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Mexico's Housing Paradox:
The Political Economy of Inaccessibility and Vacancy

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Mexico’s Housing Paradox:
The Political Economy of Inaccessibility and Vacancy

by

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Dissertation

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Doctor of Philosophy

The University of Texas at Austin

August 2018

Acknowledgements

I would like to acknowledge Mexico's Consejo Nacional de Ciencia y Tecnología, ConTex, the Lincoln Land Institute of Land Policy and the University of Texas at Austin's Office of Graduate Studies for their financial support to complete my PhD research.

Mexico's Housing Paradox:
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The University of Texas at Austin, 2018

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Neoliberal restructuring in Mexico drove a considerable mortgage expansion and a housing production boom, arguably with the intention of increasing housing access for lower-middle income formal workers. During the 2000s, numerous households acquired mortgages to buy houses in the fringes of Mexican cities, where local governments have struggled to provide adequate infrastructure and services. Many such families have seen their mortgages and monthly payments swell through the years while their debt remains virtually unchanged, forcing many of them to leave their dwellings behind and return to renting or to living with other relatives closer to the urban core. Numerous newly built developments have thus exhibited alarmingly high housing vacancy rates. By 2010, Mexico had over five million vacant housing units and a 14 percent vacancy rate. Paradoxically, however, about a third of Mexicans still live in poor housing conditions.

This research analyzes the influence of recent federal housing finance policy, and urban development practices at the state and local levels, in promoting housing production and vacancy. It also discusses some of the spatial and socioeconomic implications of these development patterns for residents, government and financing institutions, and developers. In particular, this research examines the experiences of two cases: Tijuana, Baja California and Huehuetoca, State of Mexico, chosen for (1) the severity of their vacancy and housing

conditions, (2) the amount of housing investment they received in the 2000s, and (3) their contrasting institutional capacity at the local and metropolitan levels.

Drawing upon mixed methods and extensive field research, I argue that the coexistence of a housing oversupply and a shortage exposes the tensions between the commodification and the right to housing, and the extent to which the former has trumped the latter. Given the flourishing of construction and real estate interests through state support, Mexican housing policy has served as a *politically* guided intensification of market rule, rather than as an apolitical and technocratic framework, as neoliberal advocates have often argued. Contrary to the rhetoric of autonomous market-led efficiency, the Mexican government has played a key role in mitigating risks for the construction and financial sectors – and not households. By doing so, housing reforms have lacked a critical analysis of the socioeconomic and political implications of implementing strategies that have backed private interests in the name of expanding home ownership for the poor while in reality many low-income households remain locked out of adequate and affordable homes.

The present research has implications for theories regarding how governing regimes operate to facilitate growth. The interactions and relationships between different government levels and private actors and interests since the implementation of a new housing finance and development model in Mexico have stemmed elaborate power structures and a *multi-level* regime and complex system of governance, distinct from that described by regime theorists whose focus has generally been on local governance (Stone 1989). Furthermore, this research exemplifies the ways in which this *multi-level* regime has reproduced and intensified socioeconomic and political (decision-making) inequities, ultimately fracturing the housing model itself.

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List of Acronyms

CANADEVI
    Cámara Nacional de la Industria de Desarrollo y Promoción de Vivienda

CANACINTRA
    Cámara Nacional de la Industria de la Transformación

CNBV
    Comisión Nacional Bancaria y de Valores

CONAVI
    Comisión Nacional de Vivienda

DUIS
    Desarrollo Urbano Integral Sustentable

FONHAPO
    Fideicomiso Fondo Nacional de Habitaciones Populares

FOVISSSTE
    Fondo de la Vivienda del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado

GDF
    Gobierno del Distrito Federal

IMPLAN
    Instituto Municipal de Planeación

INFONAVIT
    Instituto del Fondo Nacional de la Vivienda para los Trabajadores

INVI
    Instituto de Vivienda del Distrito Federal

NAFTA
    North America Free Trade Agreement

PAN
    Partido Acción Nacional

PRD

Partido de la Revolución Democrática

PRI
Partido Revolucionario Institucional

SEC
U.S. Securities and Exchange Commission

SEDATU
Secretaría de Desarrollo Agrario, Territorial y Urbano

SEDESOL
Secretaría de Desarrollo Social

SHF
Sociedad Hipotecaria Federal

SNIIV
Sistema Nacional de Información e Indicadores de Vivienda

SOFOL
Sociedad Financiera de Objeto Limitado

UDIs
Unidades de Inversión

Chapter 1: Introduction

In 2010, the Mexican Census counted over five million vacant housing units nation-wide.[1] Mexico's 14 percent vacancy rate is the highest among current member countries of the Organization for Economic Co-operation and Development (OECD 2015). That same year, about a third of Mexicans lived in overcrowded or poor housing conditions (SHF 2011). Over the last couple of decades, Mexican housing policies and institutions have sought to expand access to credit to lower-middle income households within the formal economy with the intention of allowing an increasing number of families to own their own homes. While this goal has partially been achieved, and the 2000s saw an unprecedented construction boom, a number of problems have rapidly emerged.

During the 2000s, countless households acquired mortgages to buy houses in the fringe of Mexican cities where they have had limited access to their daily needs. Furthermore, many families have seen their mortgages and monthly payments swell through the years while their debt remains virtually unchanged.[2] Many of them have had no choice but to leave their dwellings behind and return to renting or to living with other relatives closer to the urban core. In the wake of this housing boom, numerous newly built developments have thus exhibited alarmingly high housing vacancy rates, and the degree to which recent housing strategies have raised the standard of living of lower and middle income Mexican households is up to heated debate.

[1] The Mexican Census did not publish disaggregated 2015 data on vacancy.

[2] Until 2015, low-income households only had access to mortgages in Investment Units (UDIS) or Minimum Salaries, rather than Mexican Pesos (MxP). The Minimum Salary in 1995 was at $15 MxP per day and it currently stands a bit above $80. Similarly, UDIS were used to protect lenders from the potential default of low-income groups. Indexed to inflation, the value of UDIS has also increased more than fivefold since the 1990s. Furthermore, many mortgages were long-term 30-year loans for which people had to pay mostly only interests for the first 5 to 15 years. This has forced many people pay multiple times the value of their homes.

1.1 MEXICO'S RECENT HOUSING POLICIES AND POLITICAL ECONOMY

Around the mid-twentieth century, urbanization processes and rapid population growth in Mexico were largely fueled by State investment and Import Substitution Industrialization (ISI)[3] policies that significantly accelerated national economic growth. Since the 1970s, however, the country has battled with economic crises, inflation and an increasing foreign debt that have the government increasingly ill-equipped to adequately address housing pressures, among other issues (Eckstein 1977, Ward 1990).

After the 1982 debt crisis, and following the Washington Consensus, Mexico underwent a series of neoliberal reforms meant to limit state presence in a number of arenas.[4] Housing reforms sought to increase private sector participation in affordable housing production and limit the role of public institutions to stimulating access to housing finance and the expansion of mortgage lending. Yet, an economic crisis shut down private housing finance and one of the conditions to enter the North American Free Trade Agreement (NAFTA) was the expansion of construction lending. Thus, the government introduced Sofoles,[5] financing institutions that specialized in single-purpose lending and

[3] ISI was a trade and economic policy, which advocated replacing foreign imports with domestic production; it was based on the premise that a country should attempt to reduce its foreign dependency through the local production of industrialized products. ISI and Latin American structuralism shared a basic common belief in a State-directed, centrally planned form of economic development and were most successful in countries with large populations and income levels, such as Mexico, which allowed for the consumption of locally produced products (Ward, 1990).

[4] The Washington Consensus was established in the 1980s as a set of economic policy prescriptions for developing countries undergoing severe financial crisis and promoted by the US Treasury Department and institutions such as the International Monetary Fund and the World Bank. They argued that only through the application of neoliberal reforms, such as the opening of markets, the privatization of state enterprises, and the reduction of the state's directive role in the economy, would 'Third World' countries overcome their development challenges.

[5] Sociedad Financiera de Objeto Limitado.

raised funds through capital markets. Many of these financing institutions specialized in mortgage and housing construction lending (Coulomb and Schteingart 2006).[6]

In parallel, INFONAVIT,[7] a housing institute originally established to produce housing for formal workers, became solely a financing institution to expand mortgage lending. Although this is currently changing, INFONAVIT became the largest housing finance institution in the country and drove a significant acceleration in housing production.[8] This institute also absorbed much of the risk away from developers by guaranteeing a credit flow that financed the quick and mass production of housing. Furthermore, a secondary market of Residential Mortgage-Backed Securities also helped expand mortgage access and by 2008, Mexico became the largest market for RMBS in Latin America. Parallel reforms also pushed for the relaxation of development regulations at the state and local levels and the dissolution of the communal tenure system (*ejido*) to allow for the privatization and development of low-cost rural land surrounding Mexican cities (IMF 2008, BMI 2011).

At least according to the political discourse, an important goal of this housing finance and development model was to tackle housing shortages[9] by increasing access to housing finance. Yet, housing finance – and adequate housing – continue to be inaccessible

[6] Largely through bridge loans, short-term construction loans used until a company secures permanent financing or removes an existing obligation. This type of financing allows the user to meet current obligations by providing immediate cash flow. In the case of housing construction, they allow developers to cover building costs until they sell their units.

[7] The National Housing Fund for Workers (Instituto del Fondo Nacional de la Vivienda para los Trabajadores in Spanish), is a tripartite institution governed by business, government and labor representatives.

[8] Mortgages issued by INFONAVIT jumped from 70 thousand a year in the 1980s to over 200 thousand in 2001, over 400 thousand by 2006 and topped at 500 thousand in 2011 (Eulich 2013).

[9] Officially, housing shortages are defined as the number and/or percentage of households living in overcrowded conditions or on very poor quality housing. Overcrowding is defined as more than 2.5 inhabitants per room. Poor quality housing includes that which does not have sewage, or is built with precarious materials: waste, cardboard, perishable/untreated wood, palm leaves, mud, metal sheets, asbestos, or dirt floors.

to a significant proportion of the population, most notably very low-income, informal, and rural populations.[10] Although diverse housing strategies (e.g. rehabilitation) are likely required to address detrimental housing conditions in Mexico, there has been a persistent emphasis on financing new construction. Thus, during the 2000s, the six largest housing developers,[11] listed on the national stock exchange, produced around 50 percent of the national housing market and operated in 80 percent of the country's states. They primarily specialized in the construction of lower-middle income housing, and most of them reached their peak between 2007 and 2008, when they were each selling around 50 thousand units a year (SHF 2007).

Although the housing supply increased significantly in the 2000s, most construction took place in sprawling housing developments that have offered limited access to jobs and urban amenities, and for which local governments have struggled to provide adequate infrastructure and services. Arguably, this pattern is the result of this transformed system, in which developers see INFONAVIT, rather than residents, as their main client. Particularly in the 2000s, developers aligned their production to INFONAVIT's potential demand (the number of affiliated workers who at a certain point in time qualify for a mortgage). Almost all of INFONAVIT's income stems from worker contributions and loan recovery; the institute collects 5 percent of the earnings of affiliated members (Eibenschutz and Goya Escobedo 2009). Yet, the private sector was able to produce housing for this market and shape urban development with little local regulation, planning or civic participation. Seeking to maximize profits, developers produced housing primarily in peri-urban locations

[10] Only about 20 percent of the Mexican population has access to housing credit (SHF 2015).
[11] HOMEX, URBI, GEO, ARA HOGAR, and SARE.

where land is very cheap but where residents have had to endure issues of mobility and access to services and economic opportunity.

Despite *de jure* administrative autonomy, local governments have lacked the resources and capabilities to aptly regulate urban development and monitor construction standards.[12] Most municipalities hold poor property tax collection records and, particularly in the past, had little incentive to do long-term planning given their short, 3-year and term-limited administrations. Thus, especially during the 2000s housing boom, construction licenses and permits constituted the bulk of many local revenue streams. This gave large private developers substantial power to influence local policymaking. Furthermore, state and federal institutions frequently backed development projects that were aligned with their finance and economic development plans and policies.

An increasingly pressing issue in many of these new peripheral developments has been the concentrations of vacant or abandoned housing. Although there is some regional variation, and it is challenging to isolate and determine the precise causes and consequences of this phenomenon, there is increasing consensus that location and deficient access to infrastructure and services have strongly influenced it (INFONAVIT 2016). The problems associated with recent housing development patterns in Mexico have had wide-ranging effects, including impacts on finance institutions facing the deterioration and depreciation of their abandoned or delinquent portfolio, housing and quality of life issues faced by households who reside in remote or largely vacant housing developments and financial instability faced by those who have decided to abandon their dwellings.

