Current trends in Real Estate Development in Montevideo (Uruguay) / Analysis from the developer`s point of view

Master Thesis

International Master of Science in Construction and Real Estate Management

Joint Study Programme of Metropolia UAS Helsinki and HTW Berlin

from

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International Master of Science in Construction and Real Estate Management

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Conceptual Formulation

Master Thesis for Mr./Ms.: Gonzalo Ruiz Liard

Student number: s0567961

Topic:

Current trends in Real Estate Development in Montevideo (Uruguay) / Analysis from the developer's point of view.

During the last decade, the real estate development in Montevideo has shown significant growth. Several conditions have stimulated investment in real estate and the development of housing projects. It is of particular interest in this thesis to analyze two real estate trends that are very different in characteristics but both have managed to cover the interests of both local and foreign investors.

On the one hand, the development of luxurious projects within private residential neighbourhoods, for end-users with high purchasing power, and on the other hand projects stimulated by government policies to satisfy the housing needs of the middle class and at the same time encourage the construction industry as the main engine of the national economy.

The study will analyze the potential advantages and disadvantages of undertaking real estate projects within each of the trends from the investor`s point of view. Surveys, interviews and research and case studies will be the research method to fill the objectives.

The final goal of the study will be to define specific conditions of both business opportunities, providing valuable information about the benefits and risks that each of them may have, in such a way that they help the investor in making decisions according to their particular interests.

Some of the research questions:

- What real benefits does each of the options bring to the investor?
- What risks does each of the options bring to the investor?
- What period of return on investment is estimated in each case?
- The number of projects developed in the last 10 years under both plans.
- How affordable is the purchase of each of the options for an average salary?

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Abstract

Housing is a right and a need for individuals. Despite the significant effort done by the States to guarantee housing solutions, Latin America has a severe housing deficit, and Uruguay is not the exception. The public housing policy, launched in 2011 in Uruguay, promotes private investment and housing projects offering tax exemptions. After ten years, the plan has considerably boosted real estate development but has also drawn some criticism.

The promoted housing law has social and urban aspects as its primary objectives. On the one hand, the State intended to stimulate the construction of new housing in central areas of Montevideo, which were almost unoccupied. On the other hand, it has a social objective committed to building cheaper (with a fiscal effort by the State), resulting in lower sale prices and better opportunities for housing for middle and lower-middle-income families.

After one decade of implementation, the result of the policy has many critics. Most of them judge the performance as no more than an excellent business for the developers getting huge profits instead of transferring part of the tax exonerations to the final prices.

It is undeniable that the law achieved many of the urban objectives, but the policy results in social matters do not convince all shareholders. The final prices are not showing significant changes, so the access to housing has not been improved. The Uruguayan State resigned more than 1,440 million dollars in taxes that have had little or no impact on housing prices.

This study focuses on how the new public housing policy, launched in the last decade in Uruguay, influences the investor`s financial analysis and decision-making.

This thesis work concludes that without the benefits provided by the law, real estate developments in the areas of interest would not be viable. The enactment of the housing law allowed the creation of development opportunities, improving one of the incidence factors such as national taxes. This study concludes that without the exemptions, the sales prices that reach the required rate of return should be set significantly above the current ones, there being no actual demand for these price ranges.

In addition, this work concluded that with the current sales prices, the developers are earning an internal rate of return significantly higher than the required rate of return. This extra profit is the result of tax benefits.

Therefore, the last chapter of this work analyzes the final prices if the developers transferred the extra profit to prices.

Keywords: Real Estate Development, Uruguay, Housing, Public Housing Policies, Taxation in Real Estate, Required Rate of Return, Internal Rate of Return.

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List of Abbreviations

BHU. *Mortgage Bank of Uruguay*;

FMD. *Foot-and-mouth infection*;

GDP. *Gross Domestic Product*;

IPAT. *Wealth Tax*;

IRAE. *Income Tax on Economic Activities*;

ITP. *Property Transfer Tax*;

MERCOSUR. *Southern Common Market*;

MVOTMA: the Ministry of Housing, Land Management and Environment,

NPV. *Net Present Value*;

PVI. *Physical Volume Index*;

VAT. *Value Added Tax*;

1. Introduction

A real estate investment project is defined as any set of actions that involve the immobilization of resources to develop a real estate venture. In effect, it is a set of planned activities, which aims to achieve specific objectives for which resources are used, from which it is expected to obtain a benefit that justifies their use. (Gómez & Tisocco, 2011)

In addition, housing is a basic need for every individual and a physical asset. Most traditional investors choose to invest their capital in a market with low or moderate volatility (Gómez, 2014). Also, real estate tends to increase in value over time; it works as a safeguard against inflation, and depending on the opportunity found, it can generate desirable economic benefits.

But the real estate development market has several peculiarities that distinguish it from other business opportunities. Unlike bonds or stocks, for example, these kinds of assets are all different from each other. No two properties are the same. Uncountable aspects of the environment in which they are inserted define the value of each property. Some of them are the local economy, infrastructure, and social trends, among others, and more intrinsic characteristics of each project such as typologies, views, construction qualities, etc. (Gómez, 2014).

Furthermore, real estate investments have little liquidity, and their development takes several periods, which adds a high degree of uncertainty. The market conditions could register several changes during the project life cycle with relevant consequences. (Casacuberta, 2006)

This complexity of factors involved in a real estate business makes the feasibility study essential and requires an increasing degree of information, analysis, and evaluation.

In addition, the immobility of real estate makes the success or failure of a development heavily dependent on many aspects, as local laws and regulations. The taxation component is one of the most influential financial and economic analysis variables within many relevant factors.

In the last ten years, the Uruguayan government has enacted a law that encourages the private sector to build social housing. Through it, the State seeks to achieve urban and socioeconomic objectives. The target audience is the middle and lower-middle

social class, which has seen their opportunity to access housing reduced for decades. The market had not generated enough supply for these sections of society, and the State had not covered this deficiency with public investment. To achieve these objectives, the government has implemented a law that offers significant tax benefits for private developments that meet specific guidelines. The implementation of more than a decade has shown a high level of interest in investors who seem to have found good business opportunities.

1.1 Background

In 2011, the Uruguayan government launched the law 18.795 of promoted housing. This law is a public housing policy that stimulates private investment in social housing. The implementation of this policy has been the engine to carry out urban and sociological strategies seeking better access to housing.

These innovative policies use fiscal tools to attract the attention of local and foreign investors, thus promoting the construction of new social housing projects. It seeks to improve the development conditions, thus creates business opportunities for investors.

The results obtained during the first decade of implementation have had different interpretations. In common agreement, the urban objectives set by the law have been successfully achieved so far.

It is also a common opinion among the different actors that the objectives of an accelerated increase in the supply of housing have been met. Nevertheless, the principal basis of criticism is related to socioeconomic aspects. The goals of improving sales prices, building with tax exemptions that allow savings, and better offers for the target public seem not to be expected. Critics of the law argue that sales prices do not differ from natural market prices. They argue that the law has been nothing more than a big deal for developers who have caused tax breaks to boost their return rates instead of transferring them to the end-user.

1.2 General Objectives

As already mentioned, many variables must be considered when forming, evaluating, and analysing a real estate investment project. Changing some of the factors could

redirect the destiny of a project from success to failure or vice versa. In this sense, the tax expenses associated with a real estate project usually result in significant amounts of capital.

The general objective of this thesis work is to reliably identify how the policies launched in Uruguay in the last decade influence development profits by exempting certain taxes. The impact of this public policy seen from the investor point of view and the effect on profits is interesting to be discovered, for the first time since the law is running.

Furthermore, to determine how the prices could be altered due to the tax exemptions, calculations will be done to dissolve the extra benefits into the sale prices.

1.3 Specific Objectives

The specific objective of this work is to study a hypothetical housing development and its financial analysis under normal conditions in comparison with the same project developed within benefits given by the law launched in 2011.

This work will identify the impact that the tax benefits granted by the government generates in the economic equation developed by the investor. A comparison between an eventual project developed under normal conditions without tax benefits and the same project framed with the law benefits will make the result of the benefits visible. After analysing how the investor`s profit increases with the tax exemptions, further analysis will study the final price if that savings are transferred to the final user instead of developers' benefits.

1.4 Research Questions

• How do the tax benefits given by the policy influence the investor's financial evaluations?

• Is the investor taking excessive advantage of the tax benefits? Or is he earning accordingly to the risk taken?

• Could the investor transfer tax savings to the final price, or are the margins still very tight?

• Which could be the final price if the savings are transferred to the final user?

1.5 Research Methodology

This section describes the methodology used in this thesis, and Figure 1 depicts the structure followed. As shown, six stages articulate the structure of this work.

Firstly, stage 1 sets up the research scope, objectives and methodology.

Secondly, the local context is introduced. General parameters of the economy and social aspects and taxation concepts are relevant for a complete understanding of this study. This general introduction was followed by step 3, where the specific housing context is studied. The successive housing deficit, the history of public policies and their results are analyzed. This was the context in which the law has been created is analysed.

Through stage 4, the framework, objectives and benefits of the law are introduced. Later, the study forwards into the results achieved by the law after ten years of implementation and the different points of view, including the criticism.

After studying the achievements and weaknesses of the law, stage 5 is intended to compare the benefits the development of a project would achieve in a typical scenario and how they vary if the same project is built within the promoted law. It identifies what extra profit the investor becomes by investing in a tax-free project, the main factor of criticism.

For this purpose, hypothetic project development was developed considering the same land and construction cost but changing the tax conditions (within and outside the exemption law). A dynamic financial analysis was carried out with this information concluding how much the benefits increase due to the tax exemptions. As a final step, after finding the amount of tax savings, further calculations have been done to transfer them to the final price instead of to the investor`s profit. In this way, different possible scenarios are introduced.

Finally, stage 6 describes the study's outcomes, introduces possible alternative scenarios, and expresses the conclusions.

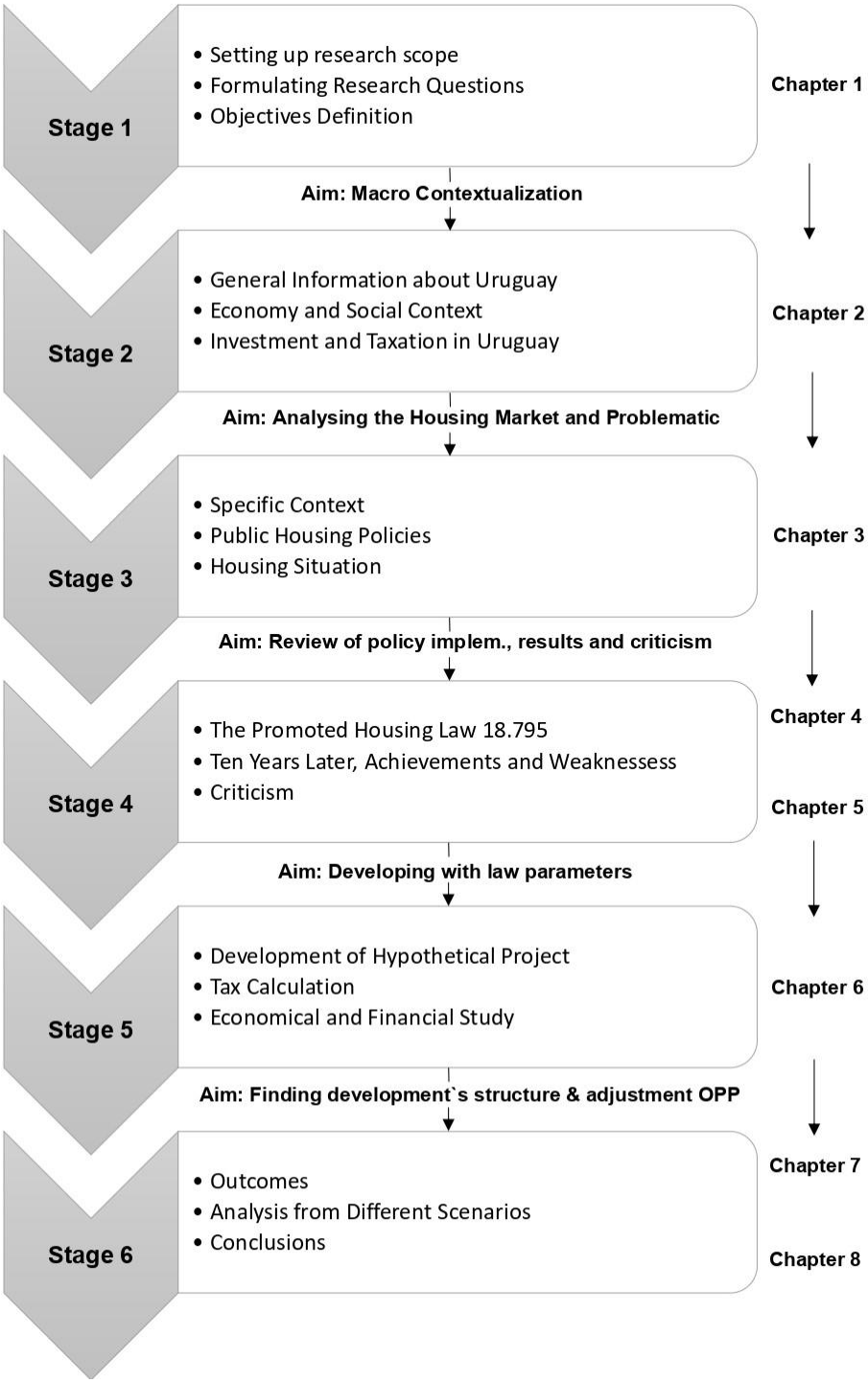

Figure 1 Methodology of research diagram. [1]

[1] Reference: Own work

1.6 Delimitations

The hypothetic real estate development included in the research method of this thesis work does not represent a feasibility study. It is not an objective to validate and value investment. The analyzes developed within this study should not be taken as a market and site analysis either, since they were not proposed in that sense because they are not strictly necessary to obtain the desired results.

In addition, when studying the development of a hypothetical real estate project, certain assumptions are defined, such as the type of financing of the project and the moments of sale of apartments. Fixing both conditions does not alter the desired result or the associated conclusions. In any case, an improvement in the type of financing to be applied and in the sales processes would only improve the project's performance. Said improvement would be the same for both study cases, so the result of this study would not have relative variations.

Nevertheless, an explicit declaration of objectives defines the goals of this work regarding the effect the benefits given by the law 18.795 causes from the developer´s point of view. The proposed research method achieves the objectives guaranteeing the reliability requirements.

1.7 Literature

The literature used for the development of this thesis work is mainly based on two bibliographic branches. On the one hand, thematic content about real estate development and academic bibliography related to the industry. In addition, due to the specific context and the public policy studied local information, laws, and regulations of the department of Montevideo, the capital of Uruguay, was used.

It is essential to mention the framework in which this thesis work has been done regarding the sanitary situation due to Covid-19. This context affected in two ways the literature used, none of them affecting the fidelity of the results.

From one side, some of the information used for this work refers to 2019 because of the lack of official information generated during the last year. In addition, the data referring to 2020 (the first year of the pandemic) does not reflect the normal conditions of the market.

It is assumed that the performance during 2020 is an exception, considering this year as a transition to the new normality. Secondly, the sanitary context and the lockdowns hindered access to physical bibliography.

2. Uruguayan Context

For an entire comprehension of the public housing policy and the investment analysis to be driven, it is essential to introduce the context in which the law is inserted. In this way, general information of Uruguay will be given, together with a study of the national economy, the investment ecosystem and local taxation.

2.1 Uruguay – Overview

Uruguay is located in the southeast of South America, between Brazil and Argentina (Figure 2). Its geographical extension is the second smallest from the continent, with only 176.215 km2. (Uruguayan Academic Network, 2000).

The modest extension of the territory makes it even more relevant to the international boundaries and their influence. Uruguay has a 985 km of “dry border” with Brazil and 579 km of border with Argentina, with the Uruguay river as a political borderline. The rest of the territory boundaries is completed with 660km of coast to the Rio de la Plata River and the Atlantic Ocean. (Uruguayan Military Geographic Service, 2019)

From a topographic point of view, the Uruguayan territory is characterized by a pene-plain without significant heights. The Cathedral Hill, with a height of 514m, is the tallest point in the country. (Welcome Uruguay, 2007)

Regarding history, the first city on the territory was founded by the Portuguese con-querors in 1680. After that, in 1726, the Spanish conquers founded Montevideo and stayed with the governance until the 25th of August 1825, when the nation achieved independence from the Spanish crown (Uruguayan Academic Network, 1995). The official language is Spanish, and the national currency is the Uruguayan peso. The State is secular with freedom of worship. (Welcome Uruguay, 2007)

Uruguay is a democratic republic with a presidential system governed by a national constitution adopted in 1830 with the national foundation (Welcome Uruguay, 2007). The division of powers into Executive, Legislative and Judicial is represented respec-tively by the president and his ministers; the General Assembly made up of the House of Representatives and the House of Senators; and the Supreme Court of Justice and the Tribunals. All the representatives are elected by the people´s vote every five years. (Welcome Uruguay, 2007)

Figure 2 A) South America and Uruguay location.[2] B) Map of Uruguay and it`s 19 departments.[3]

In the early days of state organization, the open-door immigration policy enabled the entry of Europeans, mainly Spaniards and Italians. In turn, there is a small proportion of descendants of Africans who arrived at the time of the Spanish domain. Unlike the rest of the Latin American countries, Uruguay does not have an indigenous population since it disappeared from the territory at the end of the 19th century. (Calvo, et al., 2013)

During the modern epoch, the mobility of Uruguayans is significant; a relevant percentage of residents have moved beyond the borders due to family ties with immigrants for educational or economic reasons. In 2002, the year of one of the most critical economic crises that Uruguay went through, more than 28,000 people left the country to seek a different future in other regions, just as previous generations had done in the 19th century. (Calvo, et al., 2013)

The population growth rate is under 1.0% since 1967, with a current value of 0.4%. (The World Bank, 2021).

[2] Reference: (Uruguay XXI, 2021)
[3] Reference: (Interactive Maps, 2020)

This condition could be a consequence of the current birth rate, which is the lowest in South America (13.86 ‰), and the frequent negative migration rate (Macro Data, 2019). The life expectancy of both sexes is 81.2 years, making it the highest in the South American ranking. (The World Bank, 2021)

The capital of Uruguay is Montevideo, and it is within the smallest and the most southern state of the country (Figure 2). From the 3.323.906 inhabitants of Uruguay, the city of Montevideo concentrates 43% of the total population. (INE - National Institute of Statistics, 2011)

2.2 Economic and Social Aspects

All policies, especially housing policies, are applied in specific and changing macroeconomic contexts that affect and condition their results. For this reason, it is essential to know the macroeconomic situation in which the policy is inserted and some key variables that were developed during its application. The economic context is necessary when studying an investment opportunity. To correctly evaluate the national context in which an investment is being considered, it is essential to explore its economic foundations, progress and difficulties, and stability. The economic parameters and their ups and downs impact social aspects such as poverty, unemployment, average household income and changes in social classes. The recognition of this context will allow better control and interpretation of the results achieved that will be analysed in this study.

Economies of nations and regions tend to go through economic boom times and decline times; economists define these processes as business cycles. The business cycle is a series of phases that the economy goes through and that happen in order until it reaches the final stage in which the business cycle begins again. The stages of economic cycles are usually identified in recovery, expansion, boom, recession, and depression. (Economipedia, 2019)

During the last three decades, Uruguay has gone through two great economic cycles. Uruguay recorded economic growth from 1990 to 2002 and from 2003 to today. As shown in Figure 3, in Uruguay, the GDP registered a relevant increase during the '90s, starting from USD 9.299 million in 1990 and achieving a GDP from USD 25.386 million

in 1998. A cause of that could be linked to the exit of the dictatorship in 1985 and the economic adjustments made by the following governments. (Alegre, 2007)

After that, with the beginning of the new millennium Uruguay sunken into its worst economic and social crisis. Three main factors caused the crisis. (de la Plaza & Sirtaine, 2005)

Firstly, the Uruguayan`s economy was highly dependent on its neighbours (Argentina and Brazil) economies. During the end of the '90s, both nations were struggling with massive recessions periods and coming deep into a crisis phase. Argentina`s financial crisis had a substantial impact on Uruguayan`s economy. (de la Plaza & Sirtaine, 2005)

Secondly, at that moment, the Uruguayan economy and the domestic banking sector had specific weaknesses that accelerated the start of the crisis. A protracted economic recession that started in 1999 had weakened the profitability of Uruguayan banks – particularly the public bank. The system was intrinsically vulnerable to external shocks due to its deposit structure, which was highly dollarized and with a significant presence of non-resident depositors. (de la Plaza & Sirtaine, 2005)

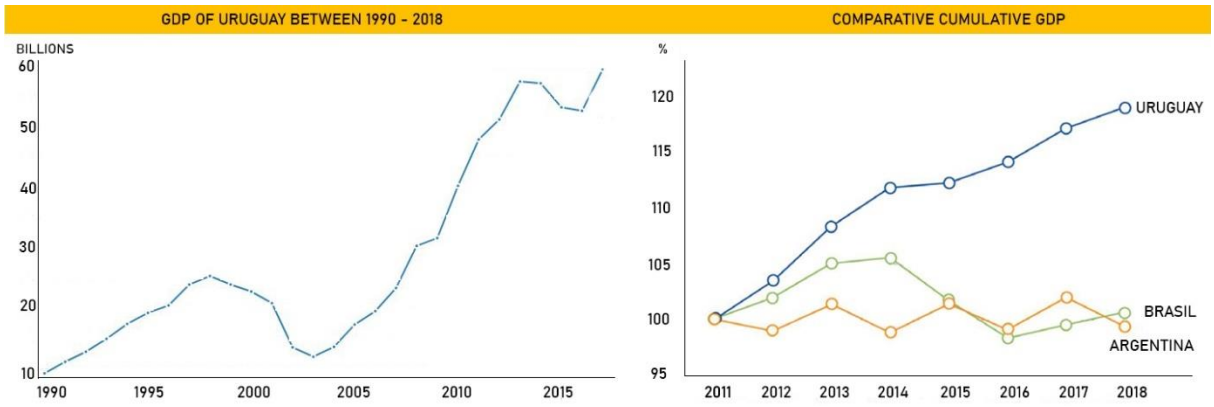

Figure 3 A) GDP of Uruguay 1990-2018.[4] B) Comparative Cumulative GDP.[5]

Thirdly, the primary industry in Uruguayan`s economy had been seriously affected by a virus. In April 2001, an infectious focus of foot-and-mouth (FMD) disease appeared through the livestock industry. Ranchers across the country refused to slaughter the animals, and Uruguay lost FMD-free status without vaccination. A few months later, imports of vaccines were accepted to face this problem, but it was a severe blow to the

[4] Reference: (Presidency of the Oriental Republic of Uruguay, 2019, p. 11)
[5] Reference: (Presidency of the Oriental Republic of Uruguay, 2019, p. 4)

economy. (de la Plaza & Sirtaine, 2005)

Fortunately, the consequences of the most profound crisis in the country did not last long. It is shown in Figure 3; in 2003, Uruguayan’s economy changed the sign and entered a recovery and expansion phase. From that moment to the present, the economy has been growing annually, showing significant improvements in conditions and rates. In 2004 Uruguay's gross domestic product (GDP) amounted to 13,686 million dollars, and its GDP per capita was around 4,000 dollars. After 16 years of uninterrupted growth, the most extended period in the country's economic history, in 2018, Uruguay reached a GDP of 59,000 million dollars and a GDP per person of 17,000 dollars. (Presidency of the Oriental Republic of Uruguay, 2019)

The price of commodities worldwide allowed the entire region and Uruguay to take a substantial boost in the sale of primary products at an excellent price, taking advantage of the world situation. (Presidency of the Oriental Republic of Uruguay, 2019)

Furthermore, during this period of constant growth, Uruguay began to open its economy to the world by developing a better international insertion. The government promoted an “open regionalism” strategy, intending to deepen both the productive integration in the region and insertion in global circuits of goods, services, and investments. Uruguay started offering its product outside the area, searching for some independence. In 2001, 44% of exports were within the region. By 2017, this figure had changed to only 26% exported within the region and 34% within Asia. This new trade strategy opens a new trade partner relationship with China as the primary buyer. (Presidency of the Oriental Republic of Uruguay, 2019)

Additionally, the government promoted a profound, productive transformation, changing the composition of the export. Historically known as a meat producer, during the beginning of the 2000`s Uruguay incorporated soy and cellulose with technology and high value-added production. (Presidency of the Oriental Republic of Uruguay, 2019)

What is more, the sale of services also registered a significant increase. Between 2007 and 2017, the number of tourist services exported tripled from 800 million dollars to 2.300 million dollars. The software industry became very strong in the country, producing 2.5% of the GDP representing third place after meet and soy exports. (Presidency of the Oriental Republic of Uruguay, 2019)

As shown in the graph in Figure 3 with data from the World Bank, the accumulated growth of Uruguay between 2011 and 2018 has been notably higher than Argentina and Chile during the same period. As already mentioned, regional and global conditions at the beginning of the decade were favourable for rapid growth and sound economic recovery. At this point, it is essential to consider the global financial and economic crisis of 2009. From that moment on, the context became more uncertain and challenging due to the contraction of world trade, the reduction in commodity prices and the slower growth of the economy worldwide and, especially, of the neighbouring countries of Uruguay. (Presidency of the Oriental Republic of Uruguay, 2019)

Thus, the information depicted in Figure 3 takes on greater relevance since it shows that, despite not being immune to changes in the international and regional context, the Uruguayan economy showed resilience and a different dynamic than the region's countries. For the first time in its economic history, Uruguay completed a cycle of eight consecutive years growing above the average for Argentina and Brazil, with markedly superior performance. The comparison is relevant, considering that, in the past, periods of instability, recession and crisis in Uruguayan’s neighbours generated adverse effects of magnitude in the local economy. (Presidency of the Oriental Republic of Uruguay, 2019)

This recovery of the economy and the management of public policies had a positive impact on social aspects. Unlike the first economic expansion recorded between 1990 - 1998, the positive cycle that began in 2011 has been accompanied by government policies and strategies that have been successful. Among other considerations, the accelerated economic growth could be accompanied by a significant reduction in inequality and an improvement in the distribution of wages.

