservado	D.P.
E. 35	18/12/2018	Representante del Sindicato UOM en la década de 1990	Carolina Yutrovich	D.P./ D.U.
E. 36	14/8/2015	Representante C.T.A. y Foro Social Urbano	Silvia Paredes	D.U.

Representantes del sector privado				
Ref.	Fecha	Entrevistado/a	Nombre	Uso
E. 37	14/12/2018	Gerente Grupo MIRGOR	Reservado	D.P.
E. 38	13/12/2018	Gerente de NewSan	Facundo Bianciotto	D.P.
E. 39	14/12/2018	Gerente y Director de BGH	Reservado	D.P.
E. 40	16/12/2018	Dirigente Cooperativa Renacer	Mónica Acosta	D.P.
E. 41	27/11/2016	Agrimensor Ushuaia	Jorge Rolando	D.U./ D. O.
E. 42	15/12/2018	Agrimensores Río Grande	Daniel Ibarra; Martín Ibarra; Jorge Zanone	D.U./ D. O.
E. 43	16/12/2018	Dueño de empresa constructora VIATLEC S.A.	Reservado	D.U.

Annex 3: Interview questionnaire guide

Indicative questionnaire to State actors involved in industrial promotion

Name and position/function:

How many years have you been working in the industrial activity in TDF?

Could you describe the activity?

Do you think there are differences in the profile of Ushuaia and Río Grande in relation to industry?

What does Law 19.640 on industrial promotion mean in TDF?

What is industrial employment like?

What is the production process like?

For those who have worked for many years on the subject:

Do you recognise cycles around industry?

What similarities do you find between the industrial boom of the 1980s and what happened after 2003?

Indicative questionnaire for interviews with state actors linked to urban dynamics

Name and position/function:

How many years have you been working in the area of urban planning/public works/habitat?

What is your opinion of the growth process of the city/s?

How or why did informal settlements grow in the city? Do you recognise any policies that have been implemented to address them?

How has industry impacted on the growth of the city?

Do you recognise similarities between the urbanisation process of the 1980s and what has happened since 2003 with the latest industrial and migratory boom?

In Ushuaia: How is tourism impacting on the city's growth?

What public planning policies do you consider to be or have been the most important in the city?

Are there urban developments promoted by private actors in the city, and do you know the process through which they were created?

To IPV actors:

Can you recognise on the map of the cities, the location and time of execution of the main housing plans?

Can you recognise on the map the location of historical and current informal settlements?

To the actors in the municipality:

Could you recognise on the city map, the location of municipal housing estates and housing plans?

Also, if they exist, can you recognise the regularisation/socio-urban integration projects applied in informal settlements? In both cases, could you indicate the time of implementation?

Can you recognise on the city map the location of historical and current informal settlements?

Can you recognise on the map of the city, the location of the urbanisations generated from the mercantile logic?

Guidance questionnaire for interviewing informal settlement dwellers

Name and neighbourhood:

When did you arrive in Tierra del Fuego?

What do you do?

How long have you lived in this neighbourhood?

How did you come to live here?

Has the State given you a solution for your housing?

Do you feel that your neighbourhood is integrated into the city? What is it like to live here?

Indicative questionnaire for interviews with researchers:

Name and speciality

For economic researchers:

How has industrialisation impacted Tierra del Fuego and its cities?

Do you recognise positive and negative cycles in terms of industry?

How is tourism impacting on the processes of differentiation in Ushuaia and Río Grande?

To urban researchers:

What relationships could you establish between urban growth and industrialisation in TDF?

How are urban housing policies linked to the growth of urban informality?

What has been the historical growth of informality, what particularities has it acquired from 2003 onwards, and what role has the growth of the real estate market played in this?

Indicative questionnaire for interviews with surveyors:

Could you mark on the map, by decades, the main areas of expansion of the city?

Could you indicate on the map the location of the historical informal settlements according to decades?

In which year was XX neighbourhood built?

Other specific questions about specific situations in each case, for example: creation of the industrial park, opening of main streets, etc.