[12] Structural damage, flooding, landslides, and overcrowding, among other issues, have been documented in these new developments. Such cases will be presented in later chapters of the dissertation.

Nonetheless, responses have started to emerge at a variety of levels. At the neighborhood scale, residents have resorted to informal strategies to cope with their inadequate access to services and opportunities. When they are able to afford it, they resort to hiring private and generally more expensive services. They also establish informal businesses in their homes or streets. In some cases, they have also resorted to more extreme forms of organizing to confront organized crime through vigilante type groups. At a higher level, social organizations have provided legal support to some residents facing possible foreclosure and eviction. In contrast, INFONAVIT's current priority is to ensure its financial stability. Thus, an important institutional strategy in the last couple of years has been to recover a portion of its delinquent portfolio and auction it to the private sector (at a fraction of its original cost) to rehabilitate and resell it. Partly in response to the fiscal risk associated with peripheral development, the federal government – with INFONAVIT – Is starting to promote densification policies. Arguably, however, these strategies have failed to incorporate fiscal or regulatory mechanisms to make land more accessible to effectively promote low-income housing production in well-located areas. Instead, new policies continue to subsidize landowners and speculators and have led to the production of more expensive housing.

1.2 Research Implications and Significance

The present research suggests that recent housing strategies have fostered unregulated housing development without effectively ensuring adequate housing access in Mexico. The coexistence of high housing vacancy rates and a shortage of adequate housing for low-income households, exposes the tension between two seemingly conflicting housing policy goals – promoting economic development, and securing the constitutional right to adequate housing – and the extent to which the former has trumped the latter. Given the flourishing of construction and real estate interests through State support, I argue that Mexican housing policy has served as a *politically* guided intensification of market rule, rather than an apolitical and technocratic framework, as neoliberal advocates have often argued (Peck and Theodore 2007). Contrary to the rhetoric of autonomous market-led efficiency, the Mexican government has played a key role in mitigating risks for the construction and financial sectors. By doing so, housing policy reforms have lacked a critical analysis of the socioeconomic and political implications of implementing strategies that have backed private interests in the name of expanding home ownership while in reality many low-income households remain locked out of adequate and affordable homes (Soederberg 2015). In short, housing finance policies have offered Mexican workers very limited housing options and control over their living situation.

Although the constitutional right to housing in Mexico should provide substantial weight to the use value of housing, exchange value rationales have dominated Mexico's housing policy, finance, and production over the last couple of decades. The country's housing development model, commonly called a 'housing train', exemplifies the importance that has been given to housing production as an economic engine, which should move forward as quickly as possible. Given the difficult economic conditions that most Mexicans face, this seems to be in direct conflict with the goal of effectively improving housing access and living conditions for the average Mexican. Thus, what seems necessary is a more fundamental reformulation of housing and development strategies, at different levels, which move away from the narrow focus on new construction, recognize the still limited access to housing finance of a majority of the population, and promote the transparency and accountability of government actions. Central in reframing housing strategies will also be the inclusion of use value considerations upon which the right to housing and to the city are predicated. Given the current scenario, both normative and pragmatic motivations would support this shift in Mexican housing policy (Lefebvre 1974, Harvey 2008, Soederberg 2015).

At a more global scale, it is important to consider the implications of the troublesome development paths that countries in the global South, such as Mexico, have continued to follow after the recent subprime crisis by marketizing housing rights and linking housing production to global financial flows (Sassen 2009). The Mexican urban poor are certainly not the only ones to endure displacement to the fringes of their cities; 'urban crises' have emerged from the current stage of financial capitalism, speculation, and inadequate government intervention all around the world (Maricato 2001, Harvey 2008, Immergluck 2011, Galster 2012). In parallel, it is important to acknowledge that land and housing markets have perhaps never functioned solely on abstract market principles. Rather, they are tied up with processes of distribution and politics. In other words, institutional factors and decisions have a profound effect upon the behavior of markets (Eckstein 1977, Ward and Jones 1994). Thus, through this research, I will attempt to bridge the theoretical gaps that exist between closely interrelated fields, namely planning and political economy, and their influence on urban and housing development, particularly in developing countries such as Mexico. Part of the success of this study will also rest on its ability to shed light on the serious negative socioeconomic consequences of recent Mexican housing finance policy, which have severely affected vulnerable populations and the development of entire cities.

1.3 SUMMARY REVIEW OF CHAPTERS

The following chapter will begin by discussing the context in which the new housing policy and development model was implemented. Mexico's 1982 oil crisis was largely responsible for the neoliberal reforms that would follow nationally and in the region. With it, a series of policies that would directly affect the housing sector were implemented, such as the privatization of ejido (communal-tenure) land, the liberalization of credit, and the privatization of housing production. These changes helped put housing at the center of economic development considerations and promote its development as paramount to the stability and well-being of the entire country. As it will be narrated below, this ideal was largely achieved through mortgage expansion for lower-income populations that would later suffer the consequences of subprime-type lending and poor quality housing development. Yet, the private sector – developers and financiers – was able to reap tremendous profits in the process. The theoretical and political-economic justifications for Mexico's development model will be presented in this chapter, as well as the contradictions that have emerged from expecting and encouraging the fulfillment of the use-value of housing to be delivered by a system that prioritizes its exchange-value. Lastly, this chapter will present a theoretical overview of relevant international research on the issue of housing vacancy in Mexico, as well as their implications and significance at different scales.

A short overview of Mexico's Housing Paradox will help transition into the actual research queries of this dissertation in "Chapter 3: Research Design and Methods". This chapter will also discuss the research design, mixed methods and comparative and embedded analysis used to study the topic in hand. Given the complexity of the phenomenon under scrutiny, a mixed-methods approach was used to triangulate and corroborate different types of data and to increase the validity of constructs and results and the breadth and depth of findings and interpretations. The preliminary findings and objectives of a pilot study will also be discussed in this chapter. Conducted between 2014 and 2015, it served, primarily, to test a number of data collection strategies and research methods. Yet, it also provided valuable lessons, not only for the final research design and field procedures and protocols, but to uncover important trends, such as the fact that housing growth rates far surpassed population growth rates, the location of high vacancy concentrations and their housing typologies. Case selection and research limitations and significance will also be discussed in this chapter.

"Chapter 4: Housing Finance and Credit Expansion in Mexico's Neoliberal Era" is the first that discusses findings related to Mexico's new development model, based largely on mortgage expansion and valuing housing production as a chief economic engine. The role of INFONAVIT (and federal housing finance policy), as well as that of state and local governments in implementing and supporting this development model are also discussed at length in this chapter, as well as the benefits reaped by the private sector in this attractive business venture that initially posed few financial risks to developers and financiers. Nonetheless, and despite the significant leverage that they gained to influence housing and urban development patterns, they would later face significant financial turmoil, and even bankruptcy, due to debt and unsustainable business practices.

The following chapter "Emerging Issues of Housing Inaccessibility and Vacancy" then focuses on the analysis of some of the issues that resulted from this development model. Although mortgage access was expanded, it will become clear that policies were not directed to those with the most urgent housing needs. Furthermore, the lower and middle-income residents that were benefited by such mortgage expansion, were quickly confronted with multiple problems, such as an increasing mortgage debt, low-quality housing, and the isolation of living in remote peripheral areas with very limited or deficient access to basic infrastructure and services. One of the main goals of Chapter 5 will be to juxtapose the main two themes of this dissertation: housing vacancy and access. While housing construction exhibited exponential growth, particularly in metropolitan regions, it was often poorly aligned with population growth and actual housing demands, needs and pressures. Not surprisingly, therefore, housing vacancy became an increasing issue in new housing developments, and was associated with problems based in the terms associated with loans, and inadequate urban infrastructure, services, economic opportunities and even housing quality. Arguably, the supply of housing produced was altogether inadequate, and lead to frequent housing abandonment. Vacancy clusters or concentrations have been particularly problematic in peri-urban areas of large metropolitan regions. This has had implications at multiple scales, affecting mortgage institutions, local governments and homebuyers.

"Chapter 6: Financial versus Civic Responses to the Housing Paradox" is the last findings chapter, which describes the responses at different levels and from different sectors to the issues discussed on Chapter 5. At the smallest scale, residents of these developments have had to resort to a variety of strategies to cope with their difficult living situations, from hiring private services, when they can afford them, to mobilizations and negotiations to ensure adequate service and infrastructure provision. The latter, have been particularly strong in the State of Mexico, giving rise to the formation of *El Frente Mexiquense*. This organization has now undertaken important legal battles against public and private figures responsible for the construction of deficient housing and development projects. They, along other organizations such as El Barzón, have also helped residents avoid foreclosure or eviction through legal means or by helping them restructure their debt with banks and mortgage lenders. In contrast, INFONAVIT has focused on ensuring its financial stability and implementing strategies to deal with its delinquent portfolio, such as by strengthening its repossession efforts and auctioning off housing units. Since these houses are sold at discounted prices to the private sector, however, social organizations have questioned the fairness of these processes. This tension between residents and mortgage institutions seems to reflect a long-standing tension in Mexican housing policy between the use and exchange value of housing, and possibly be at the center of the paradoxical coexistence of a housing oversupply and a shortage.

This tension is still evident in the drafting and implementation of new densification policies promoted at the federal level. Federally drawn urban growth boundaries across the country have been pursued to limit the continuous sprawl of Mexican cities. Yet, critics have contested the drawing and effectiveness of such boundaries and highlighted the difficulty of producing affordable housing in most inner city areas were land is most expensive, particularly since recent policies have not incorporated the necessary legal or fiscal mechanisms to prevent landowners and speculators from appropriating public subsidies and resulting gains produced by densification strategies. Thus, the final chapter, "The Marketization of Housing Rights in Mexico" will provide a theoretical and practical discussion of recent Mexican housing policy and its implications. Besides synthesizing the main takeaways of the dissertation, Chapter 7 will also discuss Mexico City's experience and lessons learned after implementing densification policies, contrast the case studies and provide references for future action at the federal, local and civic levels.

Chapter 2: Literature Review and Theoretical Framing

2.1 Mexico's Political Economy and Housing Policy in the 20th Century

Until the 1930s, Mexico had a development model based on agricultural exports and experienced slow growth. The so-called Mexican miracle roughly refers to the period between 1940 and 1970, when the Mexican economy grew at more than six percent annually. Manufacturing growth rates were spurred by Import Substitution Industrialization (ISI) policies and State investment that supported the development of basic industries and infrastructure and the production of exporting goods port to increase productivity and accelerate growth. These processes generated fundamental changes in the national economic structure. Between 1940 and 1980, the proportion of the economically active population engaged in agriculture declined from 65 to 29 percent. Industry, on the other hand, raised its share from 15 to 28 percent, and services rose from 19 to 43 percent. The population also increased rapidly from just under 20 million in 1940 to an estimated 77.4 million in 1985, with most of this growth shifting toward urban areas.

The government increasingly struggled to adequately respond to the needs of rapidly swelling urban populations, which contributed to social unrest during the late 1960s. This forced the State to increase its expenditures on social welfare, implement tax reforms, and create a number of new social development agencies in the 1970s. Real wages increased and the economy continued to grow at an average rate of six percent during this decade. Yet, economic depressions, high inflation, and an increasing foreign debt also followed (Ward 1990, Alvarez Enriquez 1998). The party in power during this period, the PRI (Revolutionary Institutional Party or *Partido Revolucionario Institucional*), had maintained hegemonic political power in Mexico since 1929. It was not until 1989 that the

PRI lost its first state election in Baja California, followed by its loss of an absolute majority in the Chamber of Deputies in 1997, and in the Senate and the presidency in 2000.

2.1.1 Housing Development: State and Self-Help Responses

In regards to housing, public production was persistently unable to keep up with the burgeoning need of the lowest-income populations, which resulted in an increasing backlog of inadequate and substandard housing. In 1970, a study estimated an accumulated housing need of 3.6 million housing units to house 1.9 million families without a dwelling and 1.7 million living in extremely precarious conditions. Deficits of residential water supply and drainage affected 5.1 and 4.9 million households, respectively, and in the field of rehabilitation, around 4.8 million 'actions' or interventions were required. Conditions improved somewhat in the following decade, with the decline of population densities per dwelling, and of dwellings without water and drainage, among other factors. Yet, in absolute terms, housing deficits continued to grow.