As shown in Figure 4, while the Physical Volume Index (PVI) grew rapidly, the Gini index, which measures income concentration, decreased markedly. In 2004, the Gini index for Uruguay was 0.45, while 2018 closed with a Gini index of 0.38 (Presidency of the Oriental Republic of Uruguay, 2019). These policies resulted in significant socioeconomic changes for the country. In 2004, the middle class represented 44% of the total and poverty levels were alarming: 4 out of 10 Uruguayans were below the poverty line, the highest value in the last 30 years. Currently, the middle class represented 75% of the total population, and poverty had systematically decreased since 2006 when it registered 32.5% to reach 8.8% in 2019. (INE - Statistics National Institute, 2019)

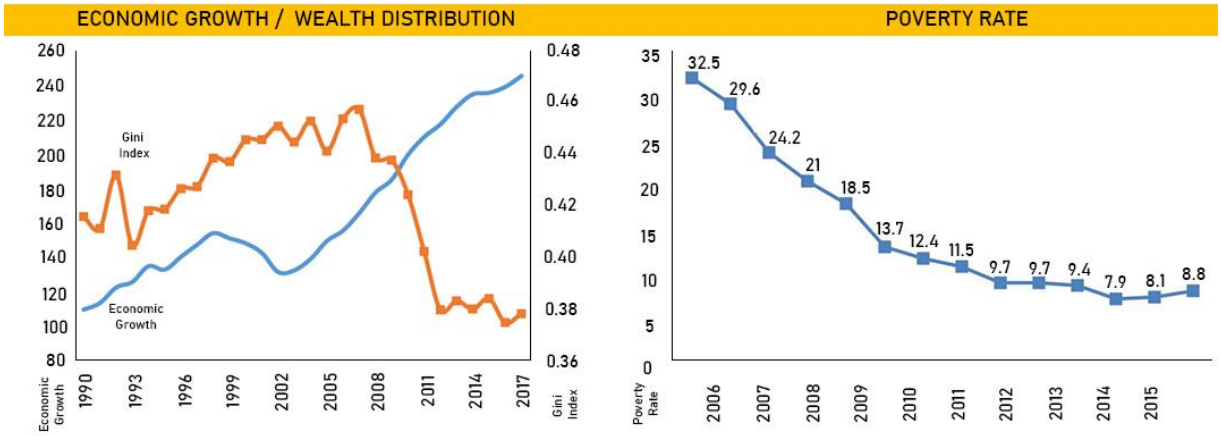

Figure 4 A) Uruguayan Economic Growth and Wealth Distribution 1990-2017.[6] B) Uruguayan Poverty Rate 2005-2016.[7]

After a deep crisis, Uruguay then achieved social parameters and placed its economy in balance, recovering world confidence. The deterioration suffered by the Uruguayan economy during the crisis plunged the country into enormous debt, which by 2004 amounted to 85% of GDP. International ratters quickly stripped Uruguay's investment grade, positioning it several notches below the minimum required. (Presidency of the Oriental Republic of Uruguay, 2019)

By the end of 2018, the macroeconomic solidity, and the economic performance registered, led Uruguay to recover the investment grade by the five international rating agencies and, in the case of three of them, a notch above the investment-grade border. Likewise, they allowed the average cost of financing to be significantly reduced, from 8% to 5%, during the period analysed. (Presidency of the Oriental Republic of Uruguay, 2019)

Nowadays, Uruguay's economy results from the combination of the country's natural resources with a highly literate population, a diversified business structure, and a strong state presence.

The Uruguayan economy is the 82nd economy in the world measured by the volume of GDP (Datos Macro, 2019). Its public debt in 2019 was 39,889 million dollars, 65.91% of GDP. The unemployment rate stayed in December 2020 at 10.50%. (INE - National Statistics Institute, 2019)

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[6] Reference: (Presidency of the Oriental Republic of Uruguay, 2019, p. 11)
[7] Reference: (INE Continuous Household Survey, 2018, p. 3)

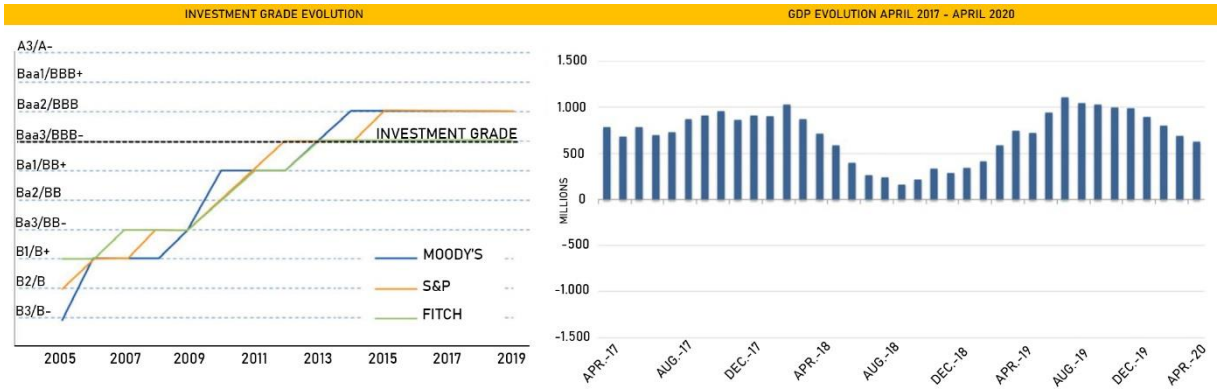


Figure 5 A) Investment Grade Evolution 2005-2019.[8] B) Evolution of the balance of the trade balance of goods. (Moving years, in millions of dollars).[9]

Between May 2019 and April 2020, the Uruguayan balance of trade registered a negative balance of 689 million dollars considering the exports of goods recorded by the National Directorate of Customs. The Covid19 has affected the global markets within that period, and Uruguay was not free from it. But when considering the external placements of the major industrial companies established in free zones of Uruguay, the results are pretty different. The balance of trade turns into a positive value of 623 million dollars (Figure 5). (Chamber of Industries of Uruguay, 2020)

2.3 Investment in Uruguay

Historically, Uruguay has become an attractive destination for local and foreign investors due to its clear and stable conditions. From that point of view, Uruguay was always well considered. However, other weaknesses hindered a greater arrival of foreign investment.

One of Uruguay's main weaknesses and disadvantages during the last decades of the 20th century was the lack of proper infrastructure. In the previous decade, this reality has been changing with a substantial investment in this regard. According to the Minister of Public Works Víctor Rossi, in 2017, investment in road infrastructure doubled the best year in the country's history, exceeding USD 460 million (Cestau & Durán,

[8] Reference: (Presidency of the Oriental Republic of Uruguay, 2019, p. 4)
[9] Reference: (Chamber of Construction of Uruguay, 2021, p. 12)

2018). Today it is considered that 67% of the national road network is in good or excellent condition. (Presidency of the Oriental Republic of Uruguay, 2019)

Furthermore, the national system of ports has been consolidated by developing the movement and connections between them and the region's ports. The port of Montevideo is one of the main entrances to the cargo traffic of the Southern Common Market (MERCOSUR). Due to its natural port conditions, it is suitable for ships of the great draft, positioning it at an advantage over the port of Buenos Aires. In recent times, the port has received large public and private investments to modernize and expand its work capacity. (Presidency of the Oriental Republic of Uruguay, 2019)

Other notable investments to improve national development and stimulate foreign investments are those made in the energy matrix and the internet connection.

In 2017, Uruguay inaugurated a submarine cable that connects Uruguay with Brazil and the United States, where one of the five strategic internet nodes are located. This investment implies achieving full sovereignty and independence in telecommunications and meeting demand by providing better quality and connection speed (Antel, 2017). This investment has been complemented by installing fibre optics in the territory and constructing the best data centre in Latin America. This reality positions Uruguay in a prominent place in terms of digital governance, which is evidenced by its integration into D9. This group brings together the nine leading countries in digital government. (Presidency of the Oriental Republic of Uruguay, 2019)

Regarding energy generation, between 2010 and 2016, Uruguay invested USD 7.8 billion in energy infrastructure to change its energy matrix (Uruguay XXI, 2019). In 2005 Uruguay's electricity generation system depended on two primary sources: hydro dams and a thermoelectric plant. The consequent droughts put the national energy generation in a situation of vulnerability, having to resort to importing energy at a high cost (Presidency of the Oriental Republic of Uruguay, 2019). Currently, 97% of electricity is generated from renewable sources. In 2018, 38% of electricity generation was wind, 7% biomass, 3% photovoltaic, 3% thermal energy and 46% hydroelectric. (Uruguay XXI, 2019)

As already shown, nowadays, Uruguay is going through more than a decade and a half of uninterrupted growth of its economy with an annual increase of 3.5% in the average of the last fifteen years (Uruguay XXI, 2020). Moody's leading credit rating

agencies, Standard Poor's, Fitch Ratings, and DBRS qualified Uruguay as a high investment grade country. (Advice Consulting, 2019)

This qualification is also a consequence of how Uruguay managed the economy. The successive governments have substantially reduced net debt relative to GDP and significantly improved the debt profile. In turn, it has a high stock of reserves and prefinancing lines that allow it to face possible financial contingencies in international markets.

The great challenge facing the Uruguayan economy in the short and medium-term is to reduce the fiscal deficit. To this end, it is essential to stimulate the flow of private investment that, together with the public projects, gives dynamism to the economy and contributes significantly to the employment generation. (Presidency of the Oriental Republic of Uruguay, 2019)

Beyond the conjuncture of each moment, Uruguay has shown political and social stability. This condition is also an index highly valued by local and foreign investors, who find in Uruguay an oasis within Latin America. Neither social revolution is the order of the day nor the political system violates democracy. According to the annual index generated by The Economist, Uruguay is the country with the highest democratic values in South America and is ranked 15th worldwide. (The Economist, 2021)

Another condition that differentiates Uruguay from the negative global image generated by other governments in the region is the low rate of corruption. It currently ranks first in Latin America and 21st in the world ranking of corruption perceptions index developed by Transparency International. (Transparency International, 2021)

Furthermore, the treatment for foreign and local firms and the tax system is unique throughout the territory; this makes the whole country a good option for any investor (CIU - Uruguayan Real Estate Chamber, 2019). A clear demonstration of the good conditions for foreign investment in Uruguay is the installation of UPM's second industrial pulp production plant. The Finnish company is building its largest pulp processing plant globally with an investment of 4,000 million dollars (UPM, 2017). This important investment will generate a significant injection of capital into the local economy and create many jobs. The plant's construction generates 3,000 new jobs, with times that can reach 5,000 without counting all the indirect jobs that this investment generates. Then, during the second half of 2022, the plant will provide employment to 4,000 direct

and indirect people during the operational phase. This investment means a reward for the strategies and investments applied for the Uruguayan State and a tremendous economic boost. It is estimated that the project will generate a tax collection of USD 120 million. (Presidency of the Oriental Republic of Uruguay, 2019)

All these positive aspects make Uruguay an excellent opportunity for local and foreign investors. A proof of the confidence and good business climate is that Uruguay is the leading country in reinvestment of profits in Latin America. Almost 65% of total earnings from Foreign Direct Investment are reinvested in Uruguay (Advice Consulting, 2019). What is more, Doing Business Ranking qualifies Uruguay in the 95th position (from 190 nations) regarding the facilities the countries offer to do business. (The World Bank, 2020)

The recognition of all these aspects that define the investment ecosystem in Uruguay allows this work to place the promoted housing law and the framework in which the hypothetical real estate development would be developed.

2.4 Taxation in Uruguay

The tax burden implemented in each country is decisive when evaluating the investment decision. Many of the positive aspects that Uruguay shows as a business climate have been highlighted in the previous chapter. On the other hand, the tax burden in Uruguay is significantly high. The local taxation condition is one of the main barriers that an investment finds when analyzing business opportunities in Uruguay. As shown in Figure 6, the fiscal pressure in Uruguay is the second highest in Latin America and the Caribbean, exceeding the average by 10 points. (Rojas & Moran, 2019)

This heavy tax burden represents a significant impediment to development and investment attraction. The national taxes to be applied to each industry are variables that cannot be altered or improved by an investor. They are conditions external to the business, so they must be assumed as relevant data when evaluating a trade.

By analysing directly, the industry under study, the weight that tax aspects have in a real estate development is highly relevant, so it must be clear what taxes should be applied to the project to be developed. For this purpose, the tax scheme corresponding to a real estate development in Uruguay will be described.

The taxes that generally applied for a real estate development in Uruguay are the Wealth-tax (IP), the Income-tax on economic activities (IRAE), the property transfer tax (ITP) and the value-added tax (VAT). (General Tax Directorate, 2021)

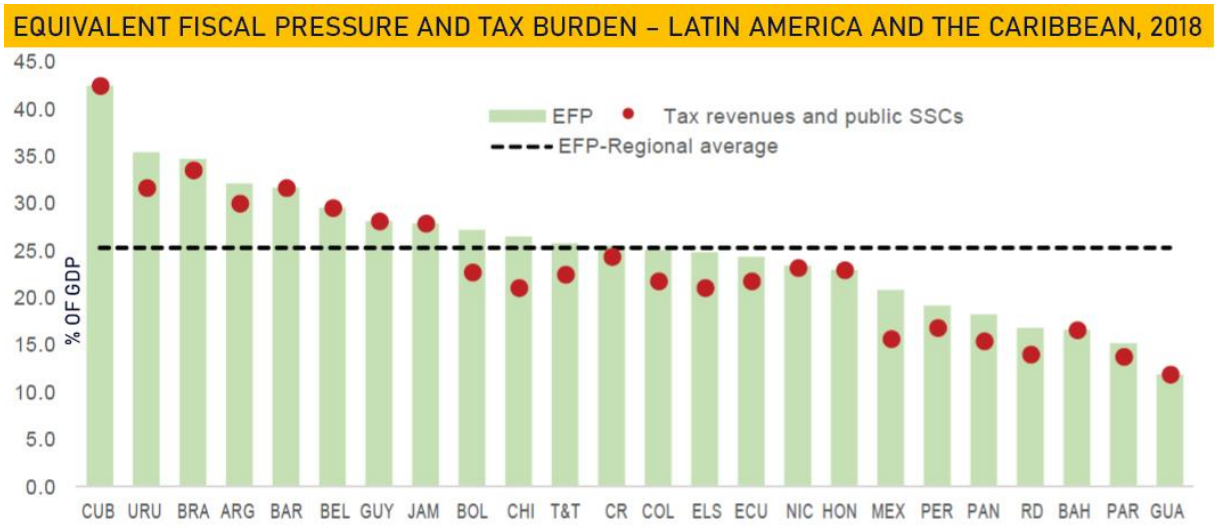


Figure 6 Equivalent Fiscal Pressure and Tax Burden – Latin America and the Caribbean (2018).[10]

Firstly, the wealth tax (IPAT) is levied on the company's assets or business developed. It is calculated at the end of each fiscal year and is determined based on the difference between the value of the assets and the total of the deductible liabilities. A percentage of 1.5 of the resulting value must be paid as IPAT. Deductible liabilities are debts with suppliers, a monthly average of bank liabilities, and salaries owed to staff. (General Tax Directorate, 2021)

Secondly, the income tax from Uruguayan sources of economic activities must be paid annually, at a rate of 25%. This tax is called Income tax on economic activities (IRAE). In the construction industry, the sale is considered to have been made with the commitment of purchase. The difference between the degree of progress of the work and the collection already made of the total income must be calculated. The tax should be levied over the resulted amount. For this purpose, the total cost of the work must be budgeted to estimate the profit that this tax will tax. The net taxable income (tax calculation basis) is determined considering the income and expenses accrued in the year. (General Tax Directorate, 2021)

[10] Reference: (Rojas & Moran, 2019, p. 19)

Thirdly, regarding the Property Transfer Tax (ITP), each of the two parties involved in the transaction (transferor and acquirer) are subject to the payment of ITP at the rate of 2% on the absolute value of the property provided by the National Land Registry Office updated by IPC at the time of the operation. (General Tax Directorate, 2021)

Finally, the Value Added Tax (VAT) corresponds to the 100% purchase VAT plus the difference of purchase VAT and sale VAT. In the sale of new homes, the tax is 10% on the sale price, computed as VAT sales. (General Tax Directorate, 2021)

Purchase VAT is that VAT included in the costs and expenses incurred in work with the corresponding documentation.

These four taxes summarize the variables that could make the hypothetic development attractive. These four taxes will be calculated and measured regarding the total investment and the profit. This comparison will show how attractive this kind of investment is and how the savings improve the benefits.

3. Housing Situation and Public Policies Before 2011

Housing is a fundamental and essential asset in people's lives. It provides families with shelter and a decent quality of life. Therefore, it is crucial for each government to carefully analyze the housing supply to assess its vulnerability and design and adjust public policies and resources accordingly. Furthermore, it is also essential to bear in mind that housing is commonly the costliest asset in the life of a family (both in the purchase and rental formats) and, therefore, the most challenging property to access and maintain.

The housing market presents various imperfections and imbalances that inhibit equity and the right to housing for all citizens. That is why state participation is usually of the utmost importance. Public policies in this area and the efficiency in their implementation are fundamental elements to intervene in the market, facilitating access to those who find it most difficult.

This global problem is even more critical in Latin America, where quantitatively and qualitatively housing problems are part of its reality. The lower-income social classes are usually the most affected, although not the only ones because the middle and lower-middle classes are also victims of this problem. According to the Inter-American Development Bank, of the 130 million families that live in cities in Latin America and the Caribbean, 5 million are forced to share a house with other families. Another 3 million live in unrestorable dwellings, and 34 million live in homes with a lack of potable water, sanitation, adequate floors, or sufficient space. (Bouillon, 2012)

At the beginning of this chapter, it will be presented how the Uruguayan State has historically handled the housing problem. The study also introduces the different situations regarding the housing deficit and the policies in this regard. There will be a historical review of public institutions and the successive housing diagnoses from 1990 to 2011.

After this review, the following sections will focus on the housing situation in the period 2000-2010. These sections will analyse the current housing deficit, the demand for housing, urban development, and the real estate investors' profile.

It is essential for the proper development of this study a complete understanding of the historical housing aspect in Uruguay and the housing situation in 2011 when Law 18,795 was launched.

Even though law 18.795, the body of this study, is a housing policy that applies throughout the national territory, this chapter will present the conditions and characteristics exclusively of the capital city. As mentioned before, Montevideo has more than half of the Uruguayan population, and it is there where most real estate projects promoted by this law have been presented. In addition, the hypothetical development that will be analysed is in Montevideo.

For an adequate understanding of the problems in the territory and the market context, it is also necessary to know how the city is structured, the socioeconomic characteristics and the different areas that can be identified.

3.1 Historical Review of Public Housing Policies

The importance of housing policies and the role that the Uruguayan State must play in this matter is recognized in the Constitution of the Republic since 1967 in Article 45, which establishes: “Every inhabitant of the Republic has the right to enjoy decent housing. The law will tend to ensure hygienic and economical housing, facilitating its acquisition and stimulating the investment of private capital for that purpose”. (Legislative Power of the Oriental Republic of Uruguay, 1967)

Since then, the State assumes the responsibility of ensuring that the conditions are in place for every Uruguayan citizen to have a decent home. One year later, in December 1968, the law 13,728 was launched. This law declared the establishment of a planned housing policy of general interest. Public law bodies finance, promote, build, regulate or assist in any way to facilitate access to housing, adjust their action and cooperate to the success of the policy that is always defined. (Legislative Power of the Oriental Republic of Uruguay, 1968)

It is within law 13,728, which is still in force, where a general framework is established for the different public policies related to housing problems and the institutionality generated for these purposes is defined.

But this institutional framework and the public policies were very soon affected by the arrival of the dictatorship in 1973. During this dictatorial period, the authorities decided to gather all housing policies in the Ministry of Economic and Finance and the National Housing Directorate was absorbed by the Mortgage Bank of Uruguay (BHU). (Permanent Housing Unit - FADU, 2018)

Just in the late '90s, with the Ministry of Housing, Land Management and Environment (MVOTMA) creation, a more rational and solid institutional structure would be achieved. This ministry, which to this day governs housing policies, is responsible for “The formulation, execution, supervision and evaluation of housing plans and the implementation of national policy on the matter and the regulation of the conditions that must be met by the urban and suburban areas for the settlement of houses that are built according to Law 13,728, of December 17, 1968". (Legislative Power of the Oriental Republic of Uruguay, 1990)

At the beginning of each government period, the MVOTMA prepares the Five-Year Housing Plan. This document is fundamental for each government since it is where the housing policies must be carried out. Its objectives, its goals and its implementation methods are set out in this document. The five-year plan includes the calculation of the housing deficit at the time, a diagnosis of the general situation and an estimate of the needs for the period by geographic areas and income categories.

In addition to evaluating quantitative aspects, this calculation of the housing deficit must include qualitative aspects and ensure means for equitable access to housing. This observation is highlighted by the document for studying the housing deficit in Latin America prepared by the UN. The document states that “The housing problem is not reduced exclusively to a matter of quantity of dwellings but implies contributing to the development of conditions that enable the safe, timely, exclusive and equitable access to adequate housing for all those groups and individuals who manifest some need". (United Nations Habitat, 2015)

The first Five-Year Housing Plan was drawn up in 1991, for the period 1991 - 1994. This first document determines that it is only possible to solve housing, urban planning, and land-use problems through sustained efforts over long periods. These long-period plans imply that the policies developed and launched by the MVOTMA should be

considered state policies that ensure stability and continuity over time. For this purpose, a political and social consensus is essential. (DINAVI, MVOTMA, 1991)

The following plan, corresponding to the period 1995-1999, reaffirms the fundamental role of the State in the planning and organization of housing programs. The state is recognized as the sole designer of the instruments to carry out policies. These strategies include the participation and management of the private sector as a generator of a large part of the housing supply. (DINAVI, MVOTMA, 1995)

It is already in the third plan designed for the period 2000-2004, where the MVOTMA warns about the depopulation of central areas and the need to reuse the existing stock in these zones. To this end, the plan proposes plans to facilitate access to the unoccupied properties, prevent the generation of irregular settlements and discourage the unregulated, informal, and inefficient growth of the city. These objectives remained as guidelines during the successive plans, resulting years later in creating Law 18,795, the focus of this study (DINAVI, MVOTMA, 2000). The following sections will delve into this problem in conjunction with the housing deficit and demand, analyzing the context in which the housing policy was launched.