Annex 4: Systematisation and classification of urban housing policies

Ushuaia				
Año	Decreto	Ordenanza	Descripción	Tipo
1974		21/74	Prohíbe construir en zonas de la Ciudad	A.I
1975		52/75	Prohíbe construcción de viviendas precarias en terrenos fiscales	A.I
1975		71/75	Aprueba el Código de Urbanismo	Pl.
1977		87/77	Modifica el Código de Planeamiento	Pl.
1983		166/83	Consejo de asesoramiento del Código de Planeamiento	Pl.
1985		138/85	Código de Planeamiento Urbano y Plan Director	Pl.
1986		223/86	Declara zona de concertación a los barrios periféricos de la ciudad de Ushuaia. Adjudicación de lotes	T/Hab.
1987	558/87		Declaración de la emergencia urbana municipal	EM.
1988		348/88	fiijas", a find e regularizar la situaicón de los propietarios de las mismas	A.I
1988		294-295/88; 312-313/88; 316-318/88; 320/88; 323/88; 330/88; 33/88; 340/88; 358-359/88; 377-379/88	Asignación de nombres a barrios de la Ciudad	T/Hab.
1988		349/88	Prohibir la division de predios sin infraestructura básica	A.I
1988		351/88	Empadronamiento de obras clandestinas parciales o totales destinadas a vivienda	A.I
1988		371/88 (Modifica ordenanza 351/88)	Empadronamiento de obras clandestinas parciales o totales destinadas a vivienda	A.I
1988		421/88	Declara zona de turbales no pto para urbanización	Pl.
1988		422/88	No se aprobarán nuevas urbanizaciones por tres meses, sólo ordenamiento de barrios existentes	Pl./T/Hab.
1988		423/88	Limita el crecimiento urbano sobre márgenes de Río Olivia y Arroyo urbano	Pl.
1988		433/88	Prórroga de empadronamiento de obras clandestinas	A.I.
1988		457/88	Zonificación preventiva	Pl.
1989		492/89	Excepción para realizar mensuras y/o urbanizaciones sobre turbales	Ex.
1989		505/89	Zonificación del ejido municipal	Pl.
1989		506/89	Establece suspender excepciones al Código de Planeamiento	Pl./Ex.
1991		816/91	Excepción para construcción sobre la costa (pedida por Asociación Caza y Pesca)	Ex.
1991		828/91	Excepción para sub- parcelamiento de Area de Proyectos Especiales	Ex.

*Type: A.I.: to address informality; Pl.: planning; Ex.: exception to existing regulations; T/Hab: access to land and housing; EM: housing emergency; R.M.: market regulation.

1992		1005/92	Excepción para realización de viviendas en predio industrial	Ex.
1992		1010/ 92	Excepción para realización de viviendas en predio industrial	Ex.
1992		1022/92 (modicifa 21/74)	Prohíbe la construcción de tipo precario	A.I.
1993		1117/93	Ratificar la creación de la Comisión Municipal de Tierras Fiscales	T/Hab.
1993		1245/93 (modifica ordenanza)	Prohíbe la construcción sobre Arroyo Buena Esperanza a menos de 15 m.	Pl.
1993		1288/93	Da por finalizada la Comisión Municipal de tierras fiscales	T/Hab.
1994		1359/94	Prohíbe construcción con caracterísitcas de "galpón" a finde resguardar caracterpísticas de barrios consolidados	Pl.
1994		1406/94	Reglamentación de adjudicación de tierras fiscales dentro del ejido municipal	T/Hab.
1994		1496/94	Zonificación del ejido municipal (se realiza interactoralmente)	Pl.
1995		1506/95	Parámetros constructivos para edificaciones	Pl.
Hasta acá se refieren al "carácter preventivo y transitorio de la norma municipal" (ord N° 1544)				
1995		1564/95	Zonificación Macizo I Sección H como R3a	Pl.
1996		1639/96	Modifica ordenanza 1496	Ex.
1997		1682/97; 1690/97; 1699/87; 1707/97; 1717/97; 1722/97; 1746/97; 1762/97; 1791/97; 1810/97; 1828- 1829/97; 1831- 1832/97; 1841/97	Excepciones a ordenanza 1496/94	Ex.
1997		1884/97	Asignación de nombre al "Barrio Casas del Sur"	T/Hab.
1999		2025/99	Regula la delimitación, registro, cesión, adjudicación y contro de tierras fiscales municipales.	T/Hab.
1999		2103/99	Zonificación sector sud- oeste de la ciudad	Pl.
2000		2139/2000	Aprobación del Código de Planeamiento Urbano de la Ciudad de Ushuaia	Pl.
2000		2178/00	Marco Normativo relativo al proceso de regularización dominial de predios fiscales (componente del PROMEBA, financiado por BID)	A.I.
2000		2179/00	regularización dominial del Barrio Felipe Varela	A.I.