Largely, the very low incomes of most Mexican families explained this. In 1980 approximated 77 percent of the economically active population earned less than 2.5 times the minimum salary, a minimum subsistence wage. These incomes were too low for workers to afford loans at commercial or even 'social-interest rates'. Thus, self-help housing dominated housing production. Poor households usually acquired un-serviced and untitled land through low-cost purchases from landlords, unscrupulous real estate developers, or peasants who held land distributed as part of the post-revolutionary land reforms. With somewhat less frequency, the squatting of vacant land also took place. The formation and growth of these kinds of irregular or informal settlements was especially rampant during the 1950s and 1960s, when cities were expanding rapidly due to high natural growth rates and rural-urban migration. In Mexico City, for instance, they housed 14 percent of the population in 1952, a proportion that grew to over 50 percent by the end of the 1980s. Eventually, the government implemented policies to service and regularize some of these areas (Gilbert and Ward 1985, Ward 1990).

As in other developing countries, housing informality and shelter deprivation in Mexico emerged as a result of rapid urbanization processes, inadequate institutional responses, unequal wealth distribution, and the unaffordability of housing markets in cities (Roy 2005, UN Human Settlement Programme 2010). Over the decades, responses to housing informality have ranged from condemnation to praise. Marginality theory gained prominence in the 1960s with Oscar Lewis's (1959) seminal work on five Mexican families, through which he argued that the living conditions of deprivation experienced in informal slums fostered the development of a 'culture of poverty' adapted to those conditions and characterized by pervasive marginality, dependency, and powerlessness (Lewis 1959 & 1966).

Subsequently, modernization or functionalist scholars argued that social change and the adoption of modern practices could help tackle poverty, while another set of scholars emphasized the role of state policies and market forces in maintaining and controlling urban poverty (Perlman 1976, Eckstein 1977). In contrast, some highlighted the opportunities available in informal low-income settlements, such as the solid equity of low-income housing or the ability of residents to generate income through renting or sharing (Turner 1965 & 1967). This latter work redirected public policy from the eradication of settlements towards their recognition as an alternative given the overwhelming demand for urban shelter for the very poor. Thus, the main arenas of intervention were to provide essential infrastructure and, in some cases, to implement regularization policies to provide legal titles to residents (Gilbert and Ward 1982, Ward 2005 & 2015).

Yet, labor informality, weak state intervention through planning and zoning, and unequal wealth distribution and property ownership continued to promote informal housing production. Informality became a rational and viable response as countries like Mexico were rapidly converting from rural to urban societies. Some communities were able to improve their living conditions through self-help and incremental strategies, and some organizations were formed to affect policy agendas and push for implementation of slum upgrading. Eventually, however, rising unemployment and insecurity, declining opportunities, and the increasing isolation of peri-urban informal settlements, led to further marginalization and social exclusion (Roy 2005, Ward 2004 & 2009). Generally, the poorest urban residents have been most negatively affected by the unaffordability of the housing market. Arguably, moreover, a high incidence of urban poverty creates a vicious cycle of informality because it limits municipal revenue generation and public investment in servicing land (UN Human Settlement Programme 2010).

Despite the concentration of need among informal workers, access to Mexican housing programs depends on social insurance and formal employment. Thus, only a fraction of the population, comprised of middle and lower-middle income workers and employees in strategic industries or the government sector, could potentially access it. Public housing production began to be significant in scale and directed towards lower income populations in the 1970s, arguably to address the intense social unrest that had emerged in response to economic inequality and inadequate living conditions, and which had begun to threaten political stability. Between 1973 and 1976, INFONAVIT generated more housing than the government had generated in the previous forty years. During this period, INFONAVIT engaged directly in housing construction and allocated it through a lottery system to blue-collar workers. Yet, in subsequent years the powerful Mexican Workers' Confederation syndicate (CTM) began to win control of INFONAVIT's financing and assigned it to affiliated worker groups. FOVISSSTE[13] carried similar housing strategies directed towards lower-income state employees. However, INFONAVIT and FOVISSSTE-affiliated programs together were only able to meet 11.3 percent of the estimated total demand between 1973 and 1980 (Ward 1990).

In 1981, FONHAPO was created as a low-income housing fund designed to support housing production for people earning up to or around 2.5 times the minimum salary, and who were ineligible for INFONAVIT funding. Some of its main housing actions included service provision, credits for land regularization, and assistance for self-builders to construct, complete or improve their dwellings. Public housing production rose significantly between 1986 and 1987 due to reconstruction programs implemented after the 1985 earthquake. In a period of 19 months, over 42,000 new dwellings were built and almost 7,000 were renovated under these programs. The World Bank provided almost half of the financing for reconstruction efforts, and, although such efforts were highly subsidized, they were considered to be fairly successful and to have higher levels of cost recovery than previous programs. Indeed, funds were recycled from FONHAPO loan funds to finance other housing programs outside of metropolitan areas (Ward 1990). In subsequent years, particularly since 1988, FONHAPO redirected most of its resources to support rural housing (FONHAPO 2014).

[13] FOVISSSTE is a parallel institution to INFONAVIT that operates similarly but serves public sector employees.

Housing policy and production shifted significantly throughout the 20th century in response to changing ideologies, processes of capital accumulation, social unrest and labor pressure. Governmental actions "shifted away from a 'laissez faire' approach that had favored capital accumulation for illegal land developers and industrial employers at the expense of low wages and acute deprivation in people's residential living conditions" (Ward 1990), and towards a policy that PRI national governments called 'shared development'. Yet, despite the scale of housing production and state intervention achieved in the 1970s, many agencies were established with inadequate budgets for their responsibilities. Furthermore, and with the particular exception of reconstruction after the 1985 earthquake, the economic crash of 1982 and the period of austerity that followed would significantly shift housing management at a time of intense social hardship.

2.1.2 Decentralization and Governance

After the 1980s debt crisis, one of the conditions for Latin American countries to compete for international financial assistance and capital was to loosen the reigns of centralized state power and control. The transferring of administrative and fiscal control to local governments represented a very significant shift that meant to drive governance innovations, competitiveness and increased levels of accountability. Decentralization reforms thus gave many local governments more authority over local services and infrastructure and revenue transfers. Yet, most local governments were not able to achieve all that decentralization promised. Emerging challenges included inadequate political control, intergovernmental coordination and policy implementation, among others. Many decentralization policies and reforms were not coupled with the necessary financial support and reforms, issues of corruption and *clientelism* persisted, and the economic crisis itself dampened decentralization efforts as policymakers and international agencies were most preoccupied with macroeconomic stability (Campbell 2003).

Despite the absence of pluralism, Mexico was a pioneer in decentralization reforms. Student demonstrations had discredited the country's highly centralized leadership in previous decades. Furthermore, northern and border cities began to consolidate their comparative advantage in economic production and export markets and the PRI lost key elections in urban centers in 1988. One result was that then president, Carlos Salinas de Gortari, began to share power in an effort to win back popular support. A new balance of power with states evolved, giving them more say in how public investments were made in their jurisdictions. Municipalities also gained responsibility over the provision of urban infrastructure and services, land use and development, and revenues from the taxation of property (Ward and Rodriguez 1999, Campbell 2003).

The argument for decentralization is built around a bottom-up governance structure predicated upon the principle of subsidiarity.[14] Yet, the evolution of federalism in Mexico and many other Latin American countries has been limited by partisan issues, lack of political commitment, weak linkages with civil society and public participation channels, inadequate local government capacity, lack of financial resources, the complexities of co-governance and the ability of local elites to sustain their power over the needs of more vulnerable groups. Furthermore, large Mexican and Latin American metropolitan regions with many municipalities have recurrently been confronted with disparities in tax base, natural resources and service provision, and with fragmented urban management and planning (Roberts and Wilson 2009, Ward, Wilson and Spink 2010, Wilson et al. 2012). In

[14] Retaining as much governance and policy implementation as possible at the local and sub-regional levels and passing upwards only those functions that are best managed at a higher level.

addition, a rolled-back and more decentralized state has also led to the creation of a sort of intermediate *third* sector of Non-Governmental Organizations that have absorbed the responsibility for the delivery of some social goods and more individualized forms of organization – role previously held by unions. At the same time, a new and more intense level of marginalization emerged (Roberts 1995, Ward 2004).

2.2 Housing Development and Political Economy

> *"As long as the capitalist mode of production continues to exist, it is folly to hope for an isolated solution of the housing question or of any other social question affecting the fate of workers"* (Engels 1935, p. 77).

Beyond its sociopolitical role, housing is a critical economic sector, fueling others such as the construction, real estate and financial sectors. Thus, housing has increasingly been appreciated for its ability to circulate capital. Value, under capitalism has to be stored, and housing is a perfect vehicle of such storage. Housing booms and boosts for instance, are generally produced – and politically facilitated – through periods of overinvestment and by extracting surplus capital from other sectors of the economy (Aalbers and Christophers 2014). Saskia Sassen (2009) similarly argues that the securization of mortgages has been used as a new channel to extract household income – worldwide. Without regard to the creditworthiness of borrowers, the emphasis has been on crossing a threshold in numbers of mortgages sold to – and often pushed onto – households as a form of primitive accumulation.

This expansion of mortgage lending through securitization, Sassen argues, has created a massive distortion in the housing finance market, as most investors are able to escape the negative consequences of home mortgage default while homeowners cannot.

Mortgage lenders succeeded in developing a whole industry and persuading homeowners to take a secondary mortgage even when they did not need the loan. Since modest-income households worldwide will be too good a market to relinquish, she cautions that it will be necessary for lawmakers and civic organizations to be alert and refine the regulation of financial instruments to prevent banks and financial firms from simply moving from one market to the next. Finally, while highlighting the effects of the recent foreclosure crisis on households, neighborhoods, entire cities and regions, and municipal governments, Sassen questions the rationale of countries in the Global South that are following the troublesome development path of using housing mortgages as yet another mechanisms to extract value from low-income individuals (Sassen 2009).

Globally, it seems that housing policies increasingly reflect capitalist ideology because of the privilege given to private property ownership, market allocation mechanisms and accumulation strategies. Private property, however, is importantly protected by the state and confers a power over public resources, rendering the public-private dichotomy problematic (Aalbers and Christopers 2014). Furthermore, although economists might assume a purity in markets, other social scientists highlight the ways that markets are sociopolitical creations. The expansion of the market (e.g. through globalized finance) into the spheres of land and housing is an increasingly central feature of modern capitalism. "In more recent history, housing has gone from being a simple commodity to being a complex financial technology that showed the capacity to bring nearly the entire world economy to its knees" (Patillo 2013, p. 512). Housing is implicated in the contemporary capitalist political economy in numerous critical but also conflicting ways, such as the tension that arises from expecting or encouraging the fulfillment of the use value of housing to be delivered by a system that prioritizes its exchange value. Yet, exploring and understanding such contradictions "represents a vital step in figuring different [housing] futures…it is no longer justifiable – if it ever was – for political economists to cede housing analysis to economists who ignore or reduce the importance of power, politics and the state" (Aalbers and Christophers 2014, p. 389).

Mexico's neoliberal housing reforms, characterized by mortgage expansion and the privatization of production, I argue, embody such tensions between housing commodification and the right to housing – its exchange versus use values. In the words of Schwartz and Seabrooke (2008, p. 238) "home equity and social equity are often at odds". The convergence of high housing vacancies with the shortage of adequate housing is evidence of the contradictions that exist between the roles of housing in capitalist economies, based on the circulation of capital (Aalbers and Christophers 2014). The commodification of housing simply conflicts with the country's constitutional right to adequate housing. Ultimately, housing as investment serves as a chief vehicle for the exacerbation of social inequality. Thus, to effectively address Mexico's housing deficit, and secure housing access for its most marginalized populations, policies would need to operate outside of the market system. Even practical considerations, given the societal costs of millions of people living in inadequate conditions, support an argument for the right to housing and proposals for social ownership. Arguably, to make this a reality, sociopolitical mobilization will likely be required. The prospects for mobilization, however, are poor since working-class homeownership has been promoted alongside suburbanization that has tied people down to mortgages and isolated them from urban social life and participation (Sassen 2009, Patillo 2013, Aalbers and Christophers 2014).

2.2.1 Urban and Housing Development under Neoliberal Governance

Socioeconomic conditions in Mexico became particularly dire after the 1982 economic crash. The Washington Consensus and neoliberal reforms were framed at that time as the only viable development path for Mexico, along other countries also affected by severe crisis and debt. A number of scholars have studied the changes endured by Latin American countries as a consequence of this neoliberal turn, which in Mexico was consolidated and deepened with the signing of the North American Free Trade Agreement (NAFTA) in 1994. Particular attention has been given to labor markets, which became increasingly affected by informality given the decline in formal industrial and public employment. Austerity measures required the reduction of State programs and intervention while encouraging greater private sector participation in various economic sectors. Governments had to walk a fine line between appealing to international investors while practicing brokerage politics at home by implementing popular and politically necessary programs. Yet, even with the continuous expansion of domestic debt, economic restructuring placed a significant strain on social programs and economic conditions. In addition, recurring crises and a decline in real wages eroded the capacity of individuals to access goods and services, such as adequate housing (Portes and Roberts 2005, Pérez Sáinz 2005, Ward 2005, Coulomb and Schteingart 2006, UN-Habitat 2010, Soederberg 2015).