As mentioned in previous chapters, Uruguay went through the worst economic crisis in its history at the beginning of the millennium. This situation produced severe fractures in State policies and the different action programs. The Five-Year Housing Plan for the period 2005-2009 identifies and declares a structural crisis in the housing system of public production and the housing system in general. The MVOTMA expresses the structural crisis in several dimensions. (DINAVI, MVOTMA, 2005)

From the institutional point of view, the MVOTMA expresses that the State organisms created in various historical contexts do not form an effective system to carry out a housing policy in a coherent and coordinated manner. (DINAVI, MVOTMA, 2005)

Regarding social aspects, there are problems in the system that did not guarantee access and permanence in adequate housing, which has a decisive impact on social fragmentation. (DINAVI, MVOTMA, 2005)

At the same time, the financing modality of the moment was insufficient to meet the demand received by the MVOTMA, so the search for other types of solutions independent of the public resources was imminent. (DINAVI, MVOTMA, 2005)

Finally, the document identifies an insufficiency in the social participation channels. In addition, a programmatic crisis was showing slowness in the processes of modification of the thought matrix of shareholders involved in the system. (DINAVI, MVOTMA, 2005)

In response to this diagnosis of institutional crisis, the National Housing Agency (ANV) was created in 2007. Its foundation aims to play the role of a decentralized body that will execute the policies coming from the MVOTMA. In short, it is the executing body in the territory of the MVOTMA plans to promote housing and facilitating access and permanence to decent housing. (Altamirano, 2019)

The consequent Five-Year Housing Plan 2010-2014, with the ANV already in operation, focuses on the territorial aspects of housing policy, socio-territorial inclusion, and the heterogeneity of the target population. One of the plan's specific objectives for this period is the construction of demand and diversity of innovative housing solutions in typologies, technology, products, sites, expanding the coverage of housing in quantity, variety, and quality in a sustainable way. Within this Five-Year Housing Plan, the State creates Law 18,795, the Social Housing Law, which is the object of study in this work. A detailed analysis of this law will be developed in the following chapters. (DINAVI, MVOTMA, 2010)

The objectives of the housing policy implemented in the following five-year period, 2015-2019, continue the strategies linked to the territory, promoting the use of consolidated and served urban areas to implement housing solutions (main objectives of Law 18,795). (DINAVI, MVOTMA, 2015)

The current Five-Year Housing Plan 2020-2024 keeps the same line of continuity of policies of previous periods, promoting access and permanence in housing for the middle-income, lower-middle, and most vulnerable sectors of the population. Programs have been defined that cover the heterogeneity of the households receiving the plans, emphasizing the importance of accessible and sustainable cities. (DINAVI, MVOTMA, 2020)

One of the 12 specific objectives listed in the current Five-Year Plan is to increase the supply of new housing for sale or rent through financial instruments that stimulate cooperation between public and private actors. The most precise and most concrete

implementation of this objective is Law 18,795 on Social Housing. (DINAVI, MVOTMA, 2020)

As previously mentioned, it is a frequent mistake to limit the concept of housing deficit only to quantitative aspects, excluding the importance of quantitative aspects of the dwellings. But another element that is not minor and should be included in the plans that aim for equity is the “right to the city”.

The minority of deficiencies in quantity and quality of houses end up involving aspects that escalate until they become an urban condition. That is why the new housing policies, recognizing this multidisciplinary and multiscale problem, pose a need for coordinated and comprehensive actions of urban-housing, social and environmental policies, and their implications regarding social integration and improvement of the quality of life. (Mendive, 2012)

So important is to consider the issue of housing as its context. The surroundings around a home decisively influence the health, nutrition, and education of its inhabitants. It also defines their access to economic opportunities and their degree of vulnerability to social problems. Therefore, public policies must be aimed not only at generating decent housing solutions but also by considering providing urban rights to all its inhabitants. The solution must bring the developed city with its infrastructure closer to the entire population, without discrimination, ensuring universal access to public goods and services, mobility, transportation, energy, air quality and livelihoods.

Similar plans were implemented in Latin America. Most of them had failed in the socio-urban aspects deepening social fragmentation (Magri, 2014). In any case, it is not necessary to resort to Latin American experiences in this matter. Today, several of the areas today considered "red zones" had been the result of public policies aimed at housing for low-income families carried out between 1970-2000 (Altamirano, 2019). In 2015, the analyst Terra Ortiz in her article “System of access to housing and territorial segregation”, identified that “Montevideo shows the result of actions that, framed in public programs, expelled the poor population to the periphery and made the socio-territorial reality more complex of neighbourhoods already affected by processes of exclusion, a product of the transformations in the world of work." (Terra Ortiz, 2015).

Although socio-territorial fragmentation processes are frequent in Latin American societies, public policies cannot be an accomplice in this by accentuating the problem.

Public policies implemented in the past have been functional to fragmentation, prioritizing the number of solutions over quality. To this end, the aim has been to provide housing solutions to the neediest sectors by constructing large housing complexes, not only of low constructive and spatial quality but also located on the outskirts of the city where there is a lack of infrastructure and services. (Altamirano, 2019)

That is why current public policies launched in recent decades recognize the need to encompass a multidimensional view that goes far beyond a simplistic solution. Policies must be transforming the housing conditions of families and, in an urban-housing aspect, claiming the right to the city (Altamirano, 2019). The following section analyses these three parameters of the quantitative and qualitative deficit during the 2000s and the general urban situation. The study of the housing situation in those years gives the background in which the law 18.795 was launched.

3.2 Housing Situation and Urban Development 2000-2010

Montevideo is the only metropolitan area of an institutionally centralized country. It is the capital city, seat of the national government, communication axis with the largest port, airport, national financial, industrial, commercial, educational, and cultural centre.

As shown in Figure 7, Uruguay is politically divided into 19 departments; Montevideo is the smallest and southernmost city in the country, with 530 km2. Figure 7 shows the urban area of the city of Montevideo within the contours of the department, which represents 40% of the total departmental area. (Uruguayan Academic Network, 2000)

According to the last national census carried out in 2011, the department of Montevideo had a population of 1,319,000 inhabitants, of which 1,305,000 (99%) lived in urban and suburban areas. (INE - National Institute of Statistics, 2011)

So, the city has the highest demand in the country and the challenge of hosting almost 50% of Uruguayan’s. This condition requires constant planning and monitoring.

As a starting point for an analysis of the housing and urban context in the city before law 18.795, it is necessary to know the number of homes and dwellings registered at the time. This background will allow learning the balance between the demand and the minimum stock to comply with the right to housing. Uruguayan society has a housing deficit that must be analyzed from a qualitative and quantitative point of view. The

concept of housing deficit and its measurement are fundamental bases for implementing public policies that seek to improve this condition.

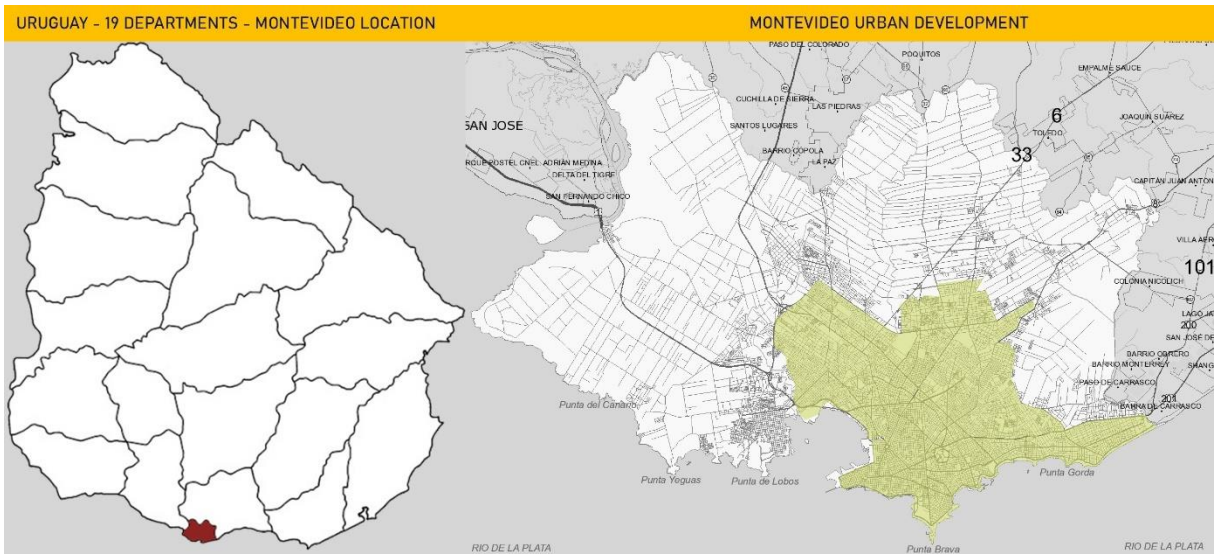


Figure 7 A) Uruguay - 19 States - Montevideo in red color.[11] B) Montevideo Urban structure.[12]

According to the last national census carried out in 2011, Montevideo was home to 487,975 households, and the housing stock was 520,538 dwellings (INE - National Institute of Statistics, 2011). Intuitively, the housing deficit is the arithmetic comparison between the number of adequate housing in the territory and the number of households. The simple calculation of this difference would give the erroneous concept of the non-existence of a housing deficit. The total number of dwellings counted by the census does not mean that all of them are occupied. The entire stock of dwellings may be higher than the total number of households in society, but it may not necessarily be satisfying the demand. Different fundamentals may be causing this situation, such as a large number of unoccupied or dilapidated homes. A significant number of vacant homes can be generated if they are not aligned with the market's needs. For a more accurate conception of the problem, the MVOTMA evaluates the housing deficit based on quantitative and qualitative parameters. (DINAVI, MVOTMA, 2015)

The MVOTMA defines as a correct or desirable scenario that there is only one household for each dwelling. This type of deficit is the absolute or quantitative deficit because

[11] Reference: (Interactive Maps, 2020)
[12] Reference: (Garcia Lopez, 2018, p. 9)

the solution only requires new housing units. Within the quantitative deficiency, the MVOTMA identifies three problems that define it. (Altamirano, 2019)

Firstly, there is the problem generated when more than one household shares the same home. The solution to this situation requires one or more dwellings that house the remaining households. (Altamirano, 2019)

Secondly, there are parameters to define a materiality deficit. To measure this type of deficit, the National Statistical Institute (INE) carried out a classification during the last census of 2011. The INE sorted the dwellings depending on the types of materials of the floors, ceilings and walls, classifying them as adequate, recoverable or irrecoverable. (Altamirano, 2019)

Finally, the households that live in irregular settlements that must be relocated are considered. (Altamirano, 2019)

Situation in Montevideo 2011	
Number of Households	487,975
Number of Dwellings	520,538

Housing Deficit in Montevideo 2011	
Households in unrecoverable dwellings	18,812
Dwellings with more than one household	29,838
Irregular settlements to relocate	19,749
Quantitative Deficit 2011	68,399
Qualitative Deficit 2011	169,573

Figure 8 A) Housing Situation 2011.[13] B) Housing Deficit 2011.[14]

Figure 8 shows the values corresponding to each quantitative deficit parameter, resulting in 68,399 deficit dwellings. (INE - National Institute of Statistics, 2011)

Until now, only the quantitative aspects were measured regarding the housing deficit. Now, it is essential to consider other deficit conditions of the dwellings and their relationship with the occupants, the solution of which is not the creation of a new residence. This parameter is the one covered by the concept of qualitative deficit. It considers problems related to overcrowding, the number of occupants per room in the house, the insecurity of housing tenure and the lack of premises for hygiene, among other things. According to the 2011 census, there were 169,573 households in a quantitative deficit situation. (INE - National Institute of Statistics, 2011)

[13] Reference: Own work with information (INE - National Institute of Statistics, 2011)
[14] Reference: Own work with information (INE - National Institute of Statistics, 2011)

As mentioned previously, since the creation of Article 47 of the Constitution in 1967, the Uruguayan State undertakes to guarantee the right to housing of its inhabitants. For this, it is necessary to outline public policies in this area and the public funds to be allocated. Figure 9 shows how Uruguay is positioned in the middle of the graph concerning the percentage of GDP invested in housing by Latin American governments. In 2018 Uruguay invested 0.5% of its GDP in this area. (United Nations Economic Commission for Latin America and the Caribbean, 2018)

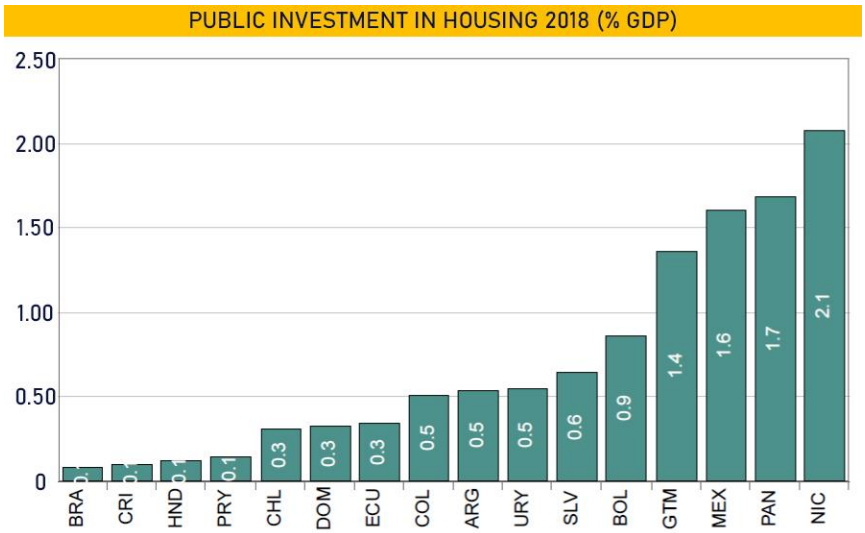


Figure 9 Public Investment in Housing 2018.[15]

To target public policies for housing and to delimit the budget, the MVOTMA establishes from its creation what conditions a family must meet to benefit from public housing solutions. The State sets income limits for households and the requirement of not owning any other property. Thus, in 2018, 31% of the country's homes met the legibility requirements required by the MVOTMA. (Altamirano, 2019)

It is relevant to add the conceptualization described in the study carried out by the Center for Economic Studies of the Construction Industry in 2019 about the double attribute of housing in the population. On the one hand, housing is where families house the essential activities for life, developing their right to housing with greater or lesser comfort. This is the social view of housing. On the other hand, it is usually the most significant family asset. Its most extensive marketable and heritable product. This

[15] Reference: (United Nations Economic Commission for Latin America and the Caribbean, 2018)

is a look that interprets housing as a capital good that is part of the family wealth. (Altamirano, 2019).

The reasons that motivate a family to search for a housing solution is very different in these cases. The MVOTMA does not consider as part of the housing deficit those who, at the time of requesting to benefit from home, are already tenants of decent housing. Between 2010 and 2018, more than 50% of the families aspiring to an MVOTMA home were tenants of a proper dwelling, so their primary interest was to access a solution that satisfies their patrimonial interest. The MVOTMA outside the priority situations leaves these cases. (Altamirano, 2019).

For these cases, there is then a qualitative demand for housing. These families try to improve their stability concerning the home by becoming owners or resorting to renting something of higher value than their current home. The reasons for this qualitative demand are socioeconomic changes during the 2000s in Uruguay.

In stable periods outside of major crises, the socioeconomic structure of Uruguayan society was traditionally led by the middle class.

As mentioned before, at the beginning of the century, economic parameters showed an evident recovery during the years following the deep crisis. These favourable conditions and social policies aiming for wealth distribution, poverty reduction, expansion of social protection coverage, better access to health and education were essential to support to enhance the middle class after such a severe crisis.

In Figure 10, the evolution in the distribution of socioeconomic classes from 1995 to 2018 can be visualized in bar graph mode. The graph shows four stages through which the social distribution has passed in Uruguay. In the first period, from 1995 to 2000, notorious stability in the distribution shows the middle class is around 60% of the total population. Then, in the period 2001-2003, the effects of the crisis are reflected, showing that about 20% of the population migrate from the lower middle class to a lower class. (Ministry of Economy and Finance, 2018)

From 2004 to 2013, the social class with the lowest income has decreased without interruption year after year. Therefore, the number of families within the social class with middle income has increased. (Ministry of Economy and Finance, 2018)

Finally, from 2014 onwards, stability in the distribution of social classes is shown. Unlike the first period, the average social class increased 13%, meaning around 600,000

people, and the social class with the lowest income was reduced by 17%, approximately 480,000 people. (Ministry of Economy and Finance, 2018)

So, it can be visualized from the graph that, except for 2002-2004, in which the lowest income class was predominant, in the rest of the 23 years, the middle social class was the biggest in the Uruguayan society.

After recognizing the weight of the middle class in the entire society, the time-lapse can be analysed. It can be seen how better economic and social conditions allowed families to improve their quality of life. But probably the most relevant outcome is that they have been able to consolidate their situation over time. Figure 10 shows the substantial growth of the median value of household income in Montevideo from 2000 to 2010.

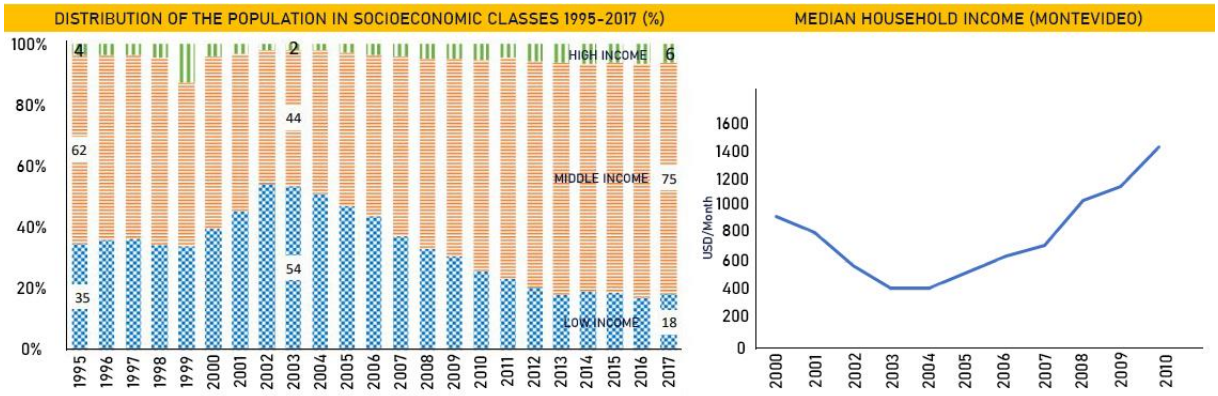


Figure 10 A) Distribution of the population in socioeconomic classes 1995-2017 (%).[16] B) Median Household Income Montevideo 2004-2020.[17]

It is essential to recognize this condition of consolidation of new families in the middle classes and the greater purchasing power that society shows today. From the real estate point of view, this means a potential higher demand than a few decades before.

The next step into the analysis is to study the proportion of the population choosing to buy their houses and how it impacts their economy. For a better study and definition of strategies, the MVOTMA classifies the population into quintiles according to household income.

When using this categorization of quintiles, calculations can be done to find how the monthly instalments for the payment of housing vary for each of them. The point is to

[16] Reference: (Ministry of Economy and Finance, 2018, p. 89)
[17] Reference: Own work with information (INE - National Institute of Statistics, 2011)

discover if there are discrepancies in the percentage of household income that is allocated to housing per quintile.

Figure 11 demonstrate that the average values monthly paid by households are very different when compared by income quintiles. The average instalments for housing of the 5th quintile are approximately five times bigger than for the 1st quintile.

MVOTMA - QUINTILE CLASISFICATION

Quintile	Minimum Income (USD)	Maximum Income (USD)
1	.-	USD 818
2	USD 818	USD 1,247
3	USD 1,247	USD 1,761
4	USD 1,761	USD 2,583
5	USD 2,583	.-

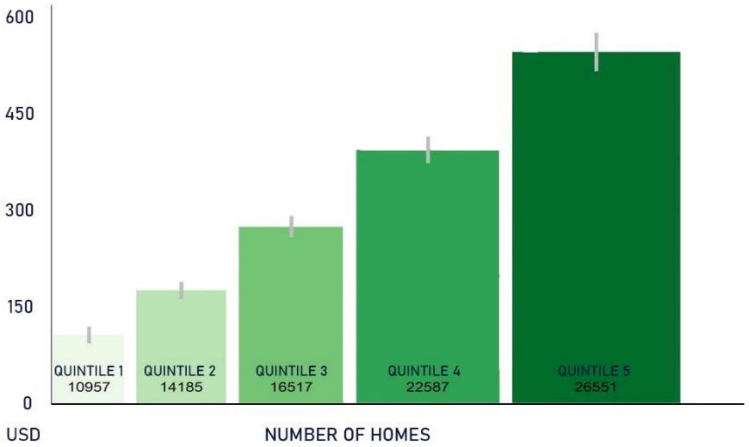


Figure 11 A) MVOTMA – Quintile Classification.[18] B) Average Value of Monthly fee for housing by quintiles of per capita income 2019.[19]

An interesting outcome from the graph is the gradual growth on the bars jump from one quintile to the next remains almost constant between the different quintiles. In this sense, it is also interesting to analyze the incidence of the quotas assigned by each family to the payment of housing by quintile. The table in Figure 12 shows some interesting aspects to highlight, with data taken from the INE Continuous Household Survey. (INE - Statistics National Institute, 2004)

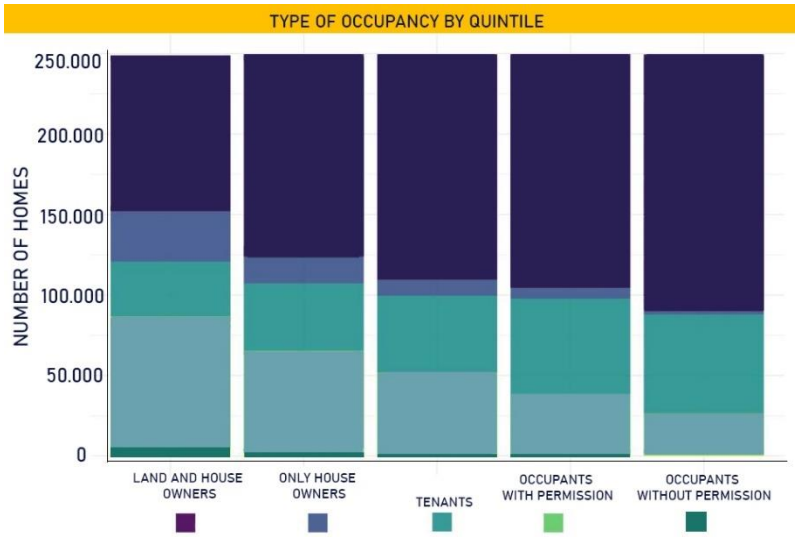
On the one hand, the stability of the percentage of incidence of the quota on income in the different quintiles is interesting. This is more noticeable in the data recorded in 2006, where it is seen that the five quintiles allocate approximately the same percentage of income to housing. This reaffirms the need for the market to provide adjusted supply to each quintile.

On the other hand, the table concludes the evolution of this incidence from 2006 to

[18] Reference: (DINAVI, MVOTMA, 2015)
[19] Reference: (DINAVI, MVOTMA, 2020)

2014. The three lowest quintiles recorded a more significant decrease in the percentage of money allocated to housing. One of the causes of this behaviour can be linked to the lack of supply according to the growing purchasing power already studied, so these families are forced not to take a quantitative step and to stay in their current dwellings with less comfort and amenities or away from the downtown areas of the city.

A further step consists of analyzing the distribution of the different types of occupation by quintile. Figure 12 shows a gradual growth in owner-occupiers (land and housing) when moving from quintile 1 to quintile 5. As expected, alternatives such as renting or occupation with and without permission would prevail in the lowest quintiles due to economic instability and low savings capacity. In any case, the whole graph shows that from quintile 2 to 5, the number of owners reaches at least 50% of their entire range. (DINAVI, MVOTMA, 2020)



MONTHLY MORTGAGE PAYMENT BY QUINTILE (%)

Quintile	2006	2014
1	11.3%	7.0%
2	9.9%	8.2%
3	11.2%	9.7%
4	12.7%	11.0%
5	11.5%	10.9%

Figure 12 A) Type of Occupancy by Quintile.[20] B) Monthly Payment by Quintile.[21]

The first interpretation of this data could be that it is still less accessible for the middle and lower middle classes to buy a home. However, better economic parameters already shown seems to have an impact on housing access. The differences between quintile one and quintile 5 are still significant but not extreme.