2000	2180/00	Mecanismo de intercambio entre parcelas fiscales municipales adjudicadas con destino a vivienda unifamiliar y unidades habitacionales adjudicadas por el IPV	T/Hab.
2000	2243/00	Programa de embellecimiento y consolidación urbana (se constituye también una unidad de gestión)	Pl.
2001	2425/01	Plan de empadronamiento y regularización edilicia	A.I.
2002	2479/02	Creación del Consejo de Planeamiento estratégico de la Ciudad de Ushuaia	Pl.
2002 - Carta Orgánica Municipal de Ushuaia			
2003	2564/03	Marco Normativo relativo a la función del Consejo de Planeamiento Urbano	Pl.
2004	2750/04	Programa de Desarrollo para la Zonificación, Condiciones y restricciones de uso para vertiente sudoccidental del Vale de Andorra	Pl./A.I.
2005	2924/05	Plan de empadronamiento y regularización edilicia	A.I.
2005	2929/05	Regularización dominial del Barrio Kaupen	A.I.
2006	3042/06	Creación del Consejo de Planificación Habitacional	Pl.
2006	3085/06	Programa Municipal de Creación de suelo urbano	T/Hab.
2006	3099/06	Vertiente sudoccidental del Valle de Andorra como reserva de expansión urbana en el marco de la crisis habitacional	Pl/A.I./T/Hab.
2006	3131/06	Programa de Evaluación de Demanda Habitacional	T/Hab.
2006	3133/06	Creación del Banco de Espacios Públicos Municipal	T/Hab.
2006	3178/06	Sistema de acceso a la vivienda por autogestión colectiva y sistema de acceso individual a predios fiscales en el marco del Programa de Creación de Suelo Urbano	T/Hab.
2007	3211/07	Convenio con Faguinos Autoconvocados	T/Hab.
2008	3375/08	Convenio de Custodia para áreas con anteproyecto de urbanización aprobado	T/Hab.
2008	3376/08	Programa de "módulos de Asentamiento Habitacional"	T/Hab.
2009	3685/09	Criterios para ordenamiento y saneamiento de la vertiente sudoccidental del Valle de Andorra	A.I.
2010	3758/10	Plan de empadronamiento y regularización edilicia	A.I.
2011	3838/11	Plan de manejo costero de la Ciudad de Ushuaia	Pl.
2011	3926/11	Proyecto Urbano Integral en la Vertiente sudoccidental del Valle de Andorra	Pl/A.I./T/Hab.
2011	4004/10	Convenio de Conservación. Ocupación precaria	A.I.
2012	4124/12	Marco regulatorio para evaluación de impacto ambiental	Pl.
2013	4502/13	Desafectación de tierras fiscales para demanda habitacional. Creación del Fondo Municipal de Vivienda	T/Hab.
2014	4776/14	Regularización B° Bella Vista	A.I.
2015	4828/15	Regularización dominial	A.I.
2016	5055/16	Nuevo régimen de tierras municipales	T/Hab.
2017	5287/17	Programa de acceso a la tierra para pequeños y medianos emprendedores	T/Hab.
2016	5082/16	Nuevas Áreas urbanas	Pl.
2017	5398/17	Lineamientos para la regularización dominial de asentamientos	A.I.