Rather than for its social significance (and use value), housing development in Mexico has increasingly been valued for its role as a critical economic engine that fuels the construction and financial sectors. Arguably, therefore, Mexico’s recent housing finance policy has supported a monopolistic and speculative real estate sector, dominated by a handful of large housing developers, instead of effectively promoting increased housing access and sustainable urban development. These housing and urban development processes seem reminiscent of David Harvey's (2008) accounts of global and historical processes of capitalist housing production which have had the primary goal of finding profitable terrains for capital-surplus absorption through debt finance.

Harvey notes, for instance, how after World War II suburbanization and highway construction radically transformed cities and metropolitan regions across the U.S. Similarly, he argues that over the last several decades a global neoliberal system of governance has been able to shape urbanization and housing development processes around the world with the main aim of maximizing private profit. To paraphrase Harvey, the right of private developers and speculative actors to increase their profits and accumulate massive amounts of wealth seems to be trumping any other conception of inalienable rights. Finally, he has also discussed how processes of liberalization and housing marketization have tended to recreate monopolies that invariably reinforce inequalities and injustices (Harvey 2003).

Slow and unstable economic growth and the emergence of new dimensions of marginalization have been increasingly linked to the neoliberal model. Yet, the marketization of housing (a sort of right to ownership – for some – rather than a right to be housed) continues to expand worldwide to facilitate global financial flows without much social or political discussion in many contexts (Wood and Roberts 2005, Sassen 2009, Soederberg 2015). Nonetheless, and despite the opposition of influential international actors, some Latin American countries have begun to pull back from such economic orthodoxy and towards more humane and less socially destructive paths for national development. In doing so, they have attempted to establish a new equilibrium between state, society, and the market. Cardoso (2009), for instance, has described some South American countries, most notably Chile and Brazil, as globalized social democracies which, without abandoning their market economies, have corrected for neoliberal excesses through vigorous social policies.[15] Other scholars (Kohli 2009) have made similar arguments about some Asian countries, which have showed lower rates of economic inequality and higher rates of economic growth due to their relative autonomy from global constraints and their ability to pursue social democratic policies.

Countries that have followed neoliberal prescriptions, on the other hand, have generally become more dependent on the global economy and foreign capital. This has been the case of some Latin American countries, which, like Mexico, Cardoso argues, have followed a regime of *asymmetric integration* into the global economy (Cardoso 2009). Thus, reforms in Mexico arguably lacked a critical analysis of the social implications and power dimensions of implementing allegedly technical and apolitical neoliberal strategies. Concerning housing policy, for instance, strategies such as mortgage securitization were implemented with the aim of expanding home ownership for the poor. Yet, in reality, many low-income households remain unable to access adequate housing while the financial and construction sectors have reaped the benefits of the country's housing finance policy (Soederberg 2015). Developers have internalized profits by producing cheap peripheral housing financed by a fund created through a 5 percent compulsory contribution of workers earnings. Simultaneously, they have externalized the costs and negative consequences of their developments, such as the fiscal burden of service provision for local governments, among other concerns.

Furthermore, as in other contexts (Wood and Roberts 2005, Portes and Roberts 2006), the powerful finance and construction sectors have often been able to overshadow

[15] More specifically with regards to housing policy, Chile's government has provided substantial housing subsidies and property tax exemptions for low-income owners, as well as promoted densification, rehabilitation, and mixed-income and rental housing (Ward et al., 2015).

the needs and concerns of other and often more vulnerable sectors of society. Through a neoliberal logic, market and private interests have heavily influenced how cities in Mexico (and arguably in many other contexts) grow, and have thus guided the organization of social life, public investment and resource allocation. The supremacy of this logic has also prevented the inclusion of other rationalities in the shaping of urban form. Thus, as housing deficiencies continue to affect over a third of the population in Mexico well after the above housing finance strategies were put in place, it seems important to question why and who benefits from their implementation. A prominent conclusion is that the financial and construction sectors have had the most to gain (Soederberg 2015).

2.2.2 Regime Theory: Development Interests and Political Power

Scholars that have studied the ways in which development policy agendas favor privileged interest have done so primarily at the local level (Stone 1989, Forester 1989, Imbroscio 1997, Flyvbjerg 2002 & 2003). Arguably, the Mexican context calls for this analysis at a higher state or even national level. Nonetheless, regime theory offers valuable lessons. Clarence N. Stone (1989) was perhaps among the first to note that business coalitions and similar powerful groups are uniquely able to influence local governance and maintain a regime that protects its prerogatives. The central concept of a regime is that of an informal arrangement by which public bodies and private interests function and carry out governing decisions. Regimes form, and give special privileges to business interests, largely due to the weakness and lack of power and public resources available to local governments. Thus, governmental functions are the product of a governing coalition located not within government but in a network of public officials and special interests.

The Atlanta case, which Stone studies in depth, also suggests that the more uneven the distribution of resources, the greater the tendency of the regime to become concerned with protecting privilege. In other words, an unequal distribution of goods and resources substantially modifies majority rule; votes count but resources decide. These imbalances may be partly explained due to the already weak nature of local government. Yet, they lead to biases in policy and governance, and are thus clearly problematic. An important conclusion from Stone's analysis is that weak governments weaken democracy because they hand governance power to the investor class. Therefore, Stone argues that strong city governments are a precondition for a strong democracy – or at least for somewhat greater attention to the interests of lower classes. Otherwise, inequality is perpetuated.

A few years earlier, Paul E. Peterson (1981), from the University of Chicago, was making significantly different claims on the same topic. He argued that local governments simply draft and implement the policies and programs that are in their city's best interest. Such policies, according to Peterson, are those that maintain or enhance a city's economic position. He argues, therefore, that redistributive policies are usually at odds with the economic interests and developmental objectives of cities. Regressive local taxes, for instance, help a city retain wealthier populations and taxpayers who will do a cost-benefit analysis of how their tax dollars are being used. He does admit that few cities, such as New York, which are wealthy and have an unusual system of competitive politics, have been able to pursue redistributive policies at the expense of its economic interests. Yet Peterson disregards the notion put forth later by Stone, which claims that the influence of local ruling elites in local politics is detrimental to the implementation of policies that are of interest to low-income groups, racial minorities, or weaker and less well-organized interests.

Other scholars, however, have continued to put forth arguments that resonate with those of Stone. Bent Flyvbjerg (2002), for instance, used his case study of central city planning in Aalborg, Denmark, to exemplify how regulations are often rearranged without a clear logic and in favor of certain interests, a practice which to him representa a clear deviation from democratic standards. By analyzing hidden power relations, and the relationship between rationality, power, and politics, Flyvbjerg concludes that power is used to define reality, and that the greater the concentration of power, the greater its ability to define reality. In other words, knowledge and rationality often carry little weight in confrontation with powerful interests.

Flyvbjerg argues that this inequality between rationality and power is a general weakness of modern democracy and politics, and of fields that operate within this framework, such as planning. The story of modernity and democracy in practice, Flyvbjerg (2003) argues, is one in which powerful actors constantly determine what counts as knowledge, and ignore or suppress that knowledge which does not serve them. Meanwhile, practices such as planning continue to underplay the importance of issues of power, the state, and political economy, and have thus remained blind to, or even aligned with, the relationships and processes that have generated the hierarchies that allow only those in power to articulate and voice their ideological and value precepts. Thus, Flyvbjerg, Forester (1989), and others have argued that it is paramount that planners counter the efforts of interests that threaten to make a mockery of democratic planning processes.

Flyvbjerg (2003) also notes that social context and history will profoundly condition the effectiveness of institutions and the possibilities of democratic change, given that rationality is a constructed concept, produced by actors in specific settings. Thus, it seems relevant to turn to a scholar who has specifically studied the relationship between the

Mexican State, capitalist interests, and society. Some decades ago, Susan Eckstein (1977) carried out intensive research on three low-income areas: an inner-city slum, a squatter settlement, and a low-cost housing development. She argued that housing strategies then, such as low-cost government financed housing, government-enforced rent control, and the legalization of squatter settlements, provided a modicum of security and helped cushion the impact of economic crises. Yet, at the same time, she noted that the government often failed to enforce minimum wage and social security legislation, which significantly hindered the prospects of the urban poor.

Eckstein also argued that the State's role in facilitating access to land and housing, gave recipients a stake in the status quo. Thus, by distributing land and housing to the poor, the government entwined them in the political patronage system and rendered them less able to make subsequent demands. The Mexican poor, she argued, were coopted in favor of capitalist interests through a sophisticated and indirect social control network embedded in the Mexican political system. The government and party in power (PRI), often used a revolutionary rhetoric to legitimize itself, even when industrial and commercial capitalist interests were favored over workers through tactics such as worker cooptation, periodic labor concessions, and occasionally even violent repression. Better-off groups, such as working and lower-middle classes, were favored given their better relations with various functionaries. Indeed, most formal groups, such as unions, the church, and community associations were often affiliated in some way with the PRI or government-linked organizations, which served to regulate demand-making (Eckstein 1977).

Arguably, since that time, the social and political platforms which civil society requires to monitor and scrutinize the various processes that drive the growth and development of their communities, cities and regions has been weakened even further.

Scholars who have recently studied the diffusion of collective action and organizing to address the structural forces driving precarious living conditions, have often explained it through the decreasing emphasis on universalistic social policies and the weakening of the working class and labor unions as a consequence of neoliberal reforms. Particularly in developing countries, the rise of the informal proletariat and the self-employed (without much capital) as the largest social class atomized and dispersed throughout cities also seems to have fragmented class solidarity and perpetuated power and resource disparities (Wood and Roberts 2005, Portes and Roberts 2006, Harvey 2008).

Bridging the theoretical gaps between fields such as planning and political economy may thus help construct a more critical lens that highlights the importance of reformulating current development and policy frameworks, particularly given their apparent unjust and unsustainable implications. This research thus examines the hegemonic logic or rationale that has shaped recent Mexican housing finance policy and subsequent urban development patterns, as well as their implications for social justice. Borrowing from Foucault (1980) Flyvberg (1998), highlights the importance of studying the tactics of domination through which modern institutions work, the *realpolitik*, or what Machiavelli called the effectual truth - *verita effettuale* (Flyvbjerg 1998 & 2003). In the face of a neoliberal system of governance that favors corporate capital and private interests, an alternative conception of urban justice would need to, first and foremost, expose these hidden practices to public scrutiny and radical democratization, so as to then foster the inclusive right to appropriate urban life and its social production and reproduction (Harvey 2008).

2.3 Housing Vacancy: A Theoretical Overview

As previously mentioned, Mexico has accumulated one of the highest vacancy rates among OECD countries, an issue which seems to be structural rather than cyclical (OECD 2015). The 2010 Census counted around five million uninhabited housing units nation-wide, 14 percent of the total housing stock. The analysis of housing vacancy in Mexico and other developing countries has received little attention. In Mexico, the issue becomes particularly perplexing given its coupling with a persistent and significant housing need. This section will therefore present an overview of some of the scholarly work on housing vacancy and focus on presenting some of the most relevant examples for the Mexican case.

Scholars have framed the issue of housing vacancy in multiple ways but have paid particular attention to the conditions that drive it and the scales (e.g. neighborhood, local, national) which it affects. Housing vacancy was perhaps first and most extensively analyzed by economists. These accounts, for the most part, have been devoted to describing and measuring the phenomenon through abstract models (Rosen and Smith 1983, Wheaton 1990, Rabianski 2002, Couch and Cocks 2013). More recently, however, analyses of *shrinking cities,* mostly in the U.S., have gained prominence, particularly among urban and planning scholars. These studies have largely focused on policy responses to the issue of population loss, economic decline, and resulting vacancy. Generally, although arguably somewhat superficially, they have also outlined some of the historical factors that have driven these phenomena (Cohe 2001, Beauregard 2009). In contrast, some works have also analyzed the political economy surrounding the issue of housing vacancy and the structural forces that have driven it, such as the behavior of housing markets and their interaction with institutional powers (Glock and Hausserman 2004, Immergluck 2011, Hollander et al. 2010, Sun et al. 2011, Galster 2012, Silverman et al. 2012, Holway et al. 2014).