[20] Reference: (DINAVI, MVOTMA, 2020)
[21] Reference: Own work with information from (DINAVI, MVOTMA, 2020)

The existence of a growing purchasing power in society during the 2000s is shown in Figure 13. This graph represents the highest purchasing power precisely in the real estate market with data extracted from the annual real estate reports of the National Institute of Statistics. On the one hand, the evolution of the average purchasing power in 2000-2010 is represented in orange. The calculation is based on the average income per household and the average price per square meter in Montevideo from year to year. In the same way, the blue and green lines show the purchasing power of the square meter of the average price in economic and luxurious housing areas, respectively. It can be seen that logically the purchasing power in the Cordón neighbourhood of affordable homes with an average income is higher than that of the Pocitos neighbourhood of luxurious homes. The interesting thing to highlight is how the three lines have a progressive increase in purchasing power during the decade. (INE - Statistics National Institute, 2010)

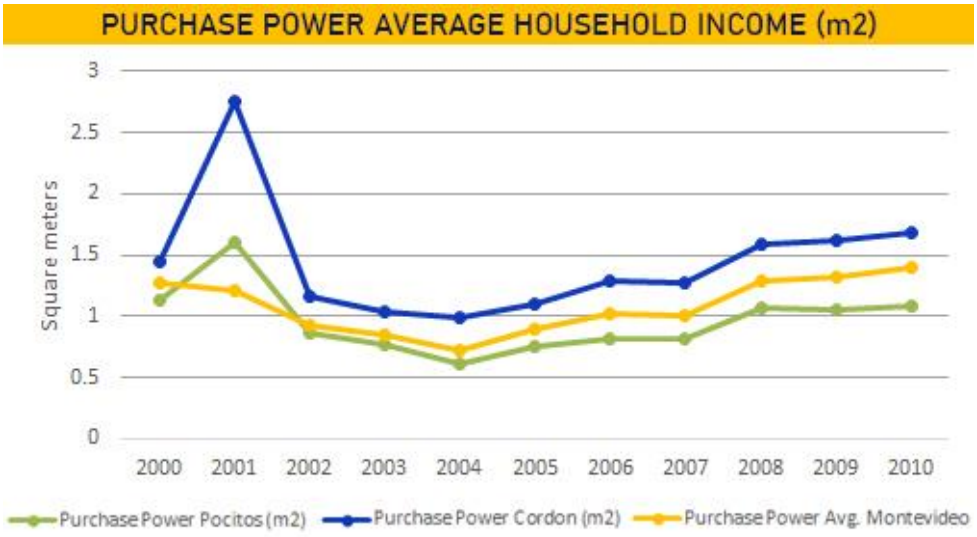


Figure 13 Purchase Power Average Household Income (m2) [22]

So, different parameters explain the high demand for housing for middle sectors of society. The current size of the middle class reached a record, and the level of average income per household has been increasing since 2004. Furthermore, it is found that there are no significant variations within quintiles in terms of predisposition to the purchase, considering the percentage of income to be allocated for this purpose.

In addition to the described qualitative demand, during the 2000s, Montevideo also has a quantitative demand.

[22] Reference: Own work with information from (Statistics National Institute, 2010)

During the last decades, several sociodemographic changes have been registered in Uruguay, more precisely in Montevideo. Some of these phenomena impact the need for more housing, so it is essential to analyze them to know their causes and their consequences and possible durations over time.

For the MVOTMA, these phenomena are of great relevance when defining housing policies. Starting from the concept "a house = a home" used when quantifying the housing deficit for each period, changes in sociodemographic dynamics are decisive when making decisions. (DINAVI, MVOTMA, 2020)

Based on data collected by the last national census from 2011, changes in the composition of households were already evident at that time. Many of these changes result in an increased demand for dwellings.

Firstly, the Uruguayan society comprises a significant component of elderly individuals who require a more considerable amount of dwellings. Naturally, the vast majority of people and couples live the last stage of their life without the company of their children, who they have already finalized emancipation. (Calvo, et al., 2013)

In 2019, the Office of Planning and Budget (OPP) produced a document defining different contributions for a long-term development strategy. In this document, the OPP expresses the ageing of the Uruguayan population, almost inevitable, for the next decades. It interprets that even assuming possible demographic changes such as a recovery in the fertility rate and consolidation of the current positive migratory balances would not be enough to counteract the current ageing projections (Office of Planning and Budget, OPP, 2019). According to the National Institute of Statistics population projections, an increase in the average life expectancy of 3.5 years is expected by 2025, reaching 75.5 years for men and 81.8 years for women (INE - National Institute of Statistics, 2013). The interpretation of this first indicator already shows us a first impact on the demand for housing.

Another sociodemographic phenomenon with an impact on the housing demand is changes in the structure of the families and the makeup of households. The "Sociodemographic and Inequality Atlas of Uruguay" prepared by different associated national and international organizations call the changes registered since the 90s in Uruguay as the "second demographic transition". (Calvo, et al., 2013)

This phenomenon is characterized by a substantial increase in divorce, a decrease in fertility below replacement levels, the occurrence of most births outside of legal unions and the diversification of family arrangements, with a reduction in the proportion of two-parent households and an increase in single-parent and single-parent households. (Calvo, et al., 2013)

This fragmentation in households with fewer members is a global trend, and Uruguay is no stranger to it. As shown in Figure 14, in the last decade, all European countries, except Serbia, register a decrease in the average number of members per household. In the 2000s, Montevideo had a ratio of 3.2 people per household. Nowadays, the ratio stands at 2.5, with a continuous decreasing trend. (Calvo, et al., 2013)

The families are changing their conformation model. The man is no longer the unique source of household income, allowing the woman greater freedom of decision in her lifestyle and family composition. (Castillo, 2013)

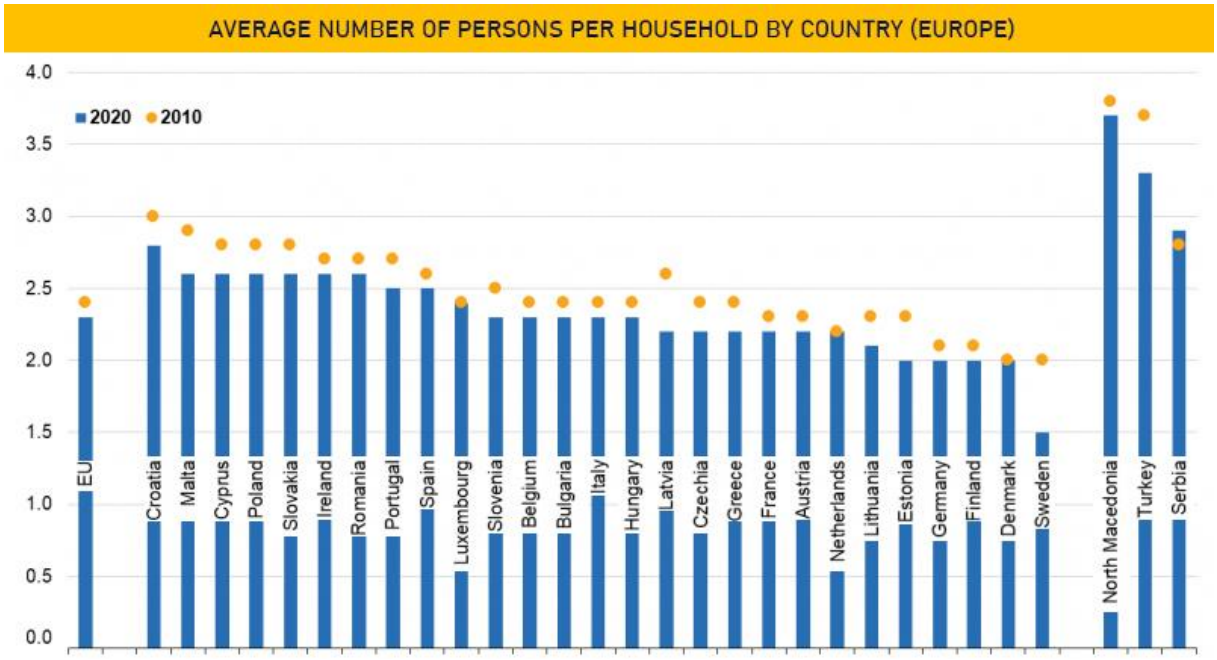


Figure 14 Average Number of Persons per Household by Country (Europe)[23]

The decrease in the average number of members per household impacts the demand for housing. The same number of people demand a greater need for homes. According

[23] Reference: (Eurostat, 2020)

to Julio Villamide, during the last 25 years, the neighbourhood of Pocitos has the same number of inhabitants, but it has 6,000 more households than before. (Teledoce , 2017)

The third sociodemographic phenomenon that has been registered in the last decades in Montevideo is the immigration received. Uruguay has been a destination mainly for Latin Americans who, escaping from the complex realities of their native countries, find in Uruguay a nation with better conditions than the current ones in their countries of origin. In 2016, the number of immigrants who arrived in Uruguay already equalled the country's annual population growth. In 2017 18,000 people decided to move to Uruguay, and the trend has continued until the present (Urwicz, 2019). Between 2015 and 2019, the total number of residency applications registered 50,000 requests. (Uruguay XXI, 2020)

Once the demand and its causes are analyzed, it is essential to study the evolution of the housing stock and its development in the urban area.

Firstly, suppose the variations in the number of dwellings and households registered in the last three censuses are analyzed. In that case, it can be seen that from 2004 to 2011, the number of households increased by 7% while the number of dwellings did so by 4%. (Figure 15) This implies that beyond the deficit carried over from previous decades, the growth in the number of households due to the social changes already made explicit has exceeded the increase in housing. According to the study carried out by the architect Altamirano for the Center for Economic Studies of the Construction Industry (CEEIC), under the assumption that the State maintains 0.50% of GDP in housing investment, the current housing lag would remain in 2030. This means that the resources provided for each year would be enough to cover the new annual needs but would be insufficient to offset the lag from previous decades. (Altamirano, 2019)

NUMBER OF HOUSEHOLDS AND DWELLINGS					
MONTEVIDEO	1996	2004		2011	
	Quantities	Quantities	Var. %	Quantities	Var. %
Households	426,371	457,424	7%	487,975	7%
Dwellings	453,874	499,252	10%	520,538	4%

DWELLINGS MONTEVIDEO 2011		
Total	520,538	100%
Occupied	472,013	91%
Unoccupied	48,525	9%

Figure 15 Occupied and Unoccupied Dwellings 2011.[24]

[24] **Reference: Own work with information from (INE - National Institute of Statistics, 2011)**

As mentioned in previous chapters, in 2002, Uruguay suffered the worst economic crisis on record. The falls in investments and GDP were exceptional and paralyzed industry in general and particularly construction.

In the following decade, the situation changed dramatically. The construction industry was one of the pioneers in the economic rebound and functioned as an engine and dynamism. As shown in Figure 16, at the end of the first decade of the millennium, construction production was already above the high level reached before the 2002 crisis.

In particular, the construction of privately developed housing in Montevideo in 2011 reached a historical production record of 270,000 square meters (Uruguay XXI, 2014). The development of countless housing projects, mainly in the city's coastal area, increased the land prices considerably since the pieces of ground with good location and suitable for construction in height began to be scarce. The incidence of land cost concerning the income from housing units sold was commonly 10%, and due to the construction boom in those years, it became over 15%. (Álvarez, et al., 2017)

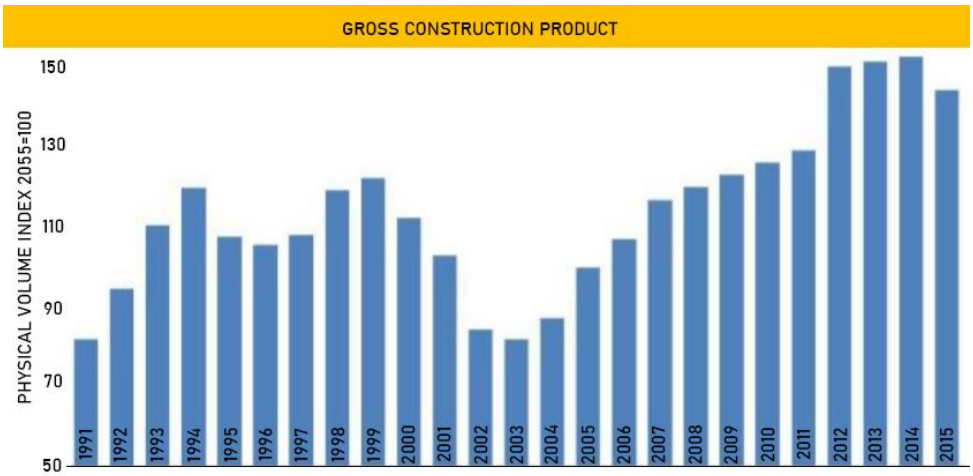


Figure 16 Gross Construction Product in Uruguay (1991-2015).[25]

Historically, the real estate market trend in Montevideo has been the search for proximity to the coast, developing projects throughout the coastal strip of the department. According to the former president of the Uruguayan Association of Private Construction Promoters (APPCU), Julio Villamide, there are three attributes that Montevideans in general look for when choosing a property: green, water and safety. The Montevideo

[25] Reference: (Chamber of Construction of Uruguay, 2021, p. 8)

waterfront offers these three qualities, with strong links with the sea, nature, and high-rise and safe real estate projects. (Teledoce , 2017)

Based on these attributes sought by users and the different economic possibilities of families, the market spontaneously fragmented the city into three large areas. In Figure 17, the coastal zone is marked in red. This area registers the highest prices, making its access exclusive to higher-income families, in addition to having excellent services. Then a second central area to the city is visualized in green that little by little has lost population. Finally, a large ring marked in yellow of peripheral regions, with an increasingly growing population and basic needs, are unsatisfied. (Nahoum, 2018)

The construction boom already described during the 2000s focused on high-end projects, which accentuated this growth of the coastal strip mainly in the eastern direction. The expensive neighbourhoods bordering the Río de la Plata maintained their average number of inhabitants, while the central areas of Montevideo, with all the services and infrastructure necessary for good living and cheaper than the former, were rapidly losing population. These zones had lost their charm; they no longer attracted new residents, which, added to the aforementioned general loss of people in the city, generated a significant underutilization of fully-equipped central neighbourhoods. Figure 17 shows how was the supply evolution between 2006-2010. As it can be seen, the only zone that decreased the number of dwellings was the central area in green. Both other areas increased their supply, so increasing the fragmentation. The other side of this situation was the expansion of the city and its periphery, both within the department and in Canelones and San José.

The dispersion of the city with an increasingly dense coastal strip and a large part of the population migrating to the peripheries has its greatest explanation in land prices. According to the data collected by the INE, the average cost of land in the coastal area is 544 USD / m2, while in the central area, it is 459 USD / m2. But the difference is even more relevant with the cost of 34 USD / m2 on the outskirts of the city. It is then natural for middle and lower-middle-income families to feel limited in their choice of housing. (Magri, 2014)

Figure 18 shows this behaviour. It can be seen how almost 50% of the dwellings traded during 2009 were concentrated in the coastal strip, maximizing the density of this area. The remaining nearly 50% of sales are divided equally between the central areas of

the city and the periphery. Likewise, Figure 18 shows how the real estate market continues in line with this trend, developing almost 50% of new homes in the coastal area. The remaining 50% of the new projects show a very discouraging distribution for the city, generating only 14% of new homes in downtown areas and 41% in the periphery. (INE - Statistics National Institute, 2010)

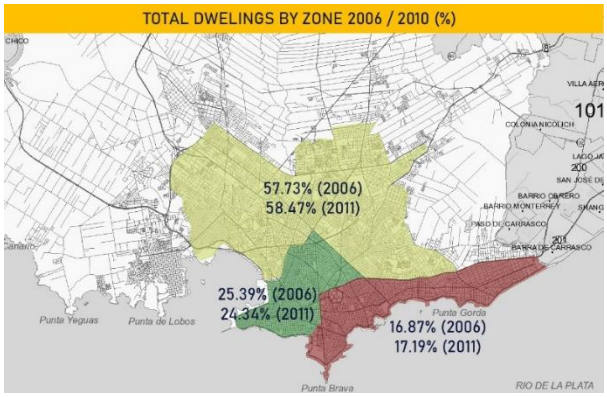


Figure 17 Total Dwellings by Zone 2006 / 2010.[26]

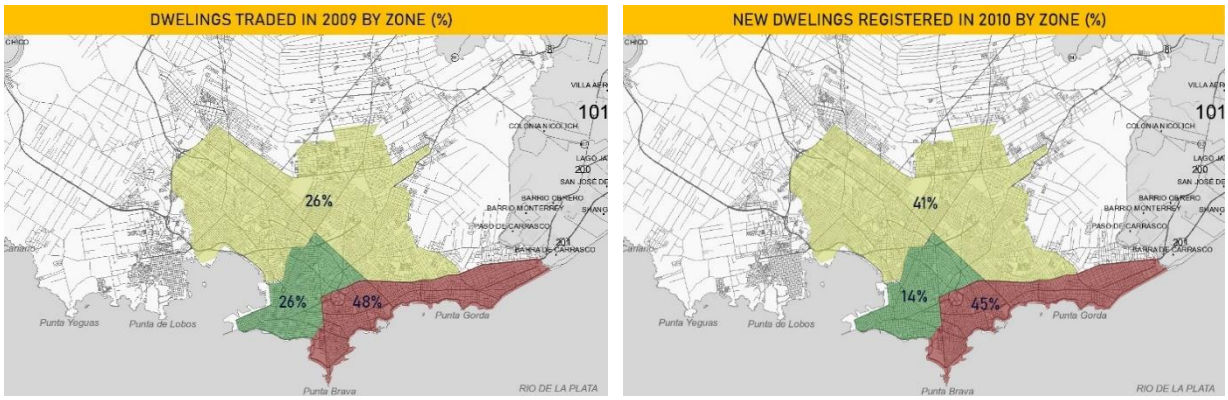


Figure 18 A) Dwellings Traded in 2009 by Zone.[27] B) New Dwellings Registered in 2010 by Zone.[28]

In the same way, by analyzing deeper the number of projects developed during 2011, it is visible how the private sector preferred to developed next to the coast. As shown in Figure 19, the Carrasco neighbourhood is ranked No. 1 in the number of projects presented during that year with 154, followed by Pocitos with 121, Buceo with 90, Malvin with 72 and Punta Carretas with 65. In addition, 865 of the works executed in 2011 were developed by the private sector, while the remaining 14% were public projects. (Permanent Housing Unit - FADU, 2013)

[26] Reference: Own work with information (INE - National Institute of Statistics, 2011)
[27] Reference: Own work with information (INE - National Institute of Statistics, 2011)
[28] Reference: Own work with information (INE - National Institute of Statistics, 2011)

On the other hand, when analysing the distribution of the different types of homes built, the focus of real estate investors on luxury projects and the low number of affordable homes built is also notorious. Figure 19 is more than eloquent. As shown in the bar graph, during the 2000s, there was notable growth in the incidence of luxury and intermediate projects and a marked reduction in economic projects. Almost half of the projects built during 2011 were of the higher category, and about a third were of the intermediate type. (Uruguay XXI, 2014)

The conjunction of these data on types of houses built and areas of more significant development reaffirm that during the 2000s, the construction of houses was almost entirely dedicated to the wealthier bands of families in privileged urban areas, leaving aside possible solutions for the rest of the population.

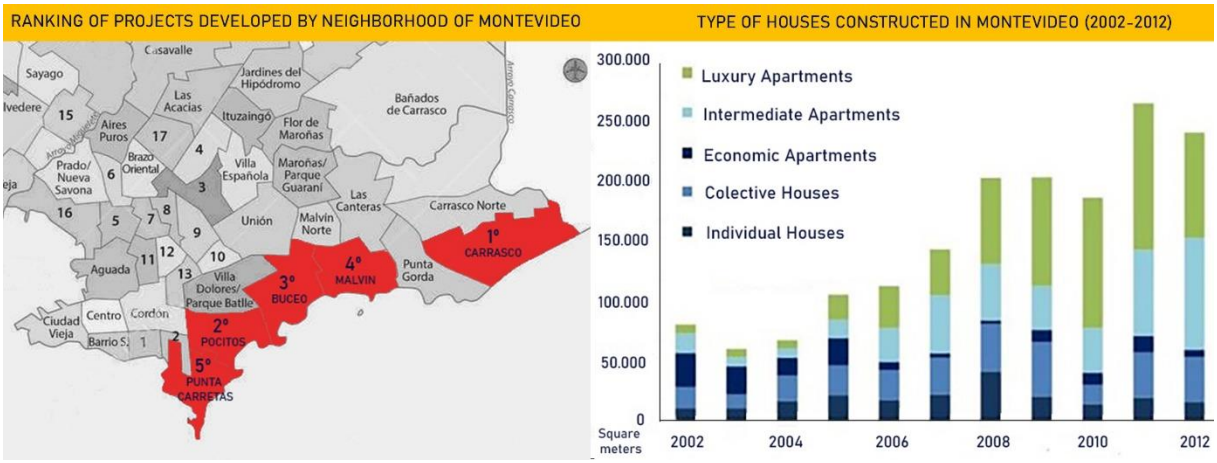


Figure 19 A) Ranking of projects developed by neighborhood of Montevideo 2011.[29] B) Type of houses constructed in Montevideo 2002-2012.[30]

This is how the Montevideo population grows little or practically nothing, but it remains with a de-densifying and fragmenting trend. This condition puts the city's sustainability at risk considering the extension of its territory and the population it houses. In comparative mode, extrapolations have been made with European cities that manage to accommodate a bigger number of people in a much smaller area. Thus, the conclusion has been reached, for example, that if Montevideo had the same density of land occupation that Barcelona has, it would contain four times the Catalan capital population. (Nahoum, 2018)

[29] Reference: Own work with information (INE - National Institute of Statistics, 2011)
[30] Reference: (Uruguay XXI, 2014, P.4)

So, the market was leading to inefficient urban imbalances. In a vast and low-density city, vast numbers of households are agglomerated in some coastal areas, and centres with services and infrastructures were emptied, pushing the rest of the population to the periphery. The price of land ends up being the defining arbiter of where some live and where others do not, generating significantly different densities. Thus, there are blocks of the coastal neighbourhood of Pocitos with 4,000 inhabitants per hectare, while in the periphery, the density per block drops to 100 (Nahoum, 2018). Montevideo is a vast city for the population it houses. Family groups establish their place of development in the city based on their economic conditions but without following a territorial order that allows them to find affordable alternatives without resorting to suburbanized peripheral areas. The size of the city and its low density provide opportunities to reorganize the urban area in such a way as to give rise to the different social classes without expelling them outside its urbanized limits.

In conclusion, far from reaching inclusive and heterogeneous urbanism, Montevideo was heading towards a poorly planned and fragmented growth. The most privileged families choose areas isolated from the rest, and those with medium or low resources are displaced to the edge of the city.

These conditions of emptying downtown areas with services and growth towards suburban areas are inefficient and costly for the State and generate discrimination and social fragmentation.

The national director of housing Salvador Schelotto referred to this issue expressing “that the city is expanding, while intermediate central areas are being emptied, and all this amid a low demographic dynamics. This causes the underutilization of urban areas with high historical, social, and cultural value. At the same time, the cost of expanding urban infrastructure and “the cost for families: travel times, difficulties in accessing services-educational, health and all kinds of services-and unequal access to services must be assumed. We are concerned about socio-spatial segregation. (Muñoz, 2017)

Therefore, it is essential to ensure a suitable supply for each quintile. Thus, this scenario seems to show fertile ground for the real estate market. New supply with affordable housing that allows a quantitative leap and a qualitative change, improving the well-being of users is needed. Without ignoring that this is only an approximation to some of the aspects to study to evaluate the demand, primary conclusions can be

drawn about a good ecosystem for solid demand for housing for the middle and lower-middle classes. Although this study is not sufficient to assess with certainty the risk associated with the business, it is possible a priori to consider that the investment risk of this type of development considering the demand variable is not high. Furthermore, the sum of the causes studied explains how despite the low demographic growth of Montevideo, the demand for housing has been growing in recent decades.

The public sector and its housing policies recognize this scenario in the current Five-Year Housing Plan. The Law 18,795 of the Housing Promotion Law, presented in the next chapter, is the primary strategy established to supply the growing demand that the public sector cannot meet.

3.3 Investors

It is crucial to also take into account and study whether, beyond the strong demand for housing, the conditions for investment does exist or not. It is possible that there is a strong demand for new housing projects and solutions but that there is no interest on the other side to invest in this market. As mentioned above, there are many variables to consider in a real estate development, making it increasingly relevant to have a good analysis and local panorama (Gómez & Tisocco, 2011). For this purpose, indices and parameters of the construction industry and the real estate sector will be analyzed.

As has already been done in previous chapters, the first thing to highlight is the favourable scenario of the Uruguayan macroeconomy, which has accumulated more than a decade and a half of growth. The average annual growth for the last 15 years is 3.5% (Uruguay XXI, 2020). During this growth, inequities and poverty have also been reduced, and the distribution of wealth prioritized.