Río Grande				
Año	Decreto	Ordenanza	Descripción	Tipo
1978		132/78	Código de edificación para la Ciudad de Río Grande	Pl.
1982		161/82	Vigencia del Código de edificación de la Isla Grande de Tierra del Fuego	Pl.
1985		200/85	Prestamo a Caja Nacional de Ahorros y seguros Pavimentacion 60 cuadras del ejido municipal	T/Hab.
1987		303/87	Llama a conformar una comision de profesionales, entidades intermedias y acotres politicas para conformar un Plan Urbanistico Municipal	Pl.
1987		322/87	Designacion barrio Aeropuerto y sus calles	T/Hab.
1987		343/87	Desafectacion y nombres de cales AGP (de espacio verde a loteo)	T/Hab.
1988			Diagnóstico Urbano Expeditivo. Convenio entre Municipalidad de Río Grande y Secretaria de Vivienda y Ordenamiento Ambiental de Nación	Pl.
1988		378/88	Plan de Viviendas Economicas Municipales	T/Hab.
1988		365/88 y 388/88	Designación de nombre y Ordenamiento calles B Islas Malvinas (AGP)	T/Hab.
1988		405/88	Reconoce y Ratifica la designacin de los barrios de MS: Austral, Aeroposta, Reconquista y Cabo Peñas	A.I.
1988		415/88	Fraccionamiento, loteo y urbanización	T/Hab./ A.I.
1989		466/89	Saneamiento costa maritima, entre av Belgrano y EL cano sobre calle guemes (iluminacion, parquizado, vereda)	Pl./T/H ab.
1990		509/90	Tierras de la ribera del rio grande como interes municipa; entre bouvoir y rio, entre puerto y prefectura.	T/Hab.
1990		524/90	Faculta al Muunicipio de intimar a propietarios/ u ocupantes de casillas ubicadas en la via publico o terrenos de dominio publico , a que en un plazo de 10 días, procedan a reubicar aquellas en otros terrenos no públicos. Pasado ese plazo el Municipio puede desalojar.	A.I.
1990		528/90	Banco de Tierras Municipales. Autoriza al Municipio a adquirir tierras dentro de Margen Sur, y también a ser garante solidario de los barrios Aeroposta, Cbao Peña y Reconquista en la compra de 515 lotes	T/Hab./ A.I.
1991		544/91	Plan de redes cloacales	Pl/T Hab.
1994		741/94	Desafecta espacio verde para uso residencial	T/Hab.
1995		771/95	Fija los límites del ejido municipal. Define el terriotrio en tres areas: urbana, suburbana y rural	Pl.
1996		825/96	Escritura Margen Sur.	A.I.
1997		895/97	El municipio administra, controla y gestiona el otorgamiento de tierras fiscales (Dirección Municipal de tierras: responsable de recepción)	T/Hab.
1997		975/97	Declaración de interés municipal el Programa de Desarrollo Municipal PDM II y adhiere a Ley Provincial N° 308 aprobatoria de dicho Programa	Pl.
1998		1014/98	Modifica Ordenanza 895. Herramientas que permitan concoer la demanda potencial de tierras	T/Hab.

2000		1235/2000	Régimen de esfuerzo compartido para ejecución de obras	T/Hab.
2000		1258/00	Aprobación y aplicación del "Esquema de Ordenamiento Territorial Municipal"	Pl.
2000		1268/00	Programa de Desarrollo Municipal II y Programa Municipio Tercer Milenio	Pl./T/Hab/A.I.
2002		1692/02	Barrio Reconquista como loteo con fines sociales	A.I.
2002		1701/02	Ocupación del suelo dentro del ejido municipal	Pl.
2002		1710/02	Barrio Aeorposta como loteo con fines sociales, regularización dominial	A.I.
2002		1713/02	Plan de ahorro previo para postulantes a terrenos fiscales	T/Hab.
2003		1788/03	Desafecta parcela como area sub urbana, Seccion Y Nacizo 200	T/ Hab.
2004		1874/04	Declara Area de Interes Municipal al Río Grande y a la Costa Marítima del Ejido Municipal	Pl.
2004		1875/04	Relocalización de familias en zonas inundables	A.I.
2004		1848/04	Proyecto de urbanización Barrio Cabo Peña	T/Hab.
2004		1980/04	Banco Municipal de tierras	T/Hab.
2005		2039/05	Barrio Cabo Peña como loteo con fines sociales, regularización donimial	A.I.
2005		2147/05	Adquisición de tierras fiscales para relocalización	T/Hab.
2005		2154/05	Impuesto a los inmuebles improductivos ubicados en el Parque Industrial	R.M.
2006 Carta Orgánica Municipal				
2006		2182/06	Programa de intervención, consolidación y completamiento urbano y social	A.I.
2006		2206/06	Obras de Infraestructura en Bario Cabo Peña el marco del PROMEBA	A.I.
2006		2243/06	Creación de la Dirección Municipal de la Vivienda	T/Hab.
2007		2376/07	Declara de utilidad pública y sujeto a exorpiación inmuebles para regularización dominial	A.I.
2008		2550/08	Convenio Municipio. Provincia em el marco del PROMEBA para regularización dominial	A.I.
2010		2835/10	Código ambiental del municipio	Pl.
2010		2856/10	Creación del "Plan de Regularización de tierras fiscales urbanas"	A.I.
2011		2863/11	Aprobación del Plan de Desarrollo territorial	Pl.
2011		2915/11	Desarrollo Urbanístico "Don Federico" (Area residencial extra urbana)	R.M.
2011		2934/11	Sanción del Código Tributario Municipal	R.M.
2013	173/13		Emergencia Habitacional hasta Dicimebre de 2015	EM.
2014		3281/14	Régimen de Regularización dominial de tierras fiscales	A.I.
2014		3287/14	Crea la Zona Residencial de Interes Publico- Privado (ZRIPP)	R.M.
2014		3312/14	Crea Comision de evaluación para ZRIPP	Pl.
2015		3408/2015	Desafecta uso publico tierras en MS para regularización dominial	A.I.
2015		3406/15	Ratifica Convenio N° 10559, celebrado e/ Secretaría Nacional de Acceso al Hábitat y el MRG. Fecha: 27/08/2015	A.I.