Economic studies have been particularly successful at defining, although at times rather abstractly, the issue of housing vacancy; by being among the first to study this topic, they pioneered a language to discuss it. In the simplest terms, vacancy is excess supply at a given price in a given market (Rabianski 2002). Yet, vacancy rates vary widely across the globe and even within countries, regions and localities. This, according to economists, largely depends on the efficiency and attractiveness of a given housing market. Thus, the field of economics has also categorized vacancy to indicate its level of impact or importance. Frictional, short-term, equilibrium, transaction or natural vacancy—to cite several synonymous terms borrowed from labor economics—usually refers to dwellings awaiting occupation or purchase, and is not considered to be problematic. This vacancy type allows the market to work efficiently by allowing people to easily move from one place to another. Often, housing vacancy in the best performing market in a country (with the lowest housing vacancy),[16] is taken as an approximate indicator of frictional vacancy, given that local variations in frictional vacancy are generally hard to measure (Couch and Cocks 2013).

Problematic, structural, or longer-term vacancy, on the other hand, is often related to a deficiency in demand, often due to a trend in population or economic decline (e.g. deindustrialization), or supply, due to a mismatch between the attributes of the market (e.g. deficient housing) and the needs of users (which may also be related to a change in housing preferences). Some have argued that cyclical vacancy, which refers to the excess supply

[16] In the case of Mexico, for instance, this would be its capital, Mexico City as a whole, with a 7.7 percent vacancy rate in 2010, although closer to 5 percent at a more disaggregated level (areas within the city).

that occurs as demand declines due to economic and financial cycles of booms and busts, fits between the two terms just described (Rabianski 2002, Couch and Cocks 2013). Yet, such cycles may well lead to the definite abandonment and decay of housing, as has occurred, for instance, after the recent mortgage and foreclosure crisis in the U.S. In these cases public action is generally required because owners cease to be able to take active steps to bring this housing (often no longer theirs) back into the market (Cohen 2001).

Traditional economic and housing market analyses have also ascribed a close connection between excess demand, as reflected in the deviation from a natural vacancy rate, and changes in the price of housing. The argument has followed that because vacancy levels relate to the operational efficiency of the market, they can be useful in highlighting the need for development (or lack thereof) and in adjusting the cost of housing, and in turn the vacancy rate (Rosen and Smith 1983, Wheaton 1990). Yet, because housing is an extremely durable good, it contributes to an asymmetrical behavior in housing markets. During the growth phase of a city, for instance, prices grow slowly and the housing stock increases greatly, whereas during the decline phase, the housing stock persists and prices collapse precipitously (Glaeser and Gyourko 2005). Market self-equilibrium is an overly simplistic assumption and abstraction of reality, thus, another notable market failure often occurs because, relative to other goods, land and property are not as easily divisible. Therefore, demand and supply shifts are not as precise as with other goods, making it harder to eliminate excess supply.

Furthermore, although it has been argued that the supply of a product is generally restricted in order to maximize total revenue (by preventing excess supply which drives down a product's price), suppliers have also been known to manipulate their total profit levels by increasing rents and creating intended vacancies.[17] Less of the product is sold, due in part to its high and inaccessible price, but profits are still maximized (Rabianski 2002). This is particularly common in monopolistic markets and interferes with the alleged equilibrating forces of the market, which are expected to eliminate vacancy and the excess supply of housing or space. These speculative processes and inflated housing prices have also been known to create simultaneous housing vacancy and accessibility issues. Similarly, they can nurture housing bubbles, particularly when they are accompanied by a lack of regulation in this and other related arenas. The recent U.S. sub-prime mortgage crisis has actually shed light on many of the facets of unregulated market behavior at a massive scale as high-risk loan markets and predatory lending practices fueled foreclosures and allowed housing vacancies to become widespread (Immergluck 2011, Sun et al. 2011).

Scholars from different disciplines have provided detailed accounts of housing vacancy at different scales. Although structural approaches are often recognized for their macro-level focus, some have successfully studied this phenomenon both locally and globally, often linking both levels. Furthermore, they have challenged notions of self-equilibrating markets, and highlighted the interaction between the market and institutional actors in reproducing the issue of housing vacancy. Arguably, by doing so, they have more comprehensively addressed the most fundamental and pressing drivers of housing vacancy.

2.3.1 Unregulated Development, Speculation and Crisis: U.S. Examples

George Galster (2012) has meticulously analyzed the underlying institutional and macroeconomic drivers of housing vacancy. He notes that in contexts such as that of

[17] In the U.S., which arguably does not suffer from a monopolistic housing market, there are currently over 7 million housing units held off the market (U.S. Census).

Detroit, the production of new suburban housing during the second half of the twentieth century significantly exceeded the number of new households in the entire metropolitan area of the city. State laws that allowed unrestricted development at the urban fringe of this and many other metropolitan areas throughout the U.S., resulted in an excess of suburban housing which in turn devalued and facilitated the abandonment of property in the city, a process that Galster explains through the concept of the regional *disassembly line*. He argues that the Greater Detroit area (along with a number of other U.S. metropolitan regions) perfected the *Fordist* style of mass production for housing, and not just for automobiles, for which the region became famous. The region's easily buildable topography, unfettered development rules, fragmented local government, and weak civil society enabled the development of a continuous disassembly line stretching from urban core to suburban fringe. Each time a new house was added to the suburban fringe, all older houses built on the line dropped in value a bit more. The least valuable units, usually located at the urban core, have been falling off the line because they are no longer worth owning.

The result has been abandoned houses, and the increasing decay of the social, fiscal, and physical conditions of its surrounding neighborhoods, and indeed the entire core urban community. This in turn creates a demand for new housing while the conveyor belt keeps moving. Meanwhile, each house already on the line, and the community in which it is located, inch a little closer to the precipice. The debris left by the disassembly line is painfully visible. Yet, the city is in no position to do anything fundamental about it, since it does not have the economic or political power. All it can try to do is clean up the never-ending mess produced by the disassembly line with progressively fewer resources at its disposal. The effects of this disassembly line resembles processes of creative destruction discussed by scholars such as David Harvey (2008), such as the socioeconomic and localized hardship that they generate in order to maximize profit accumulation through urban development processes.

Galster also importantly notes that the establishment of this disassembly line preceded population loss and economic decline in the U.S. Rust Belt. Similarly, there are currently some states in the Intermountain West, which are experiencing vacancy coupled with unregulated growth, speculation, and excess development entitlements. Some researchers have started to study these local practices and their link to a number of issues. They have in turn uncovered a significant increase of vacant or partially occupied subdivisions, which have increasingly skewed development patterns and real estate markets and diminished the fiscal health of communities by, for instance, requiring the delivery of public services to remote neighborhoods that generate very little tax revenue (Holway et al., 2014).

This phenomenon has been particularly prominent in states such as Colorado, Arizona, and Idaho, where land is abundant and cities are growing relatively rapidly. Certain jurisdictions have allowed lots to be sold before infrastructure is completed and even well in advance of market demand for housing. The issue has become particularly hard to address once construction – and partial occupation – begins without existing growth management and development regulations (Holway et al. 2014). It is important to note that although boom and bust cycles have exacerbated these issues, population or economic decline has not generally accompanied it. Indeed, the contrary has actually been true in many cases. Thus, the underlying causes of vacancy in this instance seem to be, again, lack of regulation and speculation.

2.3.2 Political and Economic Restructuring: The Case of Eastern Germany

Outside of the U.S., the issue of housing vacancy have been studied and have taken place at larger, regional and even national scales. Perhaps one of the most notable cases is that of eastern Germany after reunification in 1990. In this setting, high rates of vacancy have been linked to the political and economic restructuring of the region. This State-led transition, from socialism to capitalism, involved, among other factors, the devolution of the socialist welfare state, and an intense process of deindustrialization and economic decline. This, in turn, resulted in very high unemployment rates, depopulation, and ultimately an issue of housing vacancy (Glock and Hausserman 2004).

During socialism, housing development was largely planned and produced through State-organized investment. Large-scale prefabricated housing estates were built on the fringes of cities, while historical multi-story dwellings in the inner city were left to decay. Thus, even before unification vacancy was already an issue. After 1990, however, the issue intensified as several schemes, such as tax relief, low interest loans, and subsidies, were implemented to increase the supply of 'modernized' housing units. Public housing policies drove a massive growth in new construction and contributed to the decoupling of housing investment from demand. To correct this, over the next decade housing investments were restricted to 'safe' locations only, where there were solid expectations of sufficient demand. Conversely, high vacancy areas, usually with decaying properties and infrastructure, were considered 'unsafe' for investment. Low-income neighborhoods, in particular, which were already affected by high vacancy rates, became additionally disadvantaged and condemned to a self-perpetuating process of increasingly inadequate living conditions, most notably in terms of low-quality housing and expensive and poor service provision. This, in turn, encouraged more people to flee these areas. It is important to note that both inner-city and peripheral areas have been written-off by investors (Glock and Hausserman 2004).

Beyond the significant transformation of the housing market, general trends of deindustrialization and depopulation in Eastern Germany since unification are very likely to have also contributed to the vacant housing problem. Yet, problematic vacancy rates have more widely been blamed on the housing market and on government intervention. Importantly, however, it has been highlighted that once vacancies become problematic, the market is usually unable to reverse them. Furthermore, the important weakening of local fiscal capacity brought upon by vacancies has created a powerful case for public policy to address the issue at a higher government level (Glock and Hausserman 2004).

2.3.3 Casas sin Gente, Gente sin Casas: The Spanish Real Estate Model

Before the bursting of the housing bubble in Spain, its finance and real estate development model, based on the creation and appropriation of urban rents, had been touted as exemplary. Some countries in Latin America, for instance, arguably appropriated the Spanish model to confront their housing deficits by financing massive housing construction. Admittedly, some of the commonalities across contexts that made this possible included institutional weakness in relation to private entities, lax finance and development regulations, and access to international capital (Jiménez and Fernández 2014, Gutiérrez and Domenech 2017).

Since the 1960s, publicly-financed housing became a lucrative business in Spain. State actions guaranteed optimal conditions that allowed the construction sector to grow significantly. Since then, the construction of new residential developments has recurrently been used as a fundamental engine to fuel economic growth in the country. After its 1970s crisis, the Spanish economy also experienced a housing bubble in the late 1980s. Yet, the hegemonic model of property-based debt arguably consolidated in the 1980s following the country's entry into the European Union. At the time, there was a lot of pressure for the country to grow economically and to attract capital investment; much of this was achieved through urban development and housing construction.

Public policies also promoted owner-occupied housing and helped propel the property boom from the late 1990s to the late 2000s. A series of deregulations in the 1980s and 1990s authorized commercial banks to expand the length of mortgages and introduced the possibility of turning them into marketable securities. Furthermore, the maximum legal loan-to-value percentage increased as well. Since then, mortgage securitization boomed, as did the mortgage debt to GDP ratio. From 1994 to 2007, Spain's mortgage debt multiplied by twelve. In parallel, from 1998 to 2008, housing prices increased by more than 180 percent, compared to 104 percent in the U.S., another financialized market. In the late 2000s, the country reached the highest levels of residential development in its history, accounting for 11 percent of the GDP and almost 18 percent combining the real estate and financial sectors (Palomera 2014, Gutiérrez and Delclos 2017, Gutiérrez and Domenech 2017).

At the local level, governments had very limited resources, thus, housing construction and urban growth provided them with an important fiscal opportunity, which made them compete for large projects to foster economic growth. Public financial entities, called *Cajas de Ahorro*, also backed these kinds of projects without assessing their profitability. Financial entities expanded credit access for buyers and simultaneously created real estate subsidiaries that sold housing. Many risks were hidden at first, such as leverage issues in the real estate sector, the over-indebtedness of households, the granting of high-risk mortgages, and fraudulent practices such as offering finance for the total cost, or even more, of a housing unit, blindly hoping for its revaluation (Jiménez and Fernández 2014).

Simultaneously, Spain endured a persistent downward pressure on wages. During the housing boom, the average wage in the private sector increased by less than 1 percent whereas capital gains surged by 73 percent. It is also important to note that highly dispossessed populations in Spain were at the center of this housing boom; between 2003 and 2007, when prices were peaking, around one million migrants from the global South were granted mortgages to buy homes. Some better-off households were able to sell their properties at inflated values to migrant buyers, but given the subsequent stagnation of wages and the rocketing of mortgage payments, families often resorted to overcrowding and informal subletting. The working classes in Spain had virtually no housing alternatives as a series of policies increasingly moved towards the privatization of housing production and the promotion of home-ownership over rental housing. An increasing percentage of State housing investment went to tax deductions for the purchase of a property, from 50 percent in the early 1990s to 80 percent in the early 2000s. Furthermore, Spain has practically no public housing; State-subsidized housing only amounts to 1.5 percent of the total stock, compared to 20 percent in England or 17 percent in France. Thus, in the 2000s finance capital penetrated virtually all social sectors, even some of the most vulnerable ones (Palomera 2014, Gutiérrez and Delclos 2017).