Then, it is relevant to know the volume of investments in the construction industry and its impact on the national economy. The construction industry's performance is exceptionally influential in the real estate sector since it directly affects costs and, therefore, prices and real the production capacity of real estate. In turn, construction is one of the sectors that generate the most significant linkage in the economy due to its direct influence on other industries. The total capital invested in this industry during 2019 was

approximately 6,350 million dollars. This figure represents 11% of the national GDP. (Seré Carracedo, 2020)

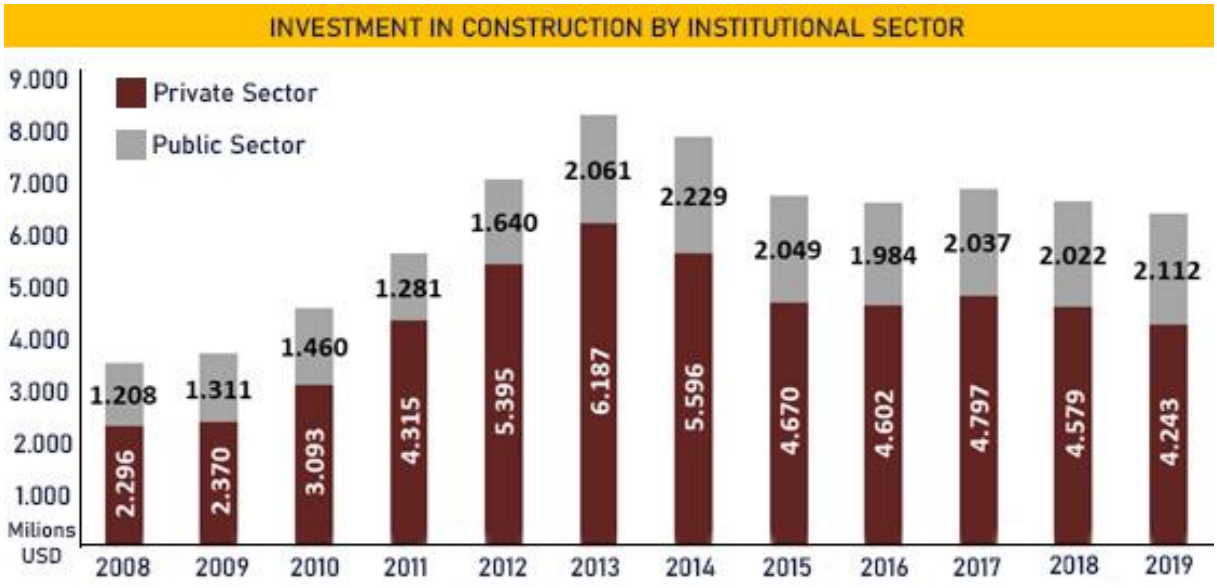


Figure 20 Investment in Construction by Institutional Sector. [31]

In addition, it is relevant to take into account how important the production of the construction industry is for the Uruguayan economy. This industry is a generator of multiple jobs and mobilizes a very diverse range of sub-industries and supply construction services. According to a study carried out by the Center for Economic Studies of the Construction Industry, for every dollar that is invested directly in the construction industry, an extra USD 4 is generated in the rest of the economy. This condition makes it one of the industries with the highest economic chains. (Rego & Fernandez, 2019)

That is why it is in the common interest of successive governments to keep the construction industry moving. The monitoring of this industry is a priority.

Considering the weight that the construction industry has in the national economy, it is interesting to see what percentage of this investment is being made by the State and what participation private investors have. As shown in Figure 20, private investment in the construction industry has accounted for around two-thirds of all investments in the last decade. The role of the private sector is essential for this industry, and the data

[31] Reference: (Chamber of Construction of Uruguay, 2020, p. 1)

show how the private investor responds to the incentives and conditions offered by Uruguay.

To keep the construction industry in constant motion, the government encourages private investment. It invests part of its resources in construction projects that improve the national infrastructure and mobilize the industry.

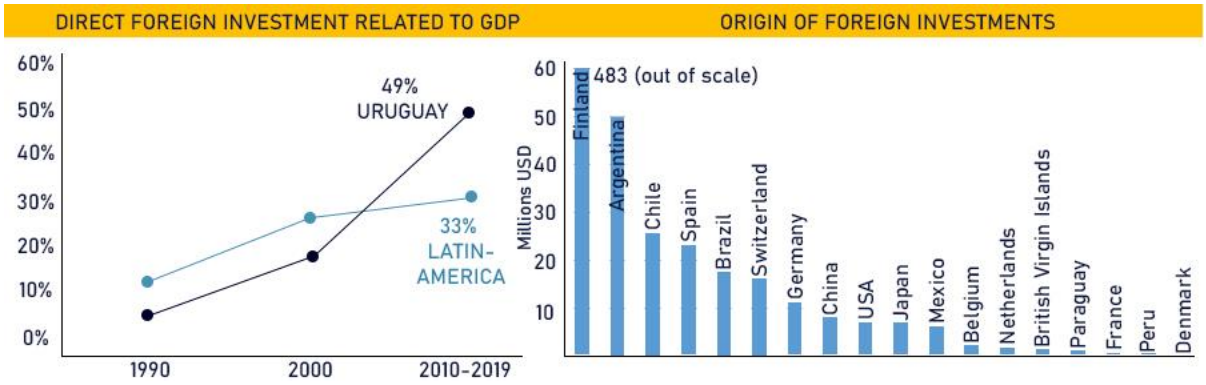


Figure 21 A) Direct Foreign Investment Related to GDP.[32] B) Origin of Foreign Investments.[33]

On the other hand, the government does its best to attract local investment and foreign capital. Thus, within the private sector that invests in Uruguay, the percentage of contribution by foreign investors is increasing. In Uruguay, investment is declared by law as of national interest; this is how the foreign investor has the same conditions and incentives as the local investor. This condition, added to the confidence generated by Uruguay as a stable and predictable country, have achieved that foreign direct investment concerning GDP has had considerable growth, exceeding the average for the region (Figure 21). (Uruguay XXI, 2014)

Figure 21 also shows the origin of foreign investment in Uruguay for all industries. It is important to note that Finland's first position in the ranking is due to the enormous investment already described before, which is being made with the second pulp paper production plant. More interesting for the evaluation is the second position in which Argentina is ranked. The negative Argentine economic indices of the last decades, the exchange rate hold, hyperinflation, and the lack of mortgage loans, added to the bad

[32] Reference: (Uruguay XXI, 2020, p. 4)
[33] Reference: (Uruguay XXI, 2020, p. 5)

reputation and distrust of the ecosystem causes that countless Argentine investors prefer to invest in Uruguay instead of in their country. (Ferreyra, 2021)

So, the main parameters demonstrate that the private sector is increasing its participation in the industry, and foreign investors choose the Uruguayan market over other alternatives.

When analyzing further into local the real estate industry, it is essential to understand the evolution of the main parameters. Studying the development of construction costs and the average sale prices per m2 will allow an overview of the real estate sector scenario in the last decade.

Firstly, it is relevant to recognize a particular condition of the Uruguayan construction industry. The construction costs in Uruguay are paid mainly in Uruguayan pesos, while homes are sold in US dollars. This condition means that construction costs and the real estate sector are closely related to the current exchange rate. Faced with an appreciation of the dollar, construction costs measured in dollars fall, increasing the return on investment. For this reason, it is essential to include the evolution of the Uruguayan peso - US dollar exchange rate in the analysis to draw better conclusions.

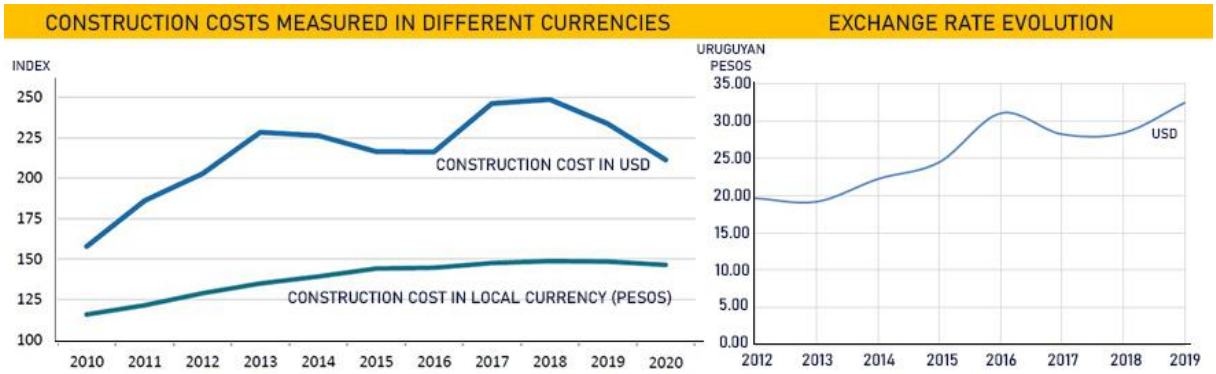


Figure 22 A) Construction Costs Measured in Different Currencies.[34] B) Exchange Rate Evolution.[35]

Construction costs in Uruguay since 2010 until now have registered a constant increase measured in national currency and a decrease in the last three years measured in dollars (Uruguay XXI, 2020). In Figure 22, it is clear the impact that the exchange rate has on the measurement of the evolution of costs measured in dollars. As the bottom line of the graph shows, the increase measured in Uruguayan pesos maintains a predictable escalation if the consumer price index is considered. On the other hand,

[34] Reference: (Uruguay XXI, 2020, p. 8)
[35] Reference: Own work with information (INE - National Institute of Statistics, 2020)

the same evolution measured in dollars (top line) fluctuates depending on the current exchange rate, registering a 9% drop in the last year. (Uruguay XXI, 2020)

Thus, it is important to visualize how the national currency-US dollar exchange rate has evolved to correctly conclude the incidence of the evolution of construction costs on a real estate investment. In Figure 22, it can be seen how the exchange rate has generally maintained an upward trend, with only two periods of depreciation (2012-2013;2016-2017). In the last section of the graph, the appreciation trend is high, and the outlook is for it to continue in this way, which has a positive effect on the absorption of construction costs, which are primarily paid in local currency. (Garcia Lopez, 2018)

Finally, it remains to see the evolution of the average housing sales prices, mainly of apartment units, since it is in this type of housing that this study focuses on.

Figure 23 Average Sale Prices Evolution 2000-2012 (Apartments in Montevideo).[36]

When analyzing the graph in Figure 23 with the average sale prices per m2 in Montevideo, since 2002, prices have increased. The average for 2012 was USD1,292 / m2, the highest registered in the first 12 years of the century. (Garcia Lopez, 2018)

In summary, the data analysis rectifies that, on the one hand, the construction industry, private investment, and foreign investment are in a high state of activity, demonstrating a substantial interest in doing business in the country.

In addition, it is verified that the economic conditions of the construction and real estate sectors show positive and stable trends. These a priori signs support and give future real estate investments that can meet the demand even without covering.

[36] Reference: (Garcia Lopez, 2018, p. 5)

3.4 Overview – Situation Summary

After analyzing the housing, urban, demand and investment context, it is clear that the middle and lower-middle social classes are the great demand for housing and the least served by the market. The State, with scarce resources, carefully focuses its efforts on the neediest populations. The 5.8% of public social spending is allocated to housing within the Juntos Plan for lower-income families. (Ministry of Economy and Finance, 2018)

On the other side, the private sector has chosen to turn its investments into products with the highest social classes as end-users since these business opportunities seem to be most attractive when evaluating the risk-benefit ratio. (Beltrame, 2017)

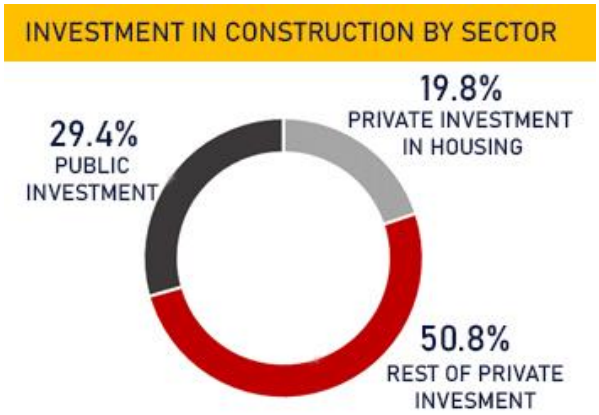


Figure 24 Investment in Construction by Sector.[37]

Figure 24 depict the investment in construction by sector. It is shown that only 19.8% of the invested capital corresponds to private investors developing housing. Considering the housing deficit already described and the specific weight that the middle class has in the total of society, the participation of the private sector in housing creation seems to be still low.

On the other hand, the previous chapter described the role of the State in housing policies. From the creation of the National Housing Law in 1968 until the crisis of 2002, real estate projects for low-income families were financed mainly by the State (Chamber of Construction of Uruguay, 2020). The graph in Figure 24 shows the crucial economic effort that the State is making with this objective.

[37] Reference: (Chamber of Construction of Uruguay, 2020, p. 3)

A decade after the crisis, the real estate market scenario showed a growing imbalance between the different socioeconomic sectors, as well as in city construction. Families with middle and lower-middle incomes have been left aside without financial assistance to resolve their housing.

The private market turned its capital purely and exclusively to the social classes with the highest purchasing power, bands of families that had been able to overcome the crisis without significant consequences while maintaining high purchasing power. This situation resulted in a frank deterioration of the depopulated central areas of the city because of the intense concentration of supply almost exclusively in the coastal strip of Montevideo.

This scenario of significant inequities in the real estate market, unsustainable in the long term, generates a severe deterioration of the superior values of a society, such as feelings of social equity, justice, and solidarity.

But this grim outlook could turn into an opportunity if some conditions could be changed. As already mentioned, on the one hand, there are favourable conditions for the arrival of potential interested in investing capital, and on the other hand, a great demand for housing for the largest mass of the city's population was neglected.

The State then had to create the conditions for the private parties to assume the risks, carry out the management, and the investments required to carry out the real estate projects that would cover the high demand for this type of housing.

Faced with this recognized insufficiency of public investment in low-income housing, the government decides to replicate policies applied to other areas of the economy intended to attract private investment (local and foreign). It is under this strategy that law 18.795 was created. It is a mechanism of tax exemptions that promote housing development under certain conditions. Details of the law will be presented and analysed in the following chapters.

4. Housing Law 18.795

In December 2010, the executive power of Uruguay declared the housing policies outlined in the Five-Year Housing Plan as high priority projects for the current government period. In this plan, the State identifies and recognizes the significant housing deficit of the moment and implements strategies to facilitate access to housing and accelerate the production of housing units. The State focused on pouring economic resources into the most vulnerable social classes and is aware that the market does not meet the great demand generated by the lower and middle classes. (DINAVI, MVOTMA, 2010)

The State resolves to intervene by launching a strategic policy to promote private investment aimed at the middle and lower-middle classes. During this chapter, the law 18,795 created in 2011 is introduced, its objectives, requirements and implementation mode.

4.1 Description

During the 2010-2015 government, a social housing policy was created based on two main guidelines. On the one hand, the “Plan Juntos” aims to produce public housing for the lower-income sectors. The objective is to cover demands that in previous plans were not fully attended. On the other hand, the Social Housing Law 18,795 was drafted, which promotes the production by private parties of homes for middle and lower-middle-income families. (DINAVI, MVOTMA, 2010)

The law 18.795 was firstly named “Social Housing Law”. It aims to diversify housing production in sectors that the State was not covering.

Through this law, an attempt is made to attack the different aspects already presented that a housing policy should contemplate. It proposes multidirectional solutions. The general intentions of the law are to produce new homes that will expand the existing stock, recover deteriorated and abandoned stock. The State also pretended to increase the population density in consolidated neighbourhoods that have been depopulated due to market conditions and reduce final sale prices to ensure better access to housing for the target audience. That is why the law had to contemplate the problem seen from social, economic, urban and commercial parameters.

For this purpose, the State needed to intervene as a facilitator and guarantor of new relations between society and the private sector.

On the one hand, the MVOTMA had to find a way to tame the market. A tool had to be designed to redirect private investment, lucrative awakening interest in depressed and neglected areas where there had been almost no investment and discouraging the mega-densification of new projects in high-income areas. It was clear that the government had to change the development business conditions in the target areas for the target audience. In short, generating investment opportunities in a segment that did not have, was neglected for decades. (Muslera & Mendive, 2011)

On the other hand, in the generation of these new playing conditions, the State had to consider aspects that would awaken society's confidence towards these developments and their promoters. It was necessary to establish requirements for the housing projects to be promoted to comply with the location, housing types, and their respective surfaces. (Muslera & Mendive, 2011)

In addition, the bill had to contain financial solutions for a target audience with little contact with the financial world. To do this, it had to launch plans with soft financing, lower requirements for processing and affordable rates. (Muslera & Mendive, 2011)

The design of this housing promotion law was then intended to create a milestone in social and urban aspects. The accelerated production of houses within delimited zoning and established typologies would cause the stock of units to increase rapidly. Therefore, the final prices would be more suitable for users who had not found options according to their possibilities until then. The law's launch is seen within a social policy insofar as it is intended as a housing solution and not as a business for the State. But the law is not strictly a social policy in itself since it is not the State that redistributes goods and services within society to generate equity. Its role is instead to act as a facilitator between the community and the private market. This subtle difference in the conception of the strategy aroused controversy over the years since the name under which the law was launched generated confusion. Thus, in 2014 the ANV changed the name of the law from “Social Housing Law” to “Promoted Housing Law”. This little semantic change created significant differences in the meaning and conceptualization of what the law actually is.

With the changes in conditions in the investors' equations, the State was aware that affordable housing would be an excellent engine for the construction and real estate sectors. It would positively affect the macroeconomy, increasing competitiveness, mobilizing financial investment, the industrial production chain, generating employment and attracting local and foreign investors. The launch of the law generated big expectations of a positive multidimensional shock. (Mendive, 2012)

This housing development strategy is similar to other plans developed in several Latin American countries, in which the public sector intervenes laterally in the market-society relationship. The State makes its contribution from the tax waiver and guarantees a percentage of the home purchase. The Uruguayan scheme has its differences compared to those applied in other countries in the target audience since it aims at the middle classes while the rest of the plans sought to serve the lower classes. These plans have been questioned regarding the quality of the constructions, but especially in terms of their implementation in peripheral rings with insufficient urban infrastructure. (Magri, 2014) On the contrary, the strategy applied in Uruguay promotes construction only in consolidated urban areas, strengthening the efficiency of the city.

4.2 Target Audience

The population groups identified as the target audience to be covered by this new law were middle and lower-middle-income families. More precisely, the groups that are in the upper band of quintile 2, and quintiles 3 and 4. (Legistlative Power, 2011)

This target audience was the one that, with the possibility of progress given the economic boom, could not find suitable housing opportunities and necessarily resorted to options on the outskirts of the city.

This law was designed for this purpose. It aims to improve the supply, increase the stock, provide more access to urban infrastructure and also be able to support access opportunities through public financing. (Legistlative Power, 2011)

4.3 Objectives

As mentioned above, the law is characterized by the multidimensionality of its objectives. Its main aim is to positively affect the affordability of housing for the middle and lower-middle-income sectors.

By implementing unprecedented tools in Uruguay, the law directs private interest, achieving their attention in areas that until now were practically entire investment by the State. In this way, the stock is increased with the construction of new homes and promoting the restoration and recycling of the existing stock.

The plurality of objectives to be covered by the law can be grouped into two large groups: social goals and urban objectives.

4.3.1 Social Objectives

The primary motivation with which the law was born is to provide housing solutions to a specific segment of society. This implies attacking the problem from several fronts.

The first objective in this sense is to increase the stock of homes required by this demanding public. Acceleration in the production of new housing units is sought. (Legislative Power, 2011)

In the same way, the renovation and recycling of the existing housing stock are promoted to allow the reuse of properties that the market has abandoned in consolidated areas of the city. (Legislative Power, 2011)

Hand in hand with these first two objectives of increasing the supply, the search of new supply generation at prices that the target audience can afford. Creating a significant number of houses would naturally reduce the sale price per square meter in the promoted areas. This consequence would bring greater accessibility to the purchase option and an improvement in the prices of the rental market. It seeks to substantially impact the real estate market, affecting prices by creating new supply in large numbers. (Mendive, 2012)

As mentioned before, the housing deficit expressed by the MVOTMA in the five-year housing plans was quantitative and qualitative. In this sense, the law implements tools to improve the qualitative conditions of the housing market.

The concept of urban law is also an objective of the law, which attempts to provide equity in the use and exploitation of the city. It tries to generate a sociodemographic impact in the territory to defragment the city and make the urban area more heterogeneous from a social point of view. (Mendive, 2012)

Lastly, the law plays an essential role in generating new ways to access credit for housing. The State designs tools that allow accessing mortgage loans to groups of families with the possibility of payment but little prior saving capacity. Expand financial inclusion to those who were still on the sidelines of credit opportunities is essential for a successful implementation. (Beltrame, 2017)

4.3.2 Urban Objectives

The Latin American experience of housing policies with similar objectives has shown deficiencies in integrating new homes and their inhabitants with the urban fabric and its services (Magri, 2014). The formulation of the Uruguayan law anticipated these negative consequences by incorporating the urban dimension in its design. The relevance of the location of homes demanded by the middle and lower-middle sectors was considered when drafting the guidelines for applying the law. The need to provide housing solutions that are in consolidated areas of the city with necessary services. (DINAVI, MVOTMA, 2010)

At the same time, the need to re-fill voids that the market had generated for decades in the city's central areas, with de-densification, the migration of families to the periphery, and the abandonment of buildings. The city required a planned intervention to counter the inefficient and unplanned growth of the city to the east. For this, it was necessary to define different areas in which the promotion conditions vary in such a way as to direct private investment towards neighbourhoods that were intended to be promoted. (Legislative Power, 2011)

4.4 Implementation

Through this housing promotion law, the State intends to regulate the conditions of access and provision of offers to respond to the demand of intermediate groups in society. It was necessary to frame the developments to be promoted within certain conditions regarding location, typologies, footage, and qualities to ensure that the

objectives to be followed are not undermined. It is also necessary to incorporate new housing financing conditions for these groups of families. In turn, the private market must benefit in some way to awaken economic attractiveness. In this chapter, all these conditions, requirements and tools that make up the law are presented.

4.4.1 Zonification and Benefits

With the objective of redirecting private interest in social housing within specific neighbourhoods, the law establishes zones and associated benefits for those who invest in each one of them. Projects developed in the city's central and intermediate areas are privileged, establishing tax exemptions for this. Then three zones were defined in which the conditions for accessing the benefits differ. (Legislative Power, 2011)

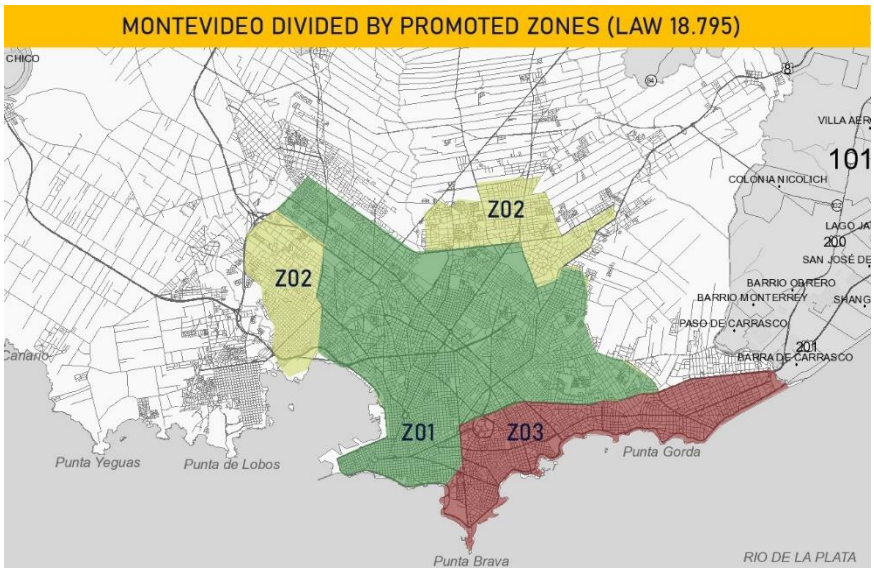


Figure 25 Montevideo Divided by Promoted Zones (Law 18.795).[38]

For zone 1 (Figure 25), all new construction projects, refurbishment, recycling, and expansion of the existing stock can benefit. In the case of zone 2, refraction, recycling and expansion of the current stock are promoted. For this area, the projects that imply the construction of new units can access the benefits only when the project demonstrates the possibility of connecting to existing sanitation lines. In zone 3, only renovation, recycling and expansion projects of the existing stock are promoted, excluding projects involving new construction. (Legislative Power, 2011)

[38] Reference: (National Housing Agency - ANV, 2021)

For all cases that meet the requirements, real estate developers are exempted from paying all income taxes for economic activities (IRAE), wealth tax (IP), value-added tax (VAT) and tax on patrimonial transfers (ITP) (Legislative Power, 2011). The tax exemption is the big fish for which investors are attracted and the main controversial point. It is here where the developer makes the difference, and the critics claims for transparent explanations. The basis of the controversy will be analyzed later in chapter 5.