2016		3486/16	Regimen de Regularización domini al de Tierras Fiscales Urbanas (Prorroga de 3281/14)	A.l.
2016		3898/16	Desafecta de uso pbulico tierra de margen y cede al IPV	T/Hab.
2016		3897/16	Desafecta de uso pbulico tierra de margen y cede al IPV	T/Hab.
2016		3896/16	Desafecta de uso pbulico tierra de margen y cede al IPV	T/Hab.

Annex 5: Spatial analysis systematisation of the production of urban space, according to type of actor. 1972- 2019

A.5.1 Production of space according differents types of actors(Ha.). 1972- 2019.

	Estado				Mercado	Soc. Civil		Residencial			Prod. V. U.	
	Nac.	Prov.	Mun.	R. Do.		O. Civ.	Infor.	For.	Infor.	Tot.		
Ushuaia												
1972- 91	12,3	147,8	10,17		5,12	5,43	82,03	180,8	82,03	263	63,27	144
1992- 02	1,58	56,83	10,86	24,75	50,32		96,9	119,6	96,9	216	19,88	140
2003- 15	1,52	50,8	68,13	57,05	123,2	0,49	271	244,1	271,02	515	49,19	111
2016- 19	11,3	21,48	63,84	75,62	55,7		9,08	152,4	9,08	161		96,4
Total	26,8	276,9	153	157,4	234,34	5,92	459	696,9	459,03	1156	132,3	491
Río Grande												
1972- 91	14,9	159,6	1,79		3,14		92,91	179,5	92,91	272	139,4	154
1992- 02	4,59	126,6	1,19	48,96		2,37	57,22	132,4	57,22	190	10,26	180
2003- 15		72,27	43,51	21,4	101,34	5,46	317,3	217,1	317,29	534	81,6	444
2016- 19	5,02	8	9,53	90,43	228,63	6,93	15,5	251,2	15,5	267	2,08	409
Total	24,6	366,5	56,02	160,8	333,11	14,76	482,9	780,2	482,92	1263	233,4	1188

A.5.2 Production of space according differents types of actors(Ha.). 1972- 2019.

Año	Ushuaia			Río Grande		
	Estado	Mercado	S. Civil	Estado	Mercado	S. Civil
1972- 91	170,25	5,12	87,46	176,33	3,14	92,91
1992- 02	69,27	50,32	96,9	132,42		59,59
2003- 15	120,45	123,2	271,51	115,78	101,34	322,75
2016- 19	96,66	55,7	9,08	22,55	228,63	22,43

A.5.3 Production of space according differents types of actors(Ha.). 1972- 2019.

Año	Ushuaia		Río Grande	
	Formal	Informal	Formal	Informal
1972- 91	180,8	82,03	179,47	92,91
1992- 02	119,59	96,9	132,42	57,22
2003- 15	244,14	271,02	217,12	317,29
2016- 19	152,36	9,08	239,18	15,5

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I hereby declare on my honour that I have prepared this thesis without the unauthorised assistance of third parties and without the use of aids other than those indicated. The data and concepts taken directly or indirectly from other sources are clearly marked with an indication of the source.

I have observed the rules of good scientific practice (in accordance with the guidelines for ensuring good scientific and artistic practice at the Bauhaus-Universität Weimar). In the selection and evaluation of the following material, the persons listed below have assisted me in the manner described in each case, against payment/unpaid:

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Weimar, September 21st, 2022.

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