As 4 million housing units were built between 2001 and 2008 – far surpassing household formation – the housing boom did not serve the purpose of satisfying the housing demand. In reality, housing price increases have been associated with accelerated housing production at various points in Spain's history. Families were only able to access housing to the extent that they could increase their debt through longer mortgages. Although interest rates dropped in the mid-2000s, in 2008 they then rose significantly, as did mortgage payments. Thus, following the bursting of the property bubble there has been a massive proliferation of evictions. Unemployment growth following the economic crisis made it impossible for an increasing number of families to meet the cost of their mortgage payments. Aided by mortgage legislation, this situation has led to an avalanche of foreclosures and to thousands of families losing their homes. In 2010, delinquency rates were at 2.6 percent for buyers, and around 11 percent for real estate developers. Yet, in 2013, real estate debt rose to 1.1 billion euros, 103.4 percent of the GDP, 61.8 percent corresponding to buyers and 38.2 percent to real estate developers. As a result anywhere from 200 to 400 thousand families have lost their housing since 2008, and many still carry mortgage debt. As a result, between 3 and 6 million housing units are vacant (Jiménez and Fernández 2014, Gutiérrez and Domenech 2017).

Today, Spain sustains a similar paradox to that of a country like Mexico, an oversized housing stock coexisting with a large unmet housing demand. Spain has indeed been one of the countries most hard hit by the recent global financial crisis, and arguably largely due to its property-based debt. Housing issues in Spain have been so profound that they have generated the most important currentcivic mobilizations in the country and possibly beyond. *The Plataforma de Afectados por la Hipoteca* (Platform for Mortgage-affected People) has blocked evictions and occupied empty bank-owned housing. Their mission is to disrupt the core dynamics of urban capital accumulation and to contest financial rent-extraction mechanisms (Palomera 2014, Jiménez and Fernández 2014, García-Lamarca 2017, Gutiérrez and Domenech 2017).

2.3.4 Implications and Significance at Different Scales

Although other, additional research has focused on the issue of housing vacancy, the previous examples have been presented due to their relevance to the present study. Similar to some local contexts in the U.S. (Holway et al. 2014), speculative, unregulated and excess development entitlements in the Mexican context seem to be imposing significant socioeconomic impacts and resulting in a significant increase in vacant housing units. Furthermore, as in Spain (Jiménez and Fernández 2014) and U.S. Rustbelt cities in the past (Galster 2012), fragmented local governments in a number of Mexican metropolitan regions have also allowed the production of new suburban housing to exceed the number of new households, thus facilitating an increase in vacant property. At a larger scale, as seen in eastern Germany (Glock and Hausserman 2004), high rates of vacancy may also be linked to the political and economic restructuring of the country. Arguably, with the aim of providing 'modernized' housing (in both contexts), public policies and investment have partially decoupled housing production or supply from demand.

Generally, and in relation to housing vacancy, economists have been mostly interested in the underlying causes of market failure, and the requirements for efficient market operation or market equilibrium when markets are unable to resolve high levels of vacancy. Yet, very rarely have they tried to incorporate the social or use value of housing into their abstract models (Wheaton 1990). Nonetheless, increasingly scholars, frequently from other disciplines, have recognized and studied the host of negative externalities brought by housing vacancy.

Some research has focused on the neighborhood and community-level consequences of high vacancy rates, which may severely affect the quality of life of residents who endure them. When properties remain vacant for prolonged periods, they tend to fall into disrepair, become neglected, and eventually abandoned, which may pose safety hazards, attract vandalism or generate criminal activity. This can also generate a ripple effect by lowering adjacent property values and by driving the decline of entire neighborhoods in terms of infrastructure and service provision, physical fragmentation, and lack of social cohesion (Cohen 2001, Culhane and Hillier 2001, Glock and Haussermann 2004, Sage 2009, Hollander et al. 2010).

Other scholars have highlighted the burdens of housing vacancy at broader community or city levels. When issues of vacancy extend to multiple communities within a city or metropolitan region, the impacts can be particularly significant for local governments and jurisdictions due primarily to a decline in revenue and an increase in maintenance and even service costs (because of diseconomies of scale). Thus, while it is in their best interest to promote the redevelopment of abandoned properties, localities are often unable to do so. In turn, the local economy and social institutions are also hurt. Furthermore, high vacancy rates, particularly when coupled with sprawling and speculative development patterns, tend to reduce economic productivity. Consequently, ever more vacant, dilapidated, and dangerous areas become progressively less attractive locations for current and potential households and businesses (Cohen 2001, Sage 2009, Galster 2012, Silverman et al. 2012).

Although more structural approaches have focused on analyzing macro-level drivers of housing vacancy, they have often also been interested in their local implications. They have highlighted, for instance, that global capital markets, coupled with federal actions, such as deregulation, have imposed profoundly localized costs on neighborhoods and local communities. They have also critiqued the minimal reach of federal responses (in the U.S.)

to deal with the scale of foreclosed or vacant property, especially when compared to the vast sums allocated to rescuing financial institutions, while local governments are left to pick up the pieces (Immergluck 2011, Galster 2012).

Particularly in the United States, housing dislocation and vacancy have often occurred due to racial segregation and marginalization, particularly in so-called ‘shrinking cities’ along the U.S. rustbelt and most notably in Detroit. Other discussions have centered on the effect of rampant financialization and speculation on vacancy, such as in the Spanish context, and recently after the U.S. foreclosure crisis. In the former cases, housing is often dilapidated or no longer habitable, while in the latter vacancy is often newly created and housing in good condition but inaccessible or no longer valuable as an investment. In the Mexican case, vacancy emerged at a period when the national government was supporting the expansion of credit and production of new housing to meet the housing needs of low and moderate-income households. One may have assumed that, if successful, this would have occurred as assisted households left behind poor quality housing for better, new housing, if we take the purported goal of this approach at face value – to use the exchange value of mortgage-backed securities to foster better quality use-value for residents who need better housing. While this may have occurred to an extent, fueling inner-city vacancy, due to the usual high value and service of such land, this has not emerged as a matter for concern. The chapters below will discuss the actual relationship between such mortgage expansion and rising levels of vacancy, as well as socioeconomic and localized issues related to housing quality and access.

Chapter 3: Research Design and Methods

3.1 Overview of Research Questions and Methods

Housing research in Mexico and other developing countries has centered on enormous unmet housing needs. Less attention has been given to the more recent and massive production of 'affordable' housing which remains inadequate, primarily in terms of its location and access to jobs, amenities, infrastructure and services. Very little research has also focused on the issue of housing vacancy in developing countries, which when above the natural level,[18] points to market inefficiencies and signals a definite waste of a country's scarce capital resources (Struyk 1988). Thus, my core and supporting research questions may be summarized as follows:

What has produced the high rates of vacancy and poor conditions in housing produced under Mexico's current housing finance and development model?

- *What has been the role of national housing finance policy, as well as state and local governments, in promoting housing production, access and vacancy since the implementation of neoliberal reforms in the 1990s?*
- *In what ways have private interests influenced national housing finance policy and state and local urban policy implementation?*
- *What have been some of the spatial and localized implications of recent housing and development policies and trends, particularly in relation to housing vacancy and access?*

[18] Short-term or natural vacancies refer to dwellings awaiting occupation or purchase, and are not considered to be problematic.

- *What have been some of the socioeconomic implications for, and the responses of, low and middle-income residents, government and financing institutions, and developers?*

The matrix below serves the purpose of clarifying and summarizing the relationship of the above research questions to the outlined theoretical framework and research design, all of which are central aspects of the dissertation proposal. The broad theory questions are linked to different authors and theoretical frameworks. In parallel, a further subset of questions is tied to specific research methods which will be discussed in this chapter in further detail.

<table>
<tr><td colspan="3">Central Research Question:
What has produced the high rates of vacancy and poor conditions in housing produced under Mexico's current housing finance and development model?</td></tr>
<tr><th>Supporting Questions</th><th>Theory/Literature & Authors</th><th>Research Methods</th></tr>
<tr><td>What has been the role of national housing finance policy in stimulating housing production, access, and vacancy since the implementation of neoliberal reforms in the 1990s?</td><td rowspan="2">Regime Theory
• Local context: Stone, Flyvbjerg, Imbroscio, Forester
• Counterargument: Peterson
• Mexican/national context: Eckstein
Capitalist Housing Production
• Global context: Harvey, Roy, Sassen, Immergluck, Glock and Hausserman</td><td>• Content analysis of interviews and supporting documents
• Descriptive statistics
• Regression analysis/INFONAVIT report</td></tr>
<tr><td>To what extent have local and state governments promoted housing production, access, and vacancy in recent decades?</td><td>• Content analysis of interviews and supporting documents
• Descriptive statistics
• Regression analysis/INFONAVIT report [19]</td></tr>
</table>

[19] Table 3.1 continues in next page.

In what ways have private interests influenced national housing finance policy, and state and local urban policy implementation?	• Latin American context: Cardoso, Portes, Kohli, Roberts, Wood • Mexican context: Soederberg *Unregulated and Excess Development Entitlements* • US context: Galster, Holway et al.	• Content analysis of interviews and supporting documents • Descriptive statistics • Regression analysis/INFONAVIT report
What have been some of the spatial and localized implications of recent housing and development policies and trends, particularly in relation to housing vacancy and access?	*Issues of Access and Governance since Neoliberal Reform* • Latin American focus: Ward, Wilson, Portes, Roberts, Wood *Housing Vacancy Implications at Different Scales* • Primarily US Literature: Galster, Immergluck, Cohen, Culhane and Hillier, Sage, Hollander, Silverman et al., Holway, Glock and Hausserman	• Content analysis of interviews and supporting documents • Spatial analyses • Windshield surveying
What have been some of the socioeconomic implications for, and the responses of, low and middle-income residents, government and financing institutions, and developers?		• Content analysis of interviews and supporting documents • Descriptive statistics

Table 3.1: Matrix of Questions, Supporting Literature and Methods.

This research draws upon mixed methods that include semi-structured interviews with public officials, housing developers, and civic groups; the content analysis of relevant government documents, policy reports, and public opinion sources; field visits and windshield surveys in neighborhoods with particularly high numbers of vacant homes; and spatial and statistical analyses. Furthermore, these analyses focus on the cases of two states, Baja California and the state of Mexico, chosen for the severity of their vacancy and housing conditions, and for the contrast in the capacity and institutional strength of their local governments and other metropolitan institutions. Within these states, an important focus is also placed on the municipalities of Tijuana and Huehuetoca, respectively.

3.2 Research Design: Mixed Methods, Comparative and Embedded Analysis

As previously noted, this study means to analyze the origins and socioeconomic implications of simultaneous high housing vacancy levels and shortages throughout some Mexican regions. The roles of the public and private sectors in shaping this paradoxical condition and the influence of recent housing finance and production in the country's development patterns are of particular interest for this study. Researchers in fields such as planning, generally benefit from an interdisciplinary approach to understanding highly complex problems and settings. Similarly in this case, multiple variables need to be analyzed from different vantage points to adequately address the above research query. Thus, a mixed-methods approach will be used to triangulate and corroborate different types of data and to increase the validity of constructs and results and the breadth and depth of findings and interpretations.

Triangulation, which refers to the establishment of a robust fact through evidence from multiple sources that coincide, allows an investigator to address a broader range of issues and contributes to a holistic understanding of a particular phenomenon (Gaber 1993, Newman and Benz 1998, Yin 1998 & 2003, Creswell 2003, Flyvbjerg 2004). The use of the quantitative methods outlined below will allow me to test relationships and, to a certain degree, construct generalizations. This is important given the research goal of comprehensively evaluating the outcomes of recent national housing policy. Yet, since quantitative strategies generally cannot explain *why* phenomena occurs, I will also rely heavily on qualitative strategies to more adequately analyze the issue of concurrent housing vacancy and shortages in particular local contexts (Weiss 1999, Shadish et al. 2002, Guba and Lincoln 2005).

3.2.1 Pilot Study: Goals and Preliminary Findings

A pilot study conducted between 2014 and 2015 served to test a number of data collection strategies and research methods. This pilot study provided valuable lessons for both my subsequent research design and field procedures and protocols; it served the purpose of highlighting validity issues and strategies for addressing them. This small-scale study centered on one state, Zacatecas, which had the third highest vacancy rate (18.2 percent) in Mexico in 2010. Around that time, Zacatecas ranked fourth among states with the largest share of its populations living in overcrowded or poor housing conditions. Yet the state's housing budget per inhabitant between 2000 and 2010 was among the lowest. The in-depth analysis of its capital city and metropolitan region was also important given the scale of housing development that occurred there in the 2000s (Figure 3.1).