4.4.2 Architectural Requirements

From the law's plural aspects, the improvement in qualitative conditions of dwellings is crucial. In this sense, it defines architectural requirements that meet the qualitative standards of housing and with minimum areas that ensure habitability and maximum areas to ensure that the homes, thus their final prices match with what the target audience can pay. (Legislative Power, 2011)

On the other hand, considering the housing deficit regarding qualitative aspects identified by the MVOTMA, the law also promotes the renovation, remodelling and expansion of existing homes. This is to rehabilitate the existing stock and the urban areas in which they are placed. This need for plans that promote the restoration of what already exists was also a recommendation of Ramada and Garabato's work on housing policies in Uruguay. (Garabato & Ramada-Sarasola, 2011)

Typology/Area (m2)	Studio	1 Bedroom	2 Bedrooms	3 Bedrooms	4 Bedrooms
Minimal Habitable Areas	25	35	50	65	80
Maximal Habitable Areas	40	50	75	100	125

Table 1 Minimal and Maximal Apartments Areas Required by the Law 18.795.[39]

Table 1 the minimum and maximum areas defined by law as a requirement to be promoted. On the one hand, these surface ranges have the objective of complying with the minimum habitability that guarantees spatial quality. On the other hand, the definition of maximum areas for each typology is intended to limit the size of the homes and therefore limit the sale prices to guarantee that the type of home promoted is adequate

[39] Reference: (National Housing Agency - ANV, 2021)

for the target audience. In this way, it is prevented from falling into a legal void that allows projects destined for other audiences with greater claims of quality and surface to be promoted by this law and exempted from taxes. (Legistlative Power, 2011)

In addition to the requirements associated with the surfaces of the houses, there are construction and installation requirements. These requirements do not contribute to the study work, so they will not be developed.

4.4.3 Financial Plans

The MVOTMA identifies as one of the barriers to access to housing for the target audience the problem of bank financing and the required prior savings. The law creates the Mortgage Credit Guarantee Fund (FGCH) to reduce the initial savings required by potential home buyers.

The private banking system offers mortgage credit options up to 70% of the cost of the house and the remaining 30% of previous savings. This requirement impeded many families that had payment possibilities but did not have prior savings of such magnitude.

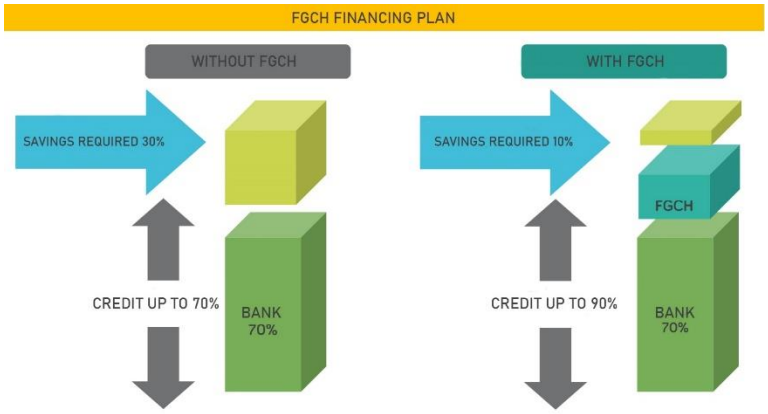


Figure 26 FGCH Financing Plan given by the Law 18.795.[40]

Within the FGCH credit, the State subsidies 20% of the purchase price, reducing the previous savings required to only 10%. Its objective is to cover the additional risk that results from lending more than 70% of the home's value. (Legislative Power, 2011)

In turn, the benefit is extended to the private financier who contributes 70% of the credit since it is exempted from paying taxes such as VAT, IRAE, property transfer, personal

[40] Reference: (National Housing Agency - ANV, 2021)

income tax and real estate contribution. (Legislative Power, 2011)

The inclusion of this financial tool opens enormous opportunities to many families that otherwise wouldn’t have access to credit. This also means an increment in potential consumers hence demands.

5. Ten Years Later – Achievements and Weaknesses

After a decade of law enforcement, it is time to evaluate the achievements of the law. What is the real impact it has had on its goals? Although these policies do not have immediate effects and the results are clearer after an extended period, it is essential to study what the reality has been so far.

There is no consensus about its effects. The different actors involved; Professionals, academics, promoters, and the population, have different views on how positive the results have been, taking into account the cost of the tax waiver. (SAU, 2017)

Firstly, analyzing the number of projects promoted, it is undeniable that it has had a good impact on the private sector, which has taken the law as a good business opportunity. Since its launch until today, 848 projects were promoted by the law, representing 25,730 new and renovated homes (National Housing Agency - ANV, 2021). Considering that this number of new or refurbished homes represents 4.5% of the housing stock (out of a total of 520,538 according to the last census of 2011) and the period in which they were executed, the results in this aspect are valued as positive. (INE - National Statistics Institute, 2020)

As an additional reference, the annual average of sales in Montevideo is around 12,000 units (Berrutti, 2017). This means that the promotion of homes during the first ten years of implementation has double the total number of units sold per year.

Montevideo concentrates almost 75% of the promoted ventures, of which around 30% are in the Z01 zone (Vinar, 2018). The capital has been receiving a solid investment in housing, stimulating depressed areas with installed infrastructures avoiding or slowing down urban expansion (Vinar, 2018). The changes in the densities of the blocks in the promoted neighbourhoods show the results clearly, having gone in some cases to more than double the pre-existing units per block.

A positive effect is then verified concerning generating new supply and increasing the population density in the city's central areas.

But what has been the price of this law for the State up to now? With the promotion of these more than 25,000 homes, the State resigned to collect just over 1,440 million dollars in taxes (National Housing Agency - ANV, 2021). If we consider the GDP generated by Uruguay in the ten years of implementation of the law (USD 541 million) (The

World Bank, 2020), the fiscal cost directly related to the law represents 0.266%. This fiscal cost does not seem high considering that, as recognized by the MVOTMA in the following five-year housing plans, the only way to meet the unmet demand was through the involvement of the private sector. The State manages to find a solution to increase the housing supply for the most prominent social class in society without resorting to its capital, which it does not have.

The most critical public discussion of this law is centred on interpreting the achievements within the socioeconomic objectives. There is debate about whether the law introduces homes to the market that are priced below average. According to the criticism, the policy prioritized increasing the number of homes but did not establish specific instruments that would achieve the socio-economic objectives of improving final prices (Berrutti, 2017). It is considered that the socio-economic goals were not achieved since the prices offered to users do not reflect a substantial difference concerning the rest of the market.

		2013	2014	2015	2016	2017	2018	2019
Pocitos	USD/m2	USD 1,599	USD 1,724	USD 1,752	USD 1,779	USD 1,869	USD 1,927	USD 2,116
	Variation %		8%	2%	2%	5%	3%	10%
Cordon	USD/m2	USD 1,281	USD 1,391	USD 1,506	USD 1,557	USD 1,856	USD 1,975	USD 1,977
	Variation %		9%	8%	3%	19%	6%	0.1%
Evolution of the Pocitos / Cordon Price Ratio		25%	24%	16%	14%	1%	-2%	7%

Table 2 Evolution of the Average Prices in Pocitos and Cordon.[41]

According to the sales data during 2019 and 2020 registered by the National Institute of Statistics, the two neighbourhoods of Montevideo with the highest number of annual transactions have been Pocitos and Cordon (INE - Statistics National Institute, 2020). The first is located in one of the most privileged areas of the city and within the coastal strip. This neighbourhood does not fall within the areas that the housing law promotes. On the other hand, the cordon neighbourhood is one of the areas promoted by the law and where the most significant number of projects have been developed since its creation. (Chamber of Construction of Uruguay, 2021)

[41] Reference: Own work with information (INE - National Institute of Statistics, 2020)

Table 2 shows the average prices for both neighbourhoods in the 2013-2019 period and their variation from year to year. As can be seen, in all the years shown, the neighbourhood's prices included within the promotion of the law have been more significant than the variations registered by the Pocitos neighbourhood, with the sole exception of 2019. This first analysis shows how the neighbourhood prices promoted have had an even more significant percentage increase than the neighbourhood with the highest demand in the entire city. (INE - Statistics National Institute, 2020)

In addition, the information in Table 2 also shows how the relationship of the average sale price between the two neighbourhoods has varied in this same period. In 2013, two years after the law was launched, the difference in average prices between the most demanded neighbourhood in the city and the reference promoted neighbourhood was 25%. In other words, the average sale price in the Pocitos neighbourhood was 25% more expensive than in the Cordón neighbourhood. When moving forward in the table, it can be seen how the average prices paid in each of the neighbourhoods begin to equalize year by year. In 2018, average prices of sales made in the Cordon neighbourhood were recorded 2% above the average price paid in the privileged neighbourhood of Pocitos (INE - Statistics National Institute, 2020). This analysis of the evolution of prices in both cases is the main point highlighted by the critics. Sales prices have not only not fallen compared to the rest of the market, but on the contrary, at times, they have equalled the prices of real estate in privileged neighbourhoods.

It is also relevant to analyze the evolution of prices concerning the purchasing power of Montevideo. Figure 27 shows the purchasing power of a middle-income household. The orange line refers to the number of square meters that the average income can buy compared to the average price of homes in Montevideo. The blue line refers to the power to purchase a home in the Cordon neighbourhood, where projects have been most developed under Law 18,795. Finally, the green line shows the purchasing power in the coastal area with the highest demand (Pocitos).

Several conclusions are interesting to draw from this graph. In the first place, it is notorious how real estate registered a price increase compared to purchasing power: both the two neighbourhoods observed and the average price of the city register this increase.

Secondly, if the same graph referring to the previous decade is taken into account (Figure 13), it is noticeable that 2011 is the breaking point in purchasing power. Until 2010 the purchasing power registered a frank growth. From 2011 to 2020, the purchasing power changed sign, falling year by year in the three parameters measured. It seems clear that the large volume of housing production under the previously undeveloped law 18,795 impacted the real estate market.

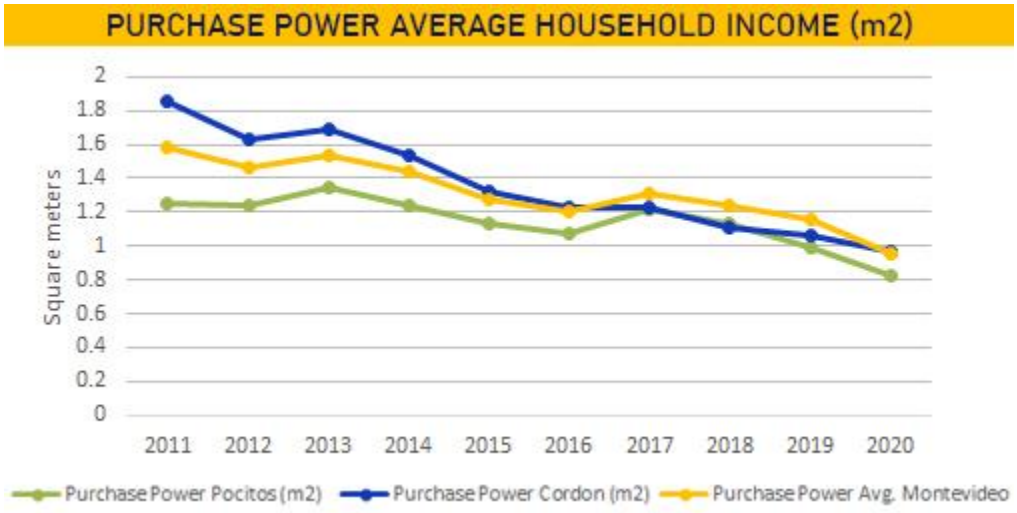


Figure 27 Purchase Power Average Household Income (m2).[42]

Finally, it is worth noting from the graph the change in behaviour recorded by the line referring to the neighbourhood promoted by law 18,795. At the beginning of the chart, it registers a purchasing power greater than Pocitos and the city's average price. As the graph progresses, the purchasing power in this neighbourhood begins to fall until it crosses the average prices and even equals the purchasing power in the coastal area of Pocitos.

The scenario a decade after the law was launched is then somewhat complex. On the one hand, it has undoubtedly been possible to promote the construction of new developments in urban areas neglected by the market, and that was of particular interest to the MVOTMA to repopulate. The qualitative and quantitative aspects of the law were then being achieved. The socioeconomic aspects do not show an improvement compared to the scenario before law 18,795. Despite the rapid supply growth, prices did not reflect these changes, raising concerns among interested parties.

[42] Reference: Own work with information (INE - National Institute of Statistics, 2020)

The criticism argues that tax exemptions have only represented a more significant benefit for investors who have not translated these savings to a cheapening (Magri, 2014). In itself, it raises doubts about how intelligent it is to subsidize the offer through exemptions given to developers with the risk of own use that this implies. Probably the effectiveness of this type of implementation can be greater when the cost structure of the developers is known so that the objective of the subsidies can be precisely specified.

In this sense, the risks of this type of implementation were already previewed when discussing the drafting of the law in parliament. Senator Bordaberry expressed concerning the bill that they should “include norms that ensure that, indeed, the tax resignation that society makes goes where it should go. We must ensure that the main destination of the dwellings is to satisfy the demand and that it does not constitute an additional resource that benefits the private developer " (Bordaberry, 2011)

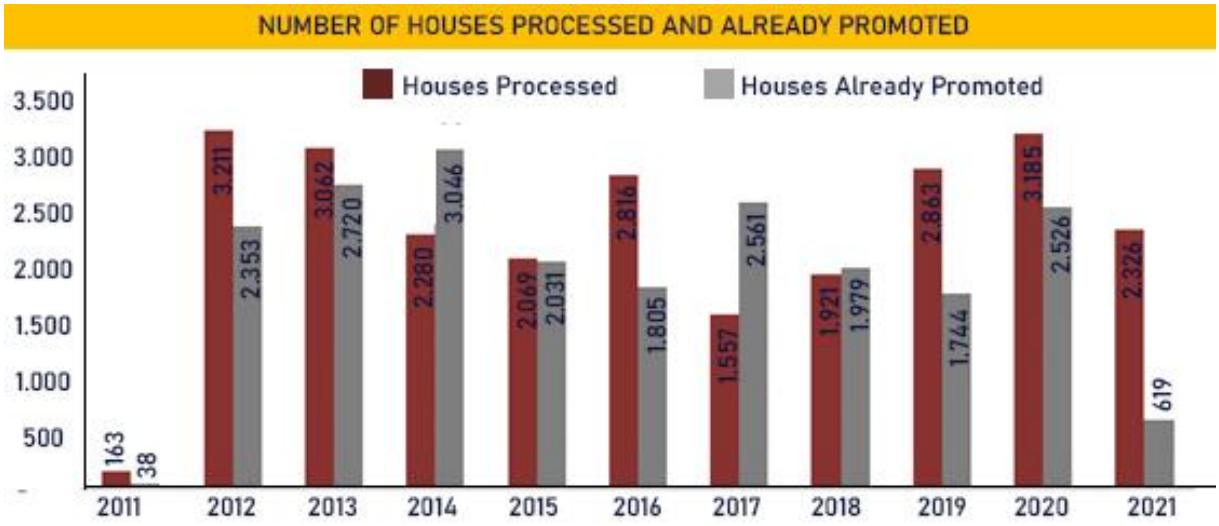


Figure 28 Number of Houses Processed and Already Promoted.[43]

Since its launch in 2011, the governments of the day have made adjustments to the law on two occasions. These changes can be interpreted in line with the points highlighted by the critics about the deviation that the law may have had concerning the objectives of lowering prices.

In March 2014, the Executive Branch considered that tax benefits were not being applied to prices, so it made adjustments in the law establishing price caps at 25% of the units of each project (Legislative Power, 2014). These prices set by the ANV were

[43] Reference: (Chamber of Construction of Uruguay, 2021, p. 1)

around 20% below market prices. Furthermore, as already mentioned, the ANV changed the name of the law since the original name awoke wrong expectations about the essence of the policy. The authorities justified that the original name wasn't clear with the commitment of the law. (Kaplan, 2020)

With the implementation of these adjustments, there was a noticeable drop in the projects presented. Figure 28 shows how the slowdown in the sector begins to be seen in the number of projects promoted in 2015. The developers claimed that the increase in construction costs added to the restrictions imposed by the ANV made the projects unviable. In addition, they argued that the rise in land prices in these areas had strongly affected the business. (Vinar, 2018)

After constant complaints by the organizations promoting projects and the notorious stagnation in the number of homes promoted, in March 2017, the Executive Power made adjustments to the law again. On that occasion, it resolves to reduce the percentage of units with capped prices to 10% of the units in each project (Legislative Power, 2017). According to specialists in the real estate market, the prices set by the ANV for these units were below construction costs (Kaplan, 2020). After implementing these new adjustments, investors argued that despite the tax exemptions, they were forced to reduce profit margins due to high construction costs and low sales ceilings. Figure 28 shows how the number of projects fell sharply again in 2017.

Finally, in March 2020, with the beginning of a new government period, changes were made to the law again. On that occasion, it was decided to remove the price cap of the units, returning then to the original conditions of the law launched in 2011. These changes once again attracted the interest of investors in a powerful way. Figure 28 shows how 2020 is one of the highest peaks in the history of the law. Interestingly, a global certainty crisis dominated 2020 with the sanitary emergency due to COVID-19. Investors' interest in developing under these new conditions appears to have been stronger than the instability on the world stage.

With more than ten years of applying the law, there are still no official studies that whitewash the developers' balance sheets and show how much more beneficial this type of investment is and how much the final price of homes in the promoted areas has become cheaper. Being able to know this information will clear many doubts. That is one of the objectives of this thesis

In conclusion, a study of the promoted projects and construction permits shows that the law had an apparent effect on the actions of the private sector and in generating a greater supply. On the other hand, the study of prices shows that, as the critics claim, the policy has not favoured lower-middle-income families regarding unit prices.

The following chapters aim to analyze the economic and financial conditions of a hypothetical real estate development developed with the law's benefits. This study will allow to understand the situation and identify how beneficial this kind of investment is. Further, it could be concluded if there is space for a cheapening of the prices by transferring part of the tax savings to the users.

6. Hypothetical Development

To measure the savings reachable from tax exemptions and how they impact the developer's profits, a hypothetical real estate development study will be made based on real and current market data.

To do this, the scale of the project, the location, the price of the land, the construction cost, the work schedule, the expected flow of expenses, the sales prices, and the cash flow allows finding the Net Present Value (NPV) will be defined. All essential data will be extracted from the current market and based on the study carried out in the previous chapters.

After an economic and financial analysis, the tax calculations to be exonerated will be made. Thus, it would be possible to compare the IRR and the end-to-end profit obtained before tax exemption and after exemption. This study intends to be able to conclude two specific objectives; on the one hand, finding how much more attractive the law makes this type of project comparing the utility achieved with the utility under normal conditions. On the other hand, once this utility plus is known, it will be possible to assess whether the tax benefit means a business itself or not.

A possible result could be that the impact of the exonerations only makes the investment feasible without extra benefit than the required return rate. Another scenario could be that the investor is enjoying an extraordinary profit due to the exemptions.

6.1 Description and Assumptions

This chapter seeks to study the economic-financial aspects of a real estate investment project under the housing development conditions of Law 18,795.

The final objective, as mentioned above, is to verify the real effects generated by the tax exemptions granted by the law on the profitability of a development.

It is not the objective of this study to conclude how profitable the development of this style is, but how much better it is due to the tax benefits. This means the economic-financial study will not delve into possible scenarios and alternatives that can further optimize the return on investment.

For example, it is assumed as a starting point that the project's financing will be carried out with the developer's capital.

In addition, the sales flow of the units is also assumed that they will all be completed at the same time, six months after completion of the work.

These assumptions of financing with the developer's capital and the sale of all units after the project is built reflect a business profit that could be even higher if the sales flow were during the work and if financial leverage mechanisms were included. This profitability optimisation does not contribute to the objectives sought to know how much profitability varies due to tax exemptions.

It is also necessary to bear in mind that this study is not a business feasibility study because it does not study market analysis, SWOT, stakeholders, or site analysis. For this, the analysis carried out in the previous chapters regarding the existing actual demand and the urban areas in which construction is promoted is taken as a starting point.

6.2 Land site Selection

As in any real estate project, the choice of location is a crucial decision for the success or failure of the project (Savransky, 2015). Many variables are at stake when choosing a site, including the demand in that area, the infrastructure and services, and the growth prospects of that neighbourhood. This decision is even more decisive in projects under the housing promotion law in Montevideo since other conditions defined by the law come into play. The correct determination of the location is essential to collect the appropriate data to this location, such as the price of the land, the sale prices, the registered demand, etc. In addition, this aspect is relevant to guarantee the fidelity of this study and the representativeness of the results.

Over the first decade of the law's implementation, investors have expressed concern about the accelerated rise in the price of land located within the promoted areas (Álvarez, et al., 2017). This change in the land market may have strongly affected the feasibility of these developments and, therefore, investors' interest. That is why it is essential for a reliable study of this type of project's economic and financial analysis to choose a real land with its current.

The first decision to make in the search for the land is in which areas delimited by law would be more representative to carry out the hypothetical development. To fully assess the incidence of the law's benefits, it is necessary to choose a location within the Z01 zone where the law stipulates 100% benefits for new works. It is there where the interest and the profit of the investor are maximized.

The Z01 zone covers a very extended area of the city. For a choice that minimizes the risk of the sales flow, the demand by official authorities during 2019 was analyzed. As shown in Table 3 of the total sales during 2019, two neighbourhoods were the primary sources of attraction in demand. The first neighbourhood (Pocitos) is located in the coastal zone Z03, in which the law tries to discourage densification and limits tax benefits. The Cordón neighbourhood, the second most demanded in 2019, is covered 100% by the Z01 area of housing development. The Cordón neighbourhood is then considered the most appropriate option for the hypothetical development as it is the most in-demand neighbourhood within the Z01 zone. (National Statistic Institute, 2020)

Since it is the neighbourhood most in demand, it is necessary to know the value of land in that area and calculate its impact on the cost of development.

APARTMENTS SOLD IN 2019 BY NEIGHBORHOOD			
Neigborhoods	Aparments Sales 2019 (%)	Neigborhoods	Aparments Sales 2019 (%)
Pocitos	13.8%	Palermo	1.6%
Cordon	12.0%	Malvin North	1.4%
Buceo	6.0%	Carrasco North	1.1%
City Center	5.3%	Carrasco	1.1%
Punta Carretas	4.5%	Maroñas	0.7%
Malvin	4.1%	Punta Gorda	0.6%
Parque Battlle	3.2%	Flor de Maroñas	0.5%
Old city	2.7%	Las Canteras	0.4%
Parque Rodó	2.2%	Punta Rieles	0.1%
South Neighbourhood	2.0%	Other Neigborhoods	36.9%

Table 3 Apartments Sold in 2019 by Neighborhood.[44]

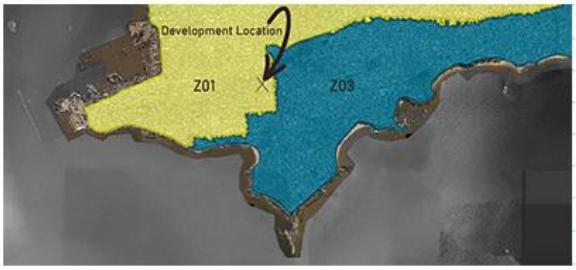
As will be seen later, the construction cost studies carried out by the APPCU for homes under Law 18,795 are based on 7-level buildings with four units per level. This cost given by APPCU will be the source for further cost calculation. This is why, to ensure the more accurate result of this study, the hypothetic development will have the same

[44] Reference: Own work with information from (National Statistic Institute, 2020)

characteristics used by APPCU as reference. Then those lands that are within the Cordón neighbourhood and the regulations allow to build up to 7 levels have been filtered for the search.

The selected land for sale is located on the edge of zone Z01, close to the coastal zone with the highest demand Z03. Being a central part of the city and very close to the higher-income neighbourhoods, the city's infrastructure and services are the most developed. In turn, its location meets the preferences of Montevideo's proximity to the green and the coast, already highlighted above.