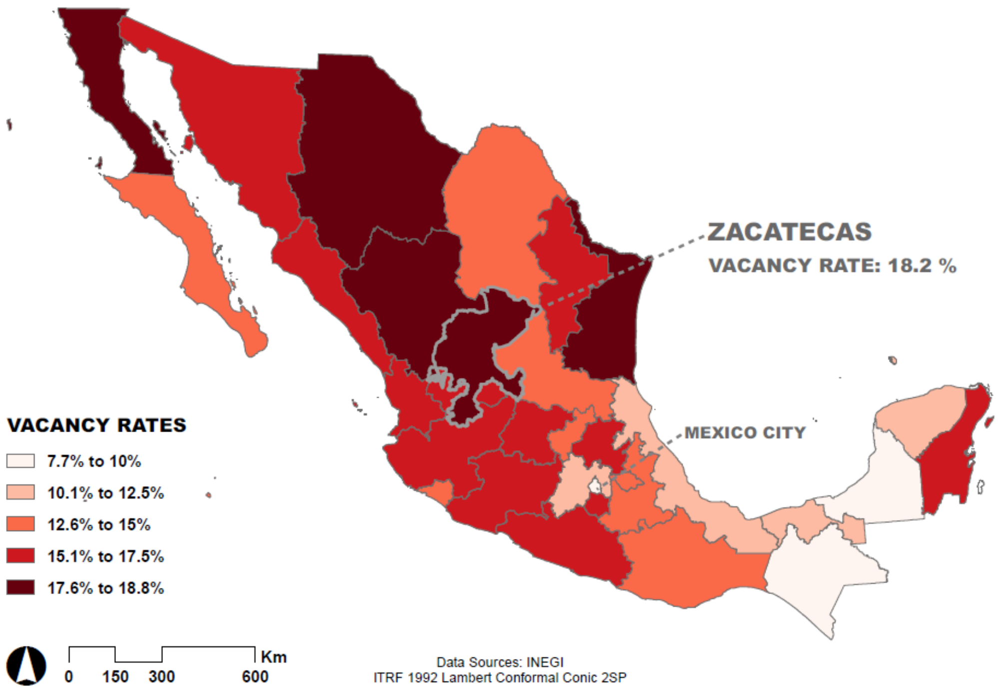


Figure 3.1: Housing Vacancy Rates in Mexico by State in 2010.

I conducted interviews with pertinent state and local government officials and housing developers to better theorize the phenomenon under study and identify the relevant variables for analysis. I also visited neighborhoods in different municipalities with particularly high vacancy rates to document their condition. Furthermore, I carried out a series of spatial and statistical analyses with municipal and census tract-level data from this state and its capital city to analyze population and housing change, locate statistically significant concentrations of vacant housing,[20] and study the correlation between vacancy rates and a number of factors, most importantly the effect of public housing finance on vacancy rates.

[20] Through a hot spot statistical analysis discussed below.

Through this initial data analysis, I uncovered important trends, such as the impressive housing growth in some municipalities during the 2000s, which was not necessarily justified by population growth. Figure 3.2 shows many more municipalities in dark blue on the right hand map, which represents housing change, than on the population change map to the left, suggesting perhaps an overproduction of housing. [21] Zooming in to the metropolitan region of the state's capital, Guadalupe-Zacatecas, we see relatively high vacancy rates throughout the city (Figure 3.3). Furthermore "rural localities", which do not cross a 2,500 population threshold and are thus not incorporated as urban census tracts, were also incorporated to show that some of these areas surrounding the metropolitan region also exhibit high vacancy rates, and some of them are actually new suburban housing developments. On Figure 3.4, a hot spot statistical analysis shows in red high-vacancy concentrations – census tracts that are surrounded by other census tracts with high vacancy rates – all of which are in peripheral areas of the city with limited access to certain services. Lastly, Figure 3.5 shows the housing typologies in these areas, mostly inhabited by lower-middle income households: newly built INFONAVIT-financed housing, incremental housing financed by the state government, and relatively consolidated informal settlements built several decades ago. Thus, the weak nature of local and metropolitan governance, and the influence of state programs and the private sector in housing production were also important preliminary findings that guided my overall study.

[21] In the case of this state, due to its historical migration trends, rural municipalities also exhibited important vacancy rates.

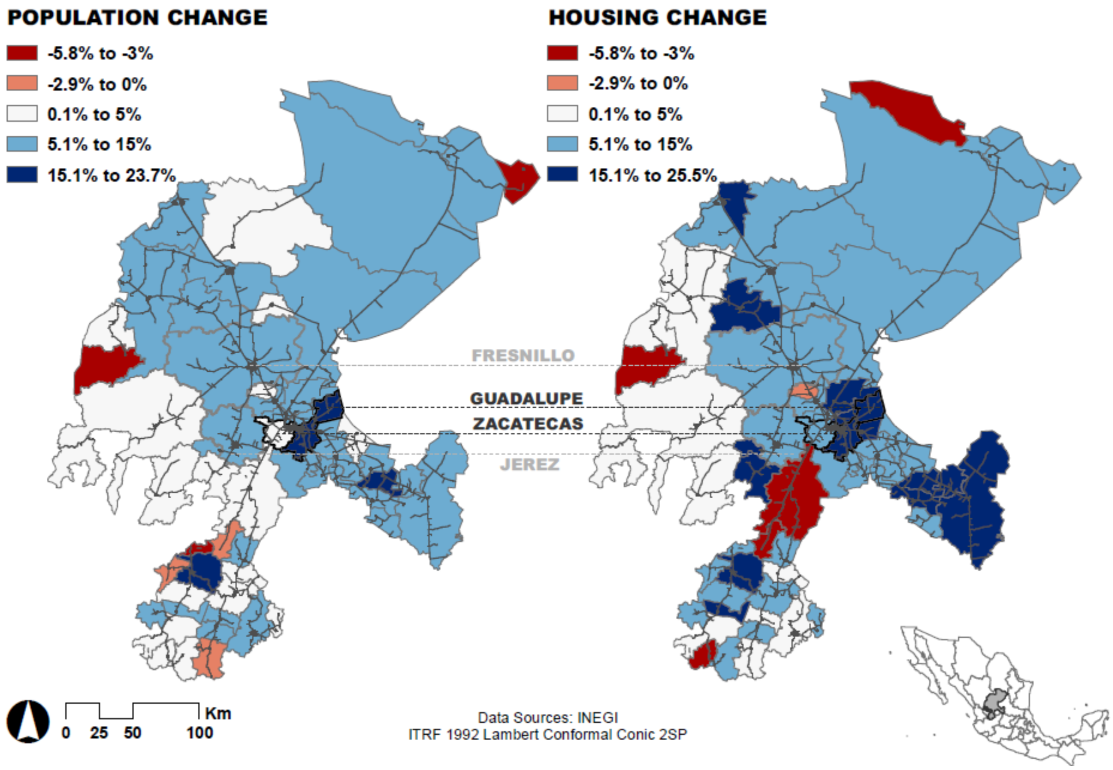
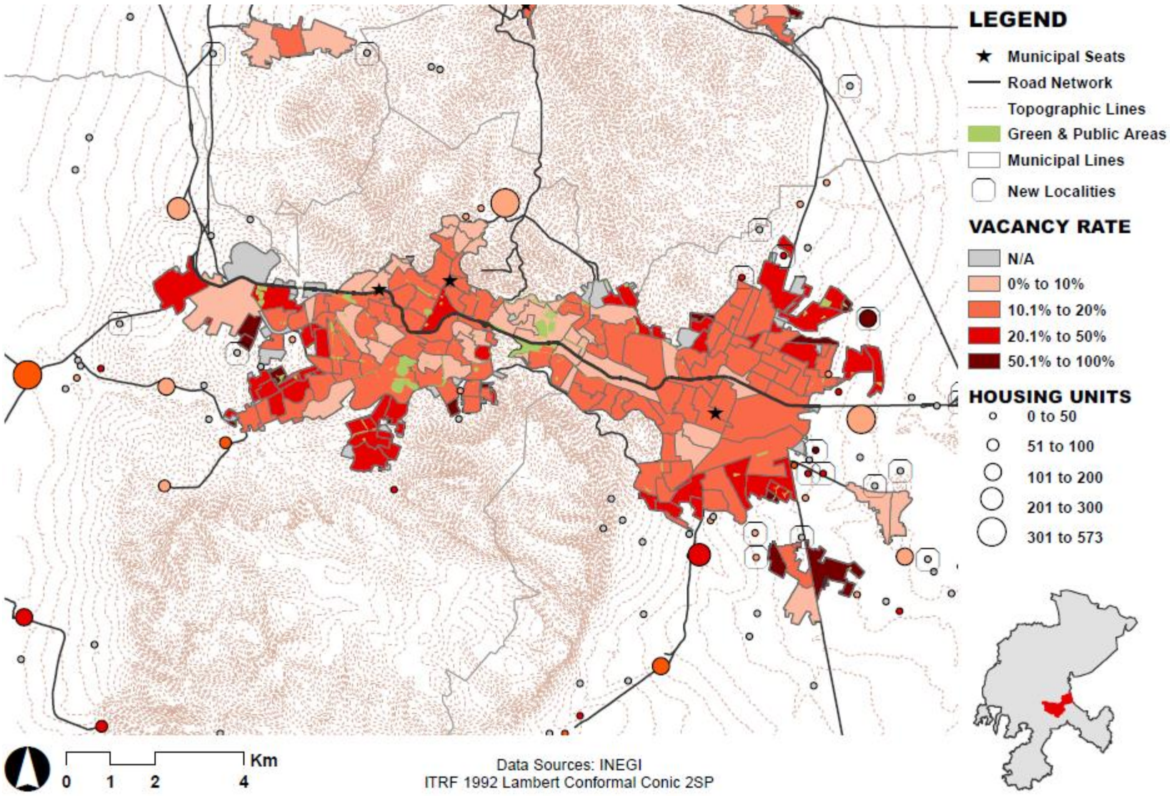


Figure 3.2: Population and Housing Change in Zacatecas from 2005 to 2010.



*Rural localities are defined as those with less than 2,500 inhabitants

Figure 3.3: Vacancy Rates in Guadalupe-Zacatecas and Surrounding Localities in 2010.

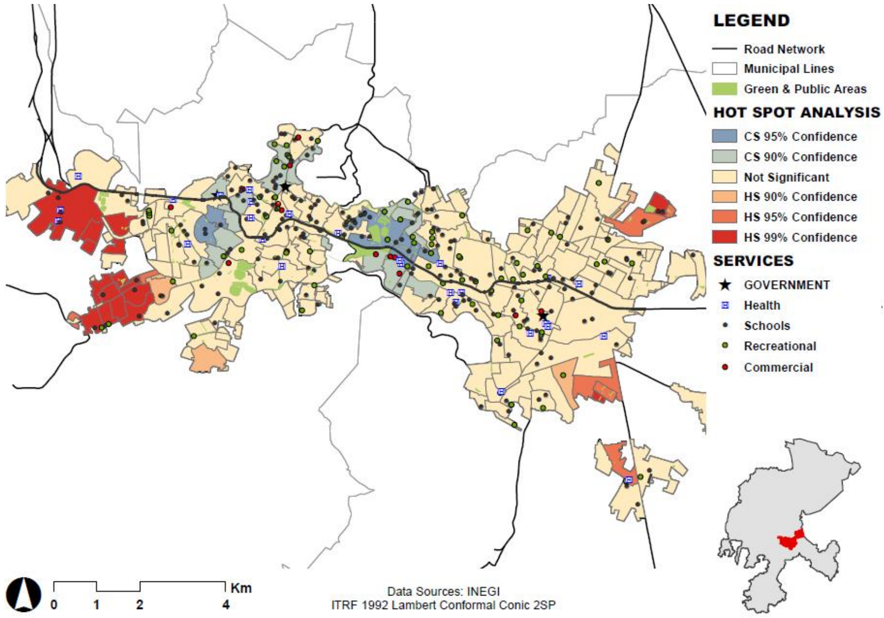


Figure 3.4: Clustering of High Vacancy (Hot Spot Analysis and Service Access).[22]

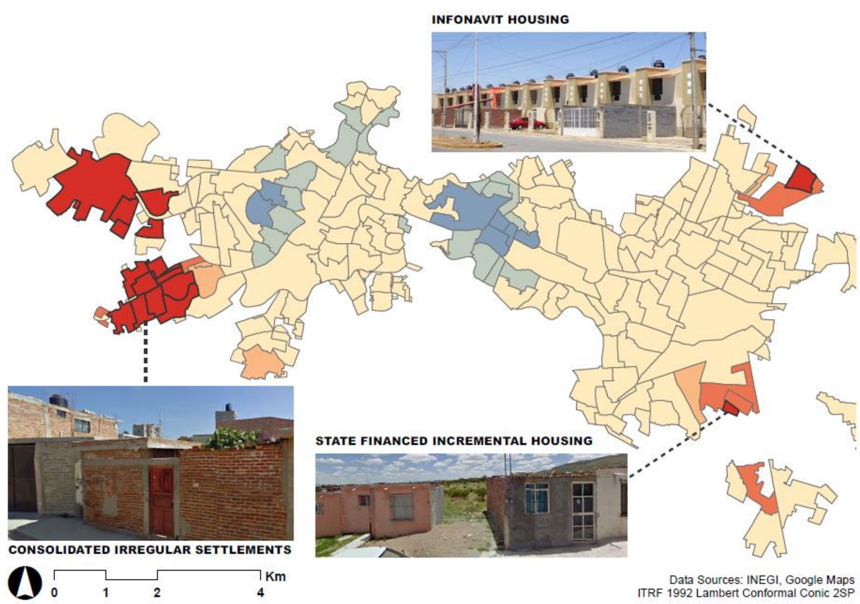


Figure 3.5: Housing Typologies in Areas with High Concentrations of Vacant Housing.