PLOT LOCATION



PLOT INFORMATION

Plot Price	USD	275,000	USD
Plot Area		219	m2
Occupancy Factor		100%	%
Authtorized Height		18	m
Number of Floors		7	Levels
Total Area		1,533	m2
Percentage Area for Sale		85%	%
Total Floor Area for Sale		1,303	m2

Figure 29 A) Hypothetic Development`s Plot Location.[45] B) Plot Information.[46]

The sale price of the land selected as of today is $ 275,000. (Real Estate Abbatte , 2021)

The fulfilment of all the conditions demanded to the field guarantees to maintain the representativeness of the results of this study. The actual asking price for this land naturally values the business potential it has. In this way, one of the factors of claims by developers is being considered, such as the rise in land prices.

6.3 Construction Cost

The Uruguayan Association of Private Construction Promoters (APPCU) updates construction rates and costs monthly. Since the creation in 2011 of Law 18,795, a category of the expenses for developments of this type of housing has been included in construction types.

[45] Reference: Own work.
[46] Reference: Own work with data from (Municipal Administration of Montevideo, 2021)

According to this index, the cost per square meter of construction of dwellings that meet the architectural and quality requirements demanded by the ANV is USD 1,249 in April 2021. (APPCU, 2021)

These costs include direct labour costs (materials and labour), indirect labour costs, social contributions from workers, and builder benefits. Therefore, land, professional fees, administrative expenses and national taxes are not included in these costs. (APPCU, 2021)

To these construction costs must be added, then the costs of professional fees that according to the construction fee are 10% of the construction cost (Uruguayan Society of Architects, 2021). In addition, 1.5% of the construction costs for marketing are assigned, and it is resolved to consider as traditional a 3% reserve for contingencies.

After including all these expenses, this study will proceed to calculate the taxes that correspond to this real estate development. The amounts resulting from the tax calculation will be the variable to include or remove depending on whether the project is evaluated within or outside the promoted law.

6.4 Apartments and Typologies

From the study of physical characteristics and regulatory effects of the land, it is clear that it has an area of 219m2, 8.0m in front, the construction of up to 18.0m in height is authorized, and a floor occupation factor of 100% of the total area. (Municipal Administration of Montevideo, 2021)

Tipologies Definition			
Total Floor Area for Sale			1,303
Number of Floors			7
Sale Area per Floor			187
Tipology	Area (m2)	Units per Floor	Area (m2)
Studio	35	1	35
1 Bedroom	44	2	88
2 Bedrooms	64	1	64
		Total Area per Floor	187

Table 4 Hypothetic Development - Tipologies Definition.[47]

[47] Reference: Own work.

As mentioned above, the search for the appropriate land was based on a land site that allows building up to 7 levels and with an area necessary to include four units per level with the surfaces defined by law 18,795 (expressed in chapter 4.4.2). It is then proposed to develop a project of 7 levels, each of them with 219 m2, in which four apartments on each floor will be defined according to the areas required by law and previously presented.

Thus, it is defined to build a studio apartment of 35m2, two one-bedroom apartments of 44m2 each and a 2-bedroom apartment of 64m2 per level. With this configuration, the maximum advantage from each floor area is used, following the law requirements and aligned with the project basis used by APPCU to calculate the construction cost.

6.5 Incomes – Sale Prices

The setting of sale prices is another significant variable when studying development and even more so for the fidelity of the results of this work. That is why to determine the sale prices to be considered correctly; their definition will be validated by proofing their concordance with the market.

As a starting point, the prices registered by the Montevideo InmueblesData real estate database have been taken. The average prices per square meter of brand-new homes, according to all the studio units in the Cordón neighbourhood, have a value of USD 2,600/ m2. For 1-bedroom units, prices are USD 2,460/ m2, and for 2-bedroom units, USD 2,300/ m2. (Real Estate Data, 2021)

Apartments Prices			
	USD/m2	m2	Price USD
Studio	USD 2,600	35	USD 91,000
1 Bedroom	USD 2,460	44	USD 108,240
2 Bedrooms	USD 2,300	64	USD 147,200

Table 5 Hypothetic Development Apartments Prices.[48]

With the areas already defined for each typology and these prices per m2, the sale prices per apartment are then determined as shown in Table 5.

[48] Reference: Own work.

With the objective of proving the fidelity of the defined prices, it is verified that they are in accordance with the market when comparing with three real projects offered today in the market. For this purpose, three reference projects were selected in the same neighbourhood in construction stages under the conditions of law 18,795.

The first reference project, “A”, is located 700m away from the selected land. (Ventura GO!, 2021), reference "B" at 900m (Universita Tower, 2021) and the reference "C" at 1,350m. (Centra Tower, 2021) All references include the three typologies defined (Studio, 1 and 2 bedrooms) developed within the law 18.795.

In Figure 30, the prices offered by the reference projects are compared with those defined by the hypothetical project. As the bar graph shows, in the three typologies, the specified price is in accordance with those of the market.

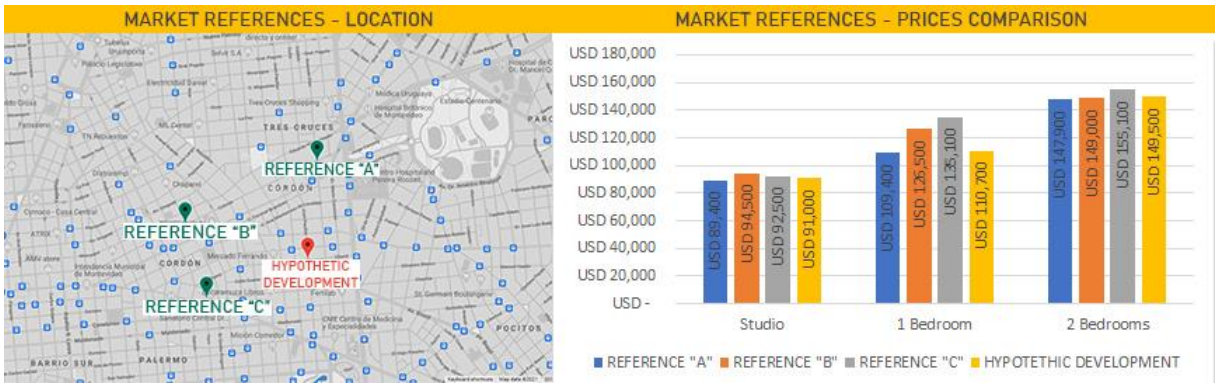


Figure 30 A) Market References Locations.[49] B) Market References Prices Comparison .[50]

Finally, the prices defined for the hypothetic development are compared with the prices paid in the purchases made in the same neighbourhood during 2020. According to INE records, the average price paid in brand new apartments in the Cordon neighbourhood has been USD 2,558 / m2 (National Statistic Institute, 2020). When calculating the average price of the three prices defined for the different typologies, an average value of USD 2,453 / m2 is reached. In this way, it is confirmed that the determined prices are also in accordance with those registered with the purchases made last year.

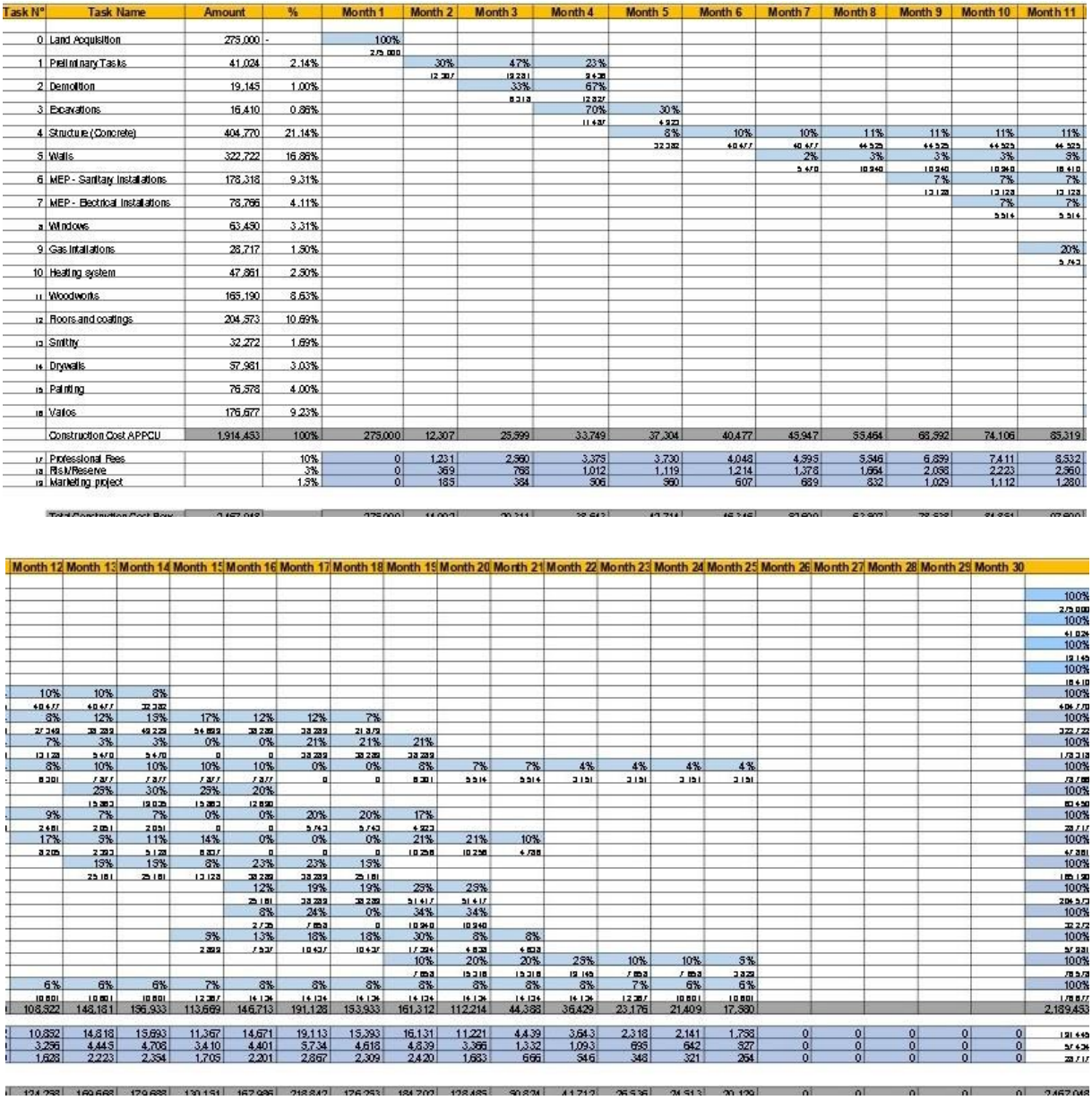
As previously described, the study assumes that the apartments are all sold in month 30. This means that no money is received during the first 29 months of the project, receiving all of the revenues in month 30. (See income schedule in the Annex) It is

[49] Reference: Own work.
[50] Reference: Own work.

interesting to note that the eventual pre-sale of units during the construction of the project could positively impact financing and economic result.

6.6 Construction Schedule and Construction Cost Cashflow

The realization of this schedule will be the basis for the project's cash flow: an estimated work schedule and its associated costs.



Task N°	Task Name	Amount	%	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24	Month 25	Month 26	Month 27	Month 28	Month 29	Month 30	
0	Land Acquisition	275,000	-	100%																														100%
1	Preliminary Tasks	41,024	2.14%		30%	47%	23%																											100%
2	Demolition	19,145	1.00%			33%	67%																											100%
3	Excavations	16,410	0.86%				70%	30%																										100%
4	Structure (Concrete)	404,770	21.14%					6%	10%	10%	11%	11%	11%	11%	10%	10%	8%																	100%
5	Walls	322,722	16.86%							2%	3%	3%	3%	3%																				100%
6	MEP - Sanitary Installations	178,318	9.31%									7%	7%	7%																				100%
7	MEP - Electrical Installations	78,766	4.11%										7%	7%																				100%
8	Windows	63,490	3.31%											8%	8%																			100%
9	Gas Intallations	28,717	1.50%																															100%
10	Heating system	47,861	2.50%																															100%
11	Woodworks	169,190	8.83%																															100%
12	Floors and coatings	204,573	10.69%																															100%
13	Smithy	32,272	1.69%																															100%
14	Drywalls	57,961	3.03%																															100%
15	Painting	76,578	4.00%																															100%
16	Varios	176,677	9.23%																															100%
	Construction Cost APPCU	1,914,453	100%	275,000	12,307	25,599	33,749	37,304	40,477	45,947	55,464	68,392	74,106	85,319	108,522	148,181	136,933	113,669	146,713	191,128	153,933	161,312	112,214	44,388	36,429	23,176	21,409	17,380						2,189,453
17	Professional Fees		10%	0	1,231	2,560	3,375	3,730	4,048	4,595	5,546	6,839	7,411	8,532	10,852	14,818	15,693	11,367	14,671	19,113	15,393	16,131	11,221	4,439	3,643	2,318	2,141	1,738	0	0	0	0	0	191,449
18	Risk/Reserve		3%	0	369	768	1,012	1,119	1,214	1,378	1,664	2,052	2,223	2,560	3,256	4,445	4,708	3,410	4,401	5,734	4,618	4,839	3,366	1,332	1,093	695	642	527	0	0	0	0	0	57,436
19	Marketing project		1.5%	0	185	384	506	560	607	689	832	1,029	1,112	1,280	1,628	2,223	2,354	1,705	2,201	2,867	2,309	2,420	1,683	666	546	348	321	264	0	0	0	0	0	28,717
	Total Construction Cost Base	2,467,048		275,000	14,092	29,311	38,643	42,714	46,346	52,609	63,507	78,312	84,852	97,691	124,258	169,668	159,688	130,151	167,986	218,842	176,253	184,702	128,485	50,824	41,712	26,536	24,513	20,129	0	0	0	0	0	2,467,048

Figure 31 Hypothetic Development - Construction Schedule.[51]

On the one hand, to carry out said schedule, the total construction cost of USD 1,914,453 was taken, which arises from multiplying the square meters to be built

[51] Reference: Own work.

(1,533m2) by the cost per square meter APPCU (USD 1,249). On the other hand, the base rubric and its incidence percentages in the total cost of work were collected by the National Institute of Statistics to study construction costs (Segui, 2021). The total cost of the work was distributed according to the cost incidences of each item. In this way, a tentative work progress schedule was defined for 24 months of work and the costs associated with each item and their monthly total. Figure 31 shows the planned work schedule and the costs to be covered in each working month. (See in the Annex for better visualization of this work schedule)

To simplify the exercise and without significant risk for the reliability of the results, it is assumed that in month 1, the land is purchased and that the construction work lasts from month 2 to month 25.

As the schedule shows, after calculating the work expenses month by month, the already mentioned additional costs of professional fees, reserve capital and marketing costs are added.

6.7 Tax Calculations

After defining the construction costs, the schedule of expenses and income, it is possible to calculate the taxes associated with the development under normal conditions outside of the promoted housing law.

For this, it is necessary to understand that the different taxes are applied in different periods and on different taxable amounts.

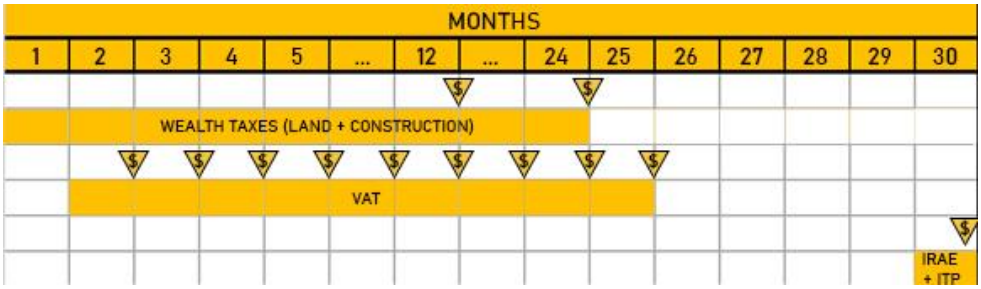


Table 6 Hypothetic Development - Taxation Schedule.[52]

As mentioned before, the Wealth Tax is paid annually, so as shown in Table 6, the calculation corresponding to months 12 and 24 of the project must be performed. The finalization of the real estate business is considered to occur on the month 30 with the

[52] Reference: Own work.

sale of all the units. The law determines that the dissolution of the promoter company dissolves with it the reason for the generation of taxes so that no other payment instance should be incurred (General Tax Directorate, 2021). In the case of VAT, it must be paid monthly. It is important to note that the purchase of the land does not pay VAT. (General Tax Directorate, 2021)

Finally, with the sale of the apartments and the closure of the real estate development company, the property transfer tax (ITP) and the income tax from economic activities must be paid. The calculation of both taxes has also been described earlier in chapter 2.4.

Taxes Calculation Hypothetic Real Estate Development (Montevideo)

Month	Outgoings	Incomes	VAT Outgoings	VAT Sales	VAT Balance	Property Transaction Tax (ITP)	Income Tax (IRAE)	Wealth Tax (IPAT)
1	USD 275,000	USD -	USD -	USD -		USD -		
2	USD 14,092	USD -	USD 2,114	USD -		USD -		
3	USD 29,311	USD -	USD 4,397	USD -		USD -		
4	USD 38,643	USD -	USD 5,796	USD -		USD -		
5	USD 42,714	USD -	USD 6,407	USD -		USD -		
6	USD 46,346	USD -	USD 6,952	USD -		USD -		
7	USD 52,609	USD -	USD 7,891	USD -		USD -		
8	USD 63,507	USD -	USD 9,526	USD -		USD -		
9	USD 78,538	USD -	USD 11,781	USD -		USD -		
10	USD 84,851	USD -	USD 12,728	USD -		USD -		
11	USD 97,690	USD -	USD 14,654	USD -		USD -		
12	USD 124,258	USD -	USD 18,639	USD -		USD -		USD 15,727
13	USD 169,668	USD -	USD 25,450	USD -		USD -		
14	USD 179,688	USD -	USD 26,953	USD -		USD -		
15	USD 130,151	USD -	USD 19,523	USD -		USD -		
16	USD 167,986	USD -	USD 25,198	USD -		USD -		
17	USD 218,842	USD -	USD 32,826	USD -		USD -		
18	USD 176,253	USD -	USD 26,438	USD -		USD -		
19	USD 184,702	USD -	USD 27,705	USD -		USD -		
20	USD 128,485	USD -	USD 19,273	USD -		USD -		
21	USD 50,824	USD -	USD 7,624	USD -		USD -		
22	USD 41,712	USD -	USD 6,257	USD -		USD -		
23	USD 26,536	USD -	USD 3,980	USD -		USD -		
24	USD 24,513	USD -	USD 3,677	USD -		USD -		USD 41,591
25	USD 20,129	USD -	USD 3,019	USD -		USD -		
26	USD -	USD -	USD -	USD -		USD -		
27	USD -	USD -	USD -	USD -		USD -		
28	USD -	USD -	USD -	USD -		USD -		
29	USD -	USD -	USD -	USD -		USD -		
30	USD -	USD 3,182,760	USD -	USD 289,342		USD 31,828	USD 88,769	
	USD 2,467,048	USD 3,182,760			USD 328,807	USD 31,828	USD 88,769	USD 57,317

Land Purchase	USD	275,000
Construction Cost	USD	1,914,453
Professional Fees/Reserve/Mktg	USD	277,596
Total Taxes USD	USD	506,721
Total Project Cost	USD	2,973,770

Table 7 Hypothetic Development - Tax Calculations.[53]

Then, having the taxable amounts applicable to each tax and the times of application of each one, it is possible to generate Table 7 that summarizes the total amount to be paid for each of the taxes in the corresponding periods and the total to pay for taxes throughout the project.

[53] Reference: Own work.

Once the total amount of taxes to be paid has been obtained, the total costs of the investment and the amounts to be paid month by month are already known. At this point, it is possible to carry out the global cash flow of the investment.

6.8 Cashflow and IRR Comparison

Naturally, the projections made during the development of a project can vary over time in real life. This is also the case with cashflows. With the definitions of square meters to be built, cost per square meter, marketable square meters, sales prices and tax calculation, and the works and sales schedule, the project's cash flow can be elaborated.

Task Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15
Outgoing Payments (USD)	275,000	14,092	29,311	38,643	42,714	46,346	52,609	63,507	78,538	84,851	97,690	124,298	169,666	179,688	130,151
VAT Outgoings	0	2,114	4,397	5,796	6,407	6,952	7,891	9,526	11,781	12,728	14,654	18,639	25,450	26,953	19,523
Property Transaction Tax (ITP)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Income Tax (IRAE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wealth Tax (IPAT)	0	0	0	0	0	0	0	0	0	0	0	15,727	0	0	0
Cumulative Outgoing Payments (USD)	275,000	291,206	324,913	369,332	418,473	471,771	532,271	603,304	695,623	793,201	905,545	1,064,168	1,259,286	1,465,928	1,615,602
Incoming Sales (USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Incoming Sales (USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Balance Cash (USD)	-275,000	-16,206	-33,707	-44,439	-48,121	-53,298	-60,501	-73,033	-90,119	-97,979	-112,344	-158,623	-195,118	-206,642	-149,674
Cumulative Balance Cash (USD)	-275,000	-291,206	-324,913	-369,352	-418,473	-471,771	-532,271	-605,304	-695,423	-793,201	-905,545	-1,064,168	-1,259,286	-1,465,928	-1,615,602
	-275,000	-288,468	-318,634	-369,034	-462,959	-460,011	-602,949	-666,582	-646,003	-728,568	-823,939	-959,166	-1,124,163	-1,296,561	-1,446,511

Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24	Month 25	Month 26	Month 27	Month 28	Month 29	Month 30	
130,151	157,986	218,842	176,253	184,702	128,485	50,824	41,712	26,536	24,313	20,129	0	0	0	0	0	2,457,048
19,523	25,198	12,826	26,438	27,705	19,273	7,624	6,257	3,980	3,647	3,619	0	0	0	0	0	328,807
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,828	11,828
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86,769	86,769
0	0	0	0	0	0	0	0	0	41,691	0	0	0	0	0	0	57,317
1,615,602	1,808,786	2,060,454	2,263,145	2,475,552	2,623,310	2,681,758	2,729,726	2,760,243	2,830,024	2,853,173	2,853,173	2,853,173	2,853,173	2,853,173	2,973,770	2,973,770
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,182,760	3,182,760
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,182,760	
-149,674	-193,184	-251,668	-302,691	-312,407	-147,758	-58,448	-47,968	-30,517	-69,781	-23,149	0	0	0	0	309,163	208,990
-1,615,602	-1,808,786	-2,060,454	-2,263,145	-2,475,552	-2,623,310	-2,681,758	-2,729,726	-2,760,243	-2,830,024	-2,853,173	-2,853,173	-2,853,173	-2,853,173	-2,853,173	208,990	
-1,446,511	-1,569,873	-1,771,490	-1,927,466	-2,088,961	-2,192,407	-2,220,187	-2,238,657	-2,242,406	-2,277,486	-2,274,532	-2,253,152	-2,231,973	-2,210,994	-2,190,211	168,922	

Table 8 Hypothetic Development - Cashflow Calculation With Taxes.[54]

Table 8 shows the cash flow corresponding to real estate development under normal conditions, that is to say, outside the law 18,795 and therefore without its tax benefits.

[54] Reference: Own work.

This cash flow considers the monthly expenses of construction costs, fees and reserve amounts, and the successive taxes to be paid. With this information, the Outgoing Payments are calculated month by month. On the other hand, a row corresponds to the income to be received from the project. As already expressed, it is an assumption of the study that there is no income until month 29, receiving the total of sales in month 30. Thus, the Incoming Sales are recorded month by month.

Task Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14
Outgoing Payments (USD)	275,000	14,092	29,311	38,643	42,714	46,346	52,609	63,507	78,538	84,851	97,690	124,258	169,668	179,688
Cumulative Outgoing Payments (USD)	275,000	289,092	318,403	357,045	399,759	446,105	498,714	562,221	640,759	725,610	823,300	947,558	1,117,226	1,296,914
Incoming Sales (USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Incoming Sales (USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Balance Cash (USD)	-275,000	-14,092	-29,311	-38,643	-42,714	-46,346	-52,609	-63,907	-78,538	-84,861	-97,690	-124,258	-169,668	-179,688
Cumulative Balance Cash (USD)	-275,000	-289,092	-318,403	-357,046	-399,759	-446,105	-498,714	-562,221	-640,759	-725,610	-823,300	-947,958	-1,117,226	-1,296,914
	-275,000	-286,374	-312,446	-347,071	-384,939	-425,529	-471,241	-526,295	-594,132	-666,484	-749,106	-854,062	-997,523	-1,147,075

Task Name	Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24	Month 25	Month 26	Month 27	Month 28	Month 29	Month 30	
Outgoing Payments (USD)	130,151	167,986	218,842	176,253	184,702	128,485	50,824	41,712	26,536	24,513	20,129	0	0	0	0	0	2,467,048
Cumulative Outgoing Payments (USD)	1,427,065	1,595,052	1,813,893	1,990,146	2,174,848	2,303,334	2,354,158	2,395,869	2,422,406	2,446,919	2,467,048	2,467,048	2,467,048	2,467,048	2,467,048	2,467,048	
Incoming Sales (USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,182,760	3,182,760
Cumulative Incoming Sales (USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,182,760	3,182,760
Monthly Balance Cash (USD)	-130,151	-167,986	-218,842	-176,253	-184,702	-128,485	-50,824	-41,712	-26,536	-24,513	-20,129	0	0	0	0	3,182,760	715,712
Cumulative Balance Cash (USD)	-1,427,065	-1,595,052	-1,813,893	-1,990,146	-2,174,848	-2,303,334	-2,354,158	-2,395,869	-2,422,406	-2,446,919	-2,467,048	-2,467,048	-2,467,048	-2,467,048	-2,467,048	715,712	
	-1,260,326	-1,384,370	-1,559,908	-1,694,960	-1,834,856	-1,924,989	-1,948,972	-1,964,880	-1,967,949	-1,969,178	-1,966,716	-1,948,229	-1,929,917	-1,911,776	-1,893,807	544,246	

Table 9 Hypothetic Development - Cashflow Calculation Considering Tax Exoneration Law 18.795.[55]

The amounts corresponding to the Monthly Balance Cash arise from the resulting difference between the Incoming Sales and the Outgoing Payments. These values will be fundamental for the calculation of the Net Present Value.

Finally, the row corresponding to Cumulative Balance Cash is the resulting calculation between the difference of the Cumulative Incoming Sales and Cumulative Outgoing Payments. This row of amounts will be the one that will show which is the Maximal Exposition in each case. It is important to note that all cashflow values show negative numbers up to month 30, in which the sales are made. As mentioned before, this is the worst-case scenario in which there are no external leverage or apartment sales during the construction phase.

Table 9 shows the cash flow of the same real estate development but carried out under the benefits of the housing law promoted 18,795. In this case, the cash flow was

55 Reference: Own work.

calculated with the same criteria already described for the previous point. The only difference is that none of the taxes is taken into account since they are exonerated by law.

Once the cash flows corresponding to the same project have been made under the two different conditions, the calculations can be made to draw clear conclusions about the returns on each investment.

A first step in evaluating both investments is to calculate the NPV. For this, it is necessary to set the Required Rate of Return (RRR), being the same for both cases. In Uruguay, the RRR applied to real estate developments is 12% annually, representing 0.95% per month (k). With this data defined, the NPV corresponding to each case can be calculated. (Kaplan, 2020)

Comparison	Without Law 18.795	With law 18.795
k (Monthly)	0.95%	0.95%
k (Annually)	12.0%	12.0%
NPV	-USD 215,618	USD 213,495
IRR Monthly	0.4%	1.5%
IRR Annually	5.2%	19.3%
Benefit Amount	USD 208,990	USD 715,712
End-to end Profitability	7.0%	22.5%
Payback Period	30	30
Maximal Exposition	-USD 2,853,173	-USD 2,467,048

Table 10 Hypothetic Development - Comparison of results considering the taxation incidence.[56]

In turn, to compare both scenarios, calculations are made that reflect the monthly and annual IRR of each case, the benefit amounts, the End-to-end Profitability, the payback period and the maximal expositions. The last two indicators are not relevant since the payback period will naturally be the same for both cases due to the assumption of sales in month 30, and the maximum exposure is directly dependent on the condition of no external financing assumed by the study.

[56] Reference: Own work.

Table 10 summarizes the results obtained from the study of the same real estate project outside and within the law 18,795.

As shown, the difference in investment returns is significant. Analysing the results obtained from the NPV of both cases, it turns out that for the project developed outside the benefits of the law, it yields a negative NPV, so it does not comply with the RRR, thus advising against investment. On the other hand, the same development, including the tax benefits, results in a positive NPV, complying with the set RRR and advising the investment.

Both cases' monthly and annual IRRs also demonstrate the significant difference that developing inside or outside the law makes for the developer's interests. The IRR in conditions outside the law is 0.4% per month and 5.2% per year (not complying with the RRR), becoming 1.5% per month and 19.3% per year in the same development within the promoted housing law.

This difference in annual returns results in a difference in benefit amounts of USD 506,722 (USD 208,990 without the Law 18,795; USD 715,712 considering the law benefits).

Finally, the end-to-end profitability of the investment goes from 7.0% for the outlaw scenario to an attractive 22.5% within the conditions of the law.

7. Outcomes

Once the hypothetical development in both scenarios (considering the tax benefits and without them) has been developed, it is possible to analyse the results. The impact that tax exoneration produces on investment from the developer's point of view is highly attractive. Specifically, the IRR increases 14.1% when developed within the law regarding outside the law conditions. To better understand how attractive this extra benefit is, it is good to remember that the required return rate was 12%. Thus, in these scenarios, the additional benefit generated by the tax exemption (14.1%) is even higher than the benefit required of the project (12%).

The measured end-to-end profit of the investment also shows a very significant improvement making the investment highly favourable. The profit within the law conditions reaches 22.5%, while in normal conditions, it would only reach a 7.0% profit.

It is crucial to bear in mind that both scenarios considered the exact cost and sales price parameters. So, another interesting outcome identifies the price variation if both scenarios achieve an IRR equal to the RRR.

In the case of the development paying taxes normally, the prices should experience an increment to achieve the RRR. On the other hand, if the project recognizes the tax exonerations, the prices would be lower to earn no more than the RRR. The NPV formula of both scenarios is solved until they equal zero, guaranteeing to obtain the RRR of 12% per year.

Table 11 shows the results obtained. The table on the top right shows the original prices defined per square meter and apartment according to each type. The table from the middle represents how prices should be affected for a regular real estate development (without the tax exoneration) to reach the RRR of 12%. The final price of the apartments should suffer an increment of 12% compared to the original sale prices.

Furthermore, the table at the bottom right of Table 11 represents how much cheaper the final prices of the apartments could be when transferring part of the savings to the final price instead of boosting the investor's return. The sale prices could be 9% cheaper than the current prices.

Finally, it is interesting to study the current prices and developer profit concerning two significant extreme scenarios. Both scenarios developed within the law. (Table 12)

Comparison NPV=0	Without Law 18.795	With law 18.795
NPV	USD 0	USD 0
IRR Month	0.9%	0.9%
IRR Annual	12.0%	12.0%
Payback Period	30	30
Maximal Exposition	-USD 2,853,173	-USD 2,467,048
End-to end Profitability	16.0%	15.0%
Benefit Amount	USD 492,540	USD 434,954
k (Monthly)	0.9%	0.9%
k (Annually)	12.0%	12.0%

Originial

Tipology	Area m2	USD/m2	Final Price USD
Studio	35	USD 2,600	USD 91,000
1 Bedroom	44	USD 2,460	USD 108,240
2 Bedrooms	64	USD 2,300	USD 147,200

Without Law 18.795 NPV=0

Tipology	Area m2	USD/m2	Final Price USD	Overprice %
Studio	35	USD 2,912	USD 101,919	12%
1 Bedroom	44	USD 2,755	USD 121,227	12%
2 Bedrooms	64	USD 2,576	USD 164,862	12%

With Law 18.795 NPV=0

Tipology	Area m2	USD/m2	Final Price USD	Disc. price %
Studio	35	USD 2,371	USD 82,973	-9%
1 Bedroom	44	USD 2,243	USD 98,692	-9%
2 Bedrooms	64	USD 2,097	USD 134,215	-9%

Table 11 Hypothetic Development - Both Scenarios with NPV=0.[57]

One of these extremes is considering the same real estate development with the benefits offered by the law but changing the sale price according to the prices required so that the investment outside the law would have NPV = 0 (RRR = 12%). This scenario would represent a 12% increase in sales prices and an extremely attractive IRR of 28.8% per year. In this case, the tax benefits would exclusively benefit the developer, and the sale prices would be 12% above the prices that for the critic today are already expensive. Considering this scenario is helpful as a reference, but it is essential to recognize that it is utopian. The demand would never pay prices 12% above the current ones. This has been one of the reasons for the creation of the law 18.795.

Development conditions	Price Variation (Current Prices = 100%)	IRR
Within Law 18.795 and Sale Price corresponding to "NPV=0 without Law 18.795"	12%	28.8%
With Law 18.795 and Current Sale Prices	**0%**	**19.3%**
Within Law 18.795 and Sale Price corresponding to "NPV=0 within Law 18.795"	-9%	12%

Table 12 Hypothetic Development - Summary of Different Scenarios.[58]

On the other hand, the other extreme scenario considers the same development, but with the IRR set equal to the RRR (12% per year), thus representing a 9% drop in sales prices. Under this scenario, tax savings cover the difference in the rate of return

[57] Reference: Own work.
[58] Reference: Own work.

required by the project with the rate of return that would have been achieved without the law. The rest of the tax benefits are being transferred to the sale prices, reaching a 9% reduction.

This analysis shows that the current scenario is roughly in the middle of the two extremes. It can be concluded that, on the one hand, part of the tax savings are already transferred to the sale prices if the prices that would have been set for the development before the law are considered. On the other hand, the rate of return obtained by the developer exceeds the required rate of return. This extra yield is caused by a part of the tax exemptions that have not been transferred to the end-users.

8. Conclusions

The main objective of this study is to evaluate how the social housing policy launched in Uruguay in 2011 affects real estate developments from the developer's point of view. After achieving this first objective, it was possible to evaluate if the developments have room for transferring tax savings to the sale prices.

After a decade of law enforcement, the results measured according to the objectives set have been diverse. In common agreement, the strategy of generating a greater supply of homes for a particular segment of the population has been successful. The statistics analyzed regarding the number of projects promoted since the passage of the law and the reactivation of the industry prove this hypothesis.

There are neither no objections from the point of view of urban objectives either. All the projects promoted by the law were developed in urban areas forgotten by the market and that the State has sought to reassess. In this way, the unplanned and unsustainable growth that the city shows towards the peripheries and towards the eastern coastal strip has been slowed down. The increment in the household density of the city's central areas is today a reality and an objective at least partially achieved. The new densities generated in the promoted neighbourhoods demonstrate the at least partial realization of this objective.

The point of most significant controversy around the law and its implementation is about sales prices. It is a clear objective of the law to intervene in market prices in search of a new supply of affordable housing for families with low and lower-middle incomes. The study of the sale prices of the neighbourhood promoted with the highest registered demand shows how they have increased rapidly during the last decade. These prices have been compared with the prices sold in the 2013-2019 period in the most privileged areas of the city. This comparison shows how at the beginning of the period the prices had a significant and expected difference. When studying this price relationship year by year during the implementation of the promoted housing law, it is proved that the prices of both neighbourhoods have been decreasing the gap, reaching the same level in recent years.

In other words, during the last three years, the prices of the promoted neighbourhood with the highest registered sales have equalled those of the coastal neighbourhood of Pocitos, where the upper-middle and upper classes of society live. Therefore, it is

concluded that the desired effect of reducing sales prices and improving access to housing for the middle and lower-middle classes has not had favourable results.

The primary tool on which the law is based to attract the attention of developers and, in turn, achieve lower sales prices than the rest of the market is the total exemption of taxes related to development. The use of this tool has brought controversy since it is considered that it has generated excessive profits for developers who have made tax savings a plus in their earnings instead of transferring them to sales prices.

From the economic and financial study of the hypothetical real estate development generated in this work, conclusions can be reached that respond to these controversies and can be the starting point for new adjustments to the law.

Firstly, it is verified how necessary the law has been in attracting investors' attention, redirecting developments, and creating investment opportunities in areas of the city that had not received new projects for several decades and were experiencing a depopulation. The study of a hypothetic development without the law's benefits demonstrates that the market and its variables did not provide business opportunities. The economic and financial analysis showed that the required return rates were not achieved under those conditions. Based on this outcome, it can then be concluded that at least part of the tax exemptions is being transferred to prices since, otherwise, sales prices would be 12% higher than current prices without the existence of the law.

Secondly, when the tax benefits are applied to the development studied, it is verified that the same business becomes viable, reaching the required rate of return. This conclusion already allows us to affirm that the law has had positive impacts from the market point of view. Without the existence of the law, there would have been no projects since they were not viable. The law made them possible.

Thirdly, it is proved that with the current parameters and variables shown by the market, the developers who undertake the promoted housing law cover the required rate of return of the project and achieve a significantly extra benefit. In the development study, the internal rate of return reaches 19.3% per year, when the required rate of return is 12%. There is then a 7.3% extra benefit that the developer is accessing, thanks to tax exemptions.

Fourthly, this thesis work concludes that prices could be 9% cheaper if investors were limited to achieving internal rates of return equal to the required rate of return. In the

hypothetical development developed here, the investor would achieve its objective of 12% per year (IRR = RRR) and the rest of the savings from tax benefits are transferred to the price, reaching a reduction of 9%. From this point, it is concluded that the development has a margin of up to 9% that can be transferred to the market.

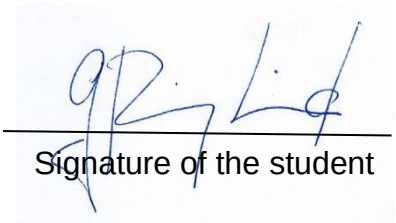
Finally, it is appreciated that the general results of the law have been more than positive. The complexity implicit in any public housing policy with multidimensional objectives and with many stakeholders must be taken into account. The achievements made in urban matters and the accelerated growth of the supply have been more than acceptable. When addressing the criticism regarding the high sales prices and the more than 1,440 million dollars that the State has stopped collecting, it can be concluded that the law has still been favourable. Without the existence of the law, the more than 25,000 new homes built would not have been possible. The public sector does not have sufficient resources for such investment, and the private sector was hindered from developing due to the cost and price parameters existing in those areas.

9. Declaration of authorship

I hereby declare that the attached Master's thesis was completed independently and without the prohibited assistance of third parties, and that no sources or assistance were used other than those listed. All passages whose content or wording originates from another publication have been marked as such. Neither this thesis nor any variant of it has previously been submitted to an examining authority or published.

Berlin, 31.07.2021

Location, Date



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Appendix

Cashflow from Hypothetic Development without Law 18.795 benefits (Regular conditions) Reference: (Own Work)

Task Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15
Outgoing Payments (USD)	275,000	14,092	29,311	38,643	42,714	46,345	52,609	63,507	78,538	84,851	97,690	124,258	169,668	179,688	130,151
VAT Outgoings	0	2,114	4,397	5,796	6,407	6,952	7,891	9,526	11,781	12,728	14,654	18,639	25,460	26,953	19,523
Property Transaction Tax (ITP)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Income Tax (IRAE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wealth Tax (IPAT)	0	0	0	0	0	0	0	0	0	0	0	15,727	0	0	0
Cumulative Outgoing Payments (USD)	275,000	291,206	324,913	369,352	418,473	471,771	532,271	605,304	695,623	793,201	905,545	1,054,168	1,239,286	1,465,928	1,615,602
Incoming Sales (USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Incoming Sales (USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Balance Cash (USD)	-275,000	-16,206	-33,707	-44,439	-49,121	-53,298	-60,501	-73,033	-90,319	-97,579	-112,144	-159,623	-195,118	-206,642	-149,674
Cumulative Balance Cash (USD)	-275,000	-291,206	-324,913	-369,352	-418,473	-471,771	-532,271	-605,304	-695,623	-793,201	-905,345	-1,064,168	-1,259,286	-1,465,928	-1,615,602
	-275,000	-288,468	-318,834	-359,034	-402,959	-450,011	-502,949	-566,582	-645,003	-728,568	-823,935	-959,166	-1,124,363	-1,296,561	-1,415,511

Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24	Month 25	Month 26	Month 27	Month 28	Month 29	Month 30	
130,151	167,986	218,842	176,253	184,702	128,465	50,824	41,712	26,536	24,513	20,129	0	0	0	0	0	2,467,048
19,523	25,198	32,826	26,438	27,705	19,270	7,624	6,257	3,980	3,677	3,019	0	0	0	0	0	328,807
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31,828	31,828
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88,769	88,769
0	0	0	0	0	0	0	0	0	41,991	0	0	0	0	0	0	57,317
1,615,602	1,808,786	2,060,454	2,263,145	2,475,552	2,623,310	2,681,758	2,729,726	2,760,243	2,830,024	2,853,173	2,853,173	2,853,173	2,853,173	2,853,173	2,973,770	2,973,770
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,182,760	3,182,760
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,182,760	
-149,674	-193,184	-251,668	-202,691	-212,407	-147,758	-58,448	-47,968	-30,517	-69,781	-23,149	0	0	0	0	3,062,163	208,990
-1,615,602	-1,808,786	-2,060,454	-2,263,145	-2,475,552	-2,623,310	-2,681,758	-2,729,726	-2,760,243	-2,830,024	-2,853,173	-2,853,173	-2,853,173	-2,853,173	-2,853,173	208,990	
-1,415,511	-1,569,873	-1,771,490	-1,927,466	-2,088,551	-2,192,407	-2,220,187	-2,238,657	-2,242,406	-2,277,486	-2,274,532	-2,253,152	-2,231,973	-2,210,994	-2,190,211	168,922	

Cashflow from Hypothetic Development with Law 18.795 benefit. Reference: (Own Work)

Task Name	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14
Outgoing Payments (USD)	275,000	14,092	29,311	38,643	42,714	46,346	52,609	63,307	78,538	84,851	97,690	124,258	169,668	179,688
Cumulative Outgoing Payments (USD)	275,000	289,092	318,403	357,045	399,759	446,105	498,714	562,221	640,759	725,610	823,300	947,558	1,117,226	1,296,914
Incoming Sales (USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Incoming Sales (USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Balance Cash (USD)	-275,000	-14,092	-29,311	-38,643	-42,714	-46,346	-52,609	-63,307	-78,538	-84,851	-97,690	-124,258	-169,668	-179,688
Cumulative Balance Cash (USD)	-275,000	-289,092	-318,403	-357,045	-399,759	-446,105	-498,714	-562,221	-640,759	-725,610	-823,300	-947,558	-1,117,226	-1,296,914
	-275,000	-286,374	-312,446	-347,071	-384,939	-426,529	-471,241	-526,256	-594,132	-666,484	-749,196	-854,062	-997,523	-1,147,075

Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24	Month 25	Month 26	Month 27	Month 28	Month 29	Month 30	
130,151	167,986	218,842	176,253	184,702	128,485	50,824	41,712	26,536	24,513	20,129	0	0	0	0	0	2,467,048
1,427,065	1,595,052	1,813,893	1,990,146	2,174,848	2,303,334	2,354,158	2,395,869	2,422,406	2,446,919	2,467,048	2,467,048	2,467,048	2,467,048	2,467,048	2,467,048	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,182,760	3,182,760
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,182,760	3,182,760
-130,151	-167,986	-218,842	-176,253	-184,702	-128,485	-50,824	-41,712	-26,536	-24,513	-20,129	0	0	0	0	3,182,760	715,712
-1,427,065	-1,595,052	-1,813,893	-1,990,146	-2,174,848	-2,303,334	-2,354,158	-2,395,869	-2,422,406	-2,446,919	-2,467,048	-2,467,048	-2,467,048	-2,467,048	-2,467,048	715,712	
-1,280,325	-1,384,370	-1,559,908	-1,694,960	-1,834,866	-1,924,989	-1,948,972	-1,964,360	-1,967,949	-1,969,178	-1,966,716	-1,948,229	-1,929,917	-1,911,776	-1,893,807	944,246	

Construction Schedule and cost cashflow from the Hypothetic Development. Reference: (Own Work)

Task N°	Task Name	Amount	%	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24	Month 25	Month 26	Month 27	Month 28	Month 29	Month 30	
0	Land Acquisition	275,000	-	100%																														100%
				275,000																														275,000
1	Preliminary Tasks	41,024	2.14%		30%	47%	23%																											100%
					12,307	19,231	9,436																											41,024
2	Demolition	19,145	1.00%			33%	67%																											100%
						6,319	12,827																											19,145
3	Excavations	16,410	0.86%				70%	30%																										100%
							11,437	4,973																										16,410
4	Structure (Concrete)	404,770	21.14%					8%	10%	10%	11%	11%	11%	11%	10%	10%	8%																	100%
								32,382	40,477	40,477	44,525	44,525	44,525	44,525	40,477	40,477	32,382																	404,770
5	Walls	322,722	16.86%							2%	3%	3%	3%	3%	3%	12%	13%	17%	12%	12%	7%													100%
										5,470	10,940	10,940	10,940	19,410	37,349	38,289	49,229	54,699	38,289	38,289	21,879													322,722
6	MEP - Sanitary Installations	178,318	9.31%									7%	7%	7%	7%	3%	3%	0%	0%	21%	21%	21%												100%
												13,128	13,128	13,128	5,470	5,470	0	0	38,289	38,289	38,289													178,318
7	MEP - Electrical Installations	78,786	4.11%										7%	7%	8%	10%	10%	10%	10%	0%	0%	8%	7%	7%	4%	4%	4%	4%							100%
													5,514	5,514	8,281	7,877	7,877	7,877	7,877	0	0	8,281	5,514	5,514	3,151	3,151	3,151	3,151							78,786
8	Windows	63,450	3.31%													25%	30%	25%	20%															100%
																15,863	19,035	15,863	12,690															63,450
9	Gas Installations	28,717	1.50%												20%	9%	7%	7%	0%	0%	20%	20%	17%												100%
															5,743	2,481	2,051	2,051	0	0	5,743	5,743	4,923											28,717
10	Heating system	47,861	2.50%													17%	9%	11%	14%	0%	0%	0%	21%	21%	10%										100%
																8,205	4,393	5,128	6,837	0	0	0	10,258	10,258	4,788									47,861
11	Woodworks	165,190	8.63%														13%	13%	8%	2.3%	23%	13%													100%
																	23,181	23,181	13,128	38,289	38,289	23,181													165,190
12	Floors and coatings	204,373	10.69%																	12%	19%	19%	29%	29%											100%
																				25,181	38,289	38,289	51,417	51,417										204,373
13	Smithy	32,272	1.69%																	8%	24%	0%	34%	34%											100%
																				2,725	7,853	0	10,940	10,940											32,272
14	Drywalls	57,961	3.03%																5%	13%	18%	18%	30%	8%	8%											100%
																			2,898	7,537	10,437	10,437	17,394	4,638	4,638										57,961
15	Painting	76,378	4.00%																				10%	20%	20%	25%	10%	10%	5%							100%
																							7,638	15,276	15,276	19,095	7,638	7,638	3,819							76,378
16	Varios	176,677	9.23%												6%	6%	6%	7%	8%	8%	8%	8%	8%	8%	8%	7%	6%	6%							100%
															10,601	10,601	10,601	12,367	14,134	14,134	14,134	14,134	14,134	14,134	12,367	10,601	10,601								176,677
	Construction Cost APPCU	1,914,453	100%	275,000	12,307	25,399	33,749	37,304	40,477	45,947	55,464	66,992	74,106	85,319	108,822	148,181	136,933	113,669	146,713	191,128	153,933	161,312	112,214	44,398	36,429	23,176	21,409	17,390						2,159,453
17	Professional Fees		10%	0	1,231	2,960	3,375	3,730	4,048	4,595	5,546	6,699	7,411	8,532	10,882	14,818	13,693	11,367	14,671	19,113	15,393	16,131	11,221	4,439	3,643	2,318	2,141	1,738	0	0	0	0	0	191,449
18	Risk/Reserve		3%	0	369	888	1,012	1,119	1,214	1,378	1,664	2,008	2,223	2,560	3,265	4,445	4,108	3,410	4,401	5,734	4,616	4,839	3,366	1,332	1,093	695	642	327	0	0	0	0	0	57,439
19	Marketing project		1.5%	0	185	384	506	560	607	689	832	1,029	1,112	1,280	1,628	2,223	2,384	1,705	2,201	2,867	2,309	2,420	1,683	666	546	348	321	254	0	0	0	0	0	28,717
	Total Construction Cost Risk	2,467,048		275,000	14,092	29,311	38,643	42,714	46,346	52,609	63,507	76,728	84,851	97,690	124,598	169,668	156,833	130,151	167,986	218,842	176,251	184,702	128,460	50,834	41,712	26,534	24,513	20,109	0	0	0	0	0	2,467,048

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