[22] HS: Hot Spots. CS: Cold Spots.

Based on the limited literature and on interviews conducted as part of this study, I also constructed a statistical model that performed well despite the relatively small data set I used, of the 58 municipalities in the state, and which explained a significant proportion of the variation in vacancy rates. The regression model variables are:

Vacancy Rates as a function of:

1. Housing Growth to Population Growth Ratio, 2005-2010 – positive effect
2. Number of Public Loans for New Housing, 2005-2010 – positive effect
3. Loans/Housing Units in 2005 – negative effect (unexpected sign)*
4. Housing Growth Rate, 2005-2010 – negative effect
5. Household Size – negative effect
6. Number of Housing Units – negative effect
7. Density (hab/km2) – positive effect (unexpected sign)
8. Composite Poverty Rate (per capita income, educational attainment, access to healthcare and social services, quality of housing, nourishment level, and inequality) – positive effect
9. Percentage of population with income above 2 minimum wages – negative effect
10. Migration Intensity Index (0-100) – positive effect
11. Homicides per 10,000 people, 2005-2010 – positive effect

* Variable 3, in addition to variable 2, was used as a measure of loan penetration.

The following section will discuss further the performance of this model and the data limitations and circumstances that prevented me from extending this portion of my study.

Besides providing an important point of reference for analytical purposes and preliminary research findings, this pilot study allowed me to fine-tune a number of my data collection strategies and instruments. For instance, I was able to clearly identify the most important actors to interview at different levels (Table 3.2). I also significantly modified my interview questions and expanded my interview groups to include housing organizations.

<table>
<tr><th>State Level</th><th>Local/Municipal Level</th></tr>
<tr><td>INFONAVIT delegates
SEDATU delegates[23]
Urban Development Officials
Housing Department Officials
Major regional developers</td><td>Planning Officials
City Services and Infrastructure Officials
Social/Economic Development
Major local developers</td></tr>
<tr><td colspan="2">Housing/Civic Organizations
(El Barzón, Frente Mexiquense, Movimiento Urbano Popular, TECHO, Habitat International Coalition)</td></tr>
</table>

Table 3.2: Interviewees.

3.2.2 Research Methods and Limitations

Given that vacancy rates are present throughout the country, and to increase the robustness of my findings, I selected two other Mexican states with significant housing vacancies and shortages for further study. After carefully analyzing a variety of statistics and conditions, Baja California and the State of Mexico (Estado de México) were selected for their critical and strategic importance in relation to the problem under study. The heaviest emphasis was placed on absolute and relative measures of housing vacancy, housing shortages, and public housing finance. Such information-oriented selection, or strategic sampling, was used to maximize the utility of the field research and acquired data, and to provide greater weight to the research's generalizations. Yet, this study proposes analytical, rather than statistical, generalization, through the analysis of comparable cases (Eisenhardt 1989, Yin 1998, Campbell 2003, Flyvbjerg 2004, Small 2009).

[23] Urban and Regional Development Ministry.

I proposed the analysis of these states in relation to the broader (e.g. national and global) social forces shaping the conditions under study, which allowed me to formulate more compelling empirical statements (Small 2009). To begin with a state-level analysis was important because states have federal housing (INFONAVIT) and urban development (SEDATU - Urban and Regional Development Ministry) offices. Similarly, housing and urban development departments exist at this level, usually as an under secretariat of an infrastructure or similar department. Developers also often operate at a regional or state level. Thus, development decisions are arguably largely influenced by state actors, which will be interviewed in each state, whereas municipal governments are often weak and, in the case of metropolitan regions, highly fragmented (Ward et al. 2010, Wilson et al. 2012). Nonetheless, municipal level authorities were also interviewed. Furthermore, a state level analysis also allowed me to uncover rural-urban disparities, which are important to highlight, particularly in reference to national housing policy.

Baja California, in the northwest corner of the country, may be regarded as an extreme case given that it had the highest vacancy rate in 2010 (18.8 percent), the second highest percentage of its population living in poor or overcrowding conditions, and the fourth highest public finance level (budget/population) for new housing between 2000 and 2010.[24] Extreme cases are useful because they often challenge existing analytical assumptions, and present pioneering paradigms (Campbell 2003). Within Baja California, special attention was also placed on Tijuana (1,559,683 inhabitants and 20.3 percent

[24] Baja California used 95 percent of its housing budget from 2000 to 2010 for new housing construction, 3 percentage points higher than the national level.

vacancy rate in 2010),[25] where local authorities and actors were also be interviewed, and where further data gathering and analysis (outlined below) took place.

Municipality	Population	Vacancy Rate
Huehuetoca	100,023	0.4495
Zumpango	159,647	0.3995
Tecámac	364,579	0.2581
Cuautitlán	140,059	0.2257
Chalco	310,130	0.2058
Chicoloapan	175,053	0.2018
Ixtapaluca	467,361	0.1864
Almoloya de Juárez*	147,653	0.1714
Coacalco de Berriozábal	278,064	0.1663
Tultepec	131,567	0.1583
Acolman	136,558	0.1505

*All municipalities, except Almoloya de Juárez, are in Mexico City's metropolitan region. Almoloya is, however, part of the metropolitan region of Toluca, capital of the state and site of a maximum security prison.

Table 3.3: State of Mexico Municipalities with over 100,000 Inhabitants and above National Average Vacancy Rates.

Source: Instituto Nacional de Estadística y Geografía (INEGI).

The State of Mexico, which surrounds Mexico City, is a very heavily populated state, and arguably for that reason it does not perform as poorly as other states in the most important metrics under scrutiny (e.g. 12 percent vacancy rate). In absolute terms, however, the state had the largest number of vacant housing units in 2010, the second largest housing budget for new housing construction from 2000 to 2010,[26] and the third highest number of households living in overcrowded or poor housing conditions. Furthermore, when looking

[25] Tijuana's metropolitan region is the sixth most populated in the country (in 2010 it had a population of 1,751,430) and it is composed by three municipalities: Tijuana, Tecate, and Playas de Rosarito. Yet, most of the region's economic units (87.5%), employed population (90.6%), and total gross production (90.8%) is in the core municipality of Tijuana.

[26] Estado de Mexico used 93 percent of its housing budget from 2000 to 2010 for new housing construction, 1 percentage point higher than the national level

at municipalities with over 100,000 inhabitants, the state has eleven with above (national) average vacancy rates, ten of which form part of Mexico City's metropolitan region. Huehuetoca (100,023 inhabitants and 45 percent vacancy rate in 2010) was thus chosen for further embedded local-level analysis.

As briefly outlined before, a central portion of this study is qualitative and has been largely based on a series of semi-structured interviews (in each state and municipality) with pertinent state and local public officials, housing developers, and members of civil society either affected by or involved in addressing the housing conditions under study. The qualitative data collected from these interviews served to deepen my understanding of the phenomenon under study significantly, and to uncover some of the implications of high levels of housing vacancy and shortages of adequate housing felt by different levels of government, financing institutions, developers, and residents. Appendix B provides both the interview questions for public officials and housing developers used in the pilot study and in the research reported here on Baja California and the State of Mexico. Most interviews were audio recorded (when participants agreed, only one refused) and transcribed for subsequent analysis. This analysis has been complemented with content analysis of pertinent documents, such as urban development plans and housing programs, mostly existing at the state and federal levels,[27] housing and development reports (typically

[27] In Baja California, for instance, the most important document to review are the state's urban development law, *Ley de Desarrollo Urbano del Estado de Baja California*, published in 1994, and the real estate and housing regulatory estatutes, *Reglamento Interno del Instituto para el Desarrollo Inmobiliario y de la Vivienda del Estado de Baja California*,updated in 2010. As mentioned before, however, Tijuana's metropolitan region does have a guiding urban development institute and plan, *Programa de Desarrollo Urbano del Centro de Poblacion Tijuana, B.C. 2008-2030* (IMPLAN). Estado de Mexico also has an urban development plan, *Plan Estatal de Desarrollo Urbano*, from 2008, and a regional plan for its urban share of Mexico City's metropolitan región, what they call the Cuautitlan-Texcoco Valley, from 2005, *Plan Regional de Desarrollo Urbano Cdel Valle Cuautitlan-Texcoco*. Large municipalities also often have zoning, land use, and other relevant documents and plans. Federal level documents such as the Housing Law of 2006 and reformed in 2015 for the last time, the National Urban Development plan (2014-2018), and INFONAVIT's law (1972) reformed in 2014 for the last time, will also be analyzed.

drafted by international organizations or financial institutions), and public opinion sources (e.g. newspaper accounts).

The quantitative portion of this study includes different units of analysis. Census and government data have been analyzed through descriptive statistics and spatial analyses to begin to illustrate relevant information at different scales, such as socioeconomic conditions throughout a state, housing shortages and vacancy rates. The Federal Mortgage Association defines Mexico's housing shortage as the number of households living in overcrowded (two or more households per unit) or poor housing conditions (due to precarious construction materials such as dirt floors and other nondurable materials). Contrasting population and housing unit changes helped to reveal a likely housing oversupply, as found in the pilot study as well. Similarly, the spatial concentration of housing vacancy was assessed through spatial statistics. A more sophisticated analysis was also used to spot statistically significant clusters of high housing vacancy in Tijuana and Huehuetoca to determine the locations and typologies of such housing, as well as the relative isolation, marginalization, and infrastructure and services access levels of these areas. The previous section includes selected maps from Zacatecas' pilot study that illustrate some of the spatial analyses that informed these research methods (i.e. hot spot analysis).

A statistically significant and fit OLS regression model ($R^2 = 0.825$) was constructed during the pilot study phase to predict the effect of a number of factors (11 variables outlined in the previous section) on explaining vacancy rates. The scale of public housing financing available (variable 'Loans 05-10' on Figure 3.6) proved to be positively correlated with vacancy at a statistically significant level ($p<0.001$). The 58 municipalities of the state of Zacatecas were used as the units of analysis because it is at this level where data are most complete. It was clear, however, that increasing the sample size of this study would be beneficial for a variety of reasons, including to extend the scope of the analysis and to better support making generalizations based on the results.[28] Thus, I intended to increase the sample size by including municipalities from the other states under analysis (Figures 3.6-3.7).[29] Yet, besides significant data limitations, this proved unnecessary since INFONAVIT published a statistical analysis very similar to this one at the national level in 2016. I will summarize and make use of these data below, particularly in Chapter 5.

Source	SS	df	MS		
				Number of obs =	58
				F(11, 46) =	19.65
Model	.272338115	11	.02475801	**Prob > F =**	**0.0000**
Residual	.057954227	46	.001259875	**R-squared =**	**0.8245**
				Adj R-squared =	0.7826
Total	.330292342	57	.005794602	Root MSE =	.03549

VacancyRate	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
HtoPRATIO~10	.0012874	.0007224	1.78	0.081	-.0001667	.0027416
HousCH05_10	-.2047491	.0853253	-2.40	0.021	-.3765	-.0329982
Loans05_10	.000017	6.48e-06	2.62	0.012	3.94e-06	.00003
LoanPen	-.3583376	.1903828	-1.88	0.066	-.7415582	.024883
HHSize	-.2090239	.0273686	-7.64	0.000	-.264114	-.1539338
HousingUnits	-1.28e-06	7.29e-07	-1.76	0.085	-2.75e-06	1.86e-07
hab_km2	.0001966	.0001598	1.23	0.225	-.000125	.0005182
PovRate	.0027034	.0007611	3.55	0.001	.0011713	.0042356
MORE2sm	-.0011955	.0005981	-2.00	0.052	-.0023994	8.28e-06
IIMig0a100	.0124474	.0022975	5.42	0.000	.0078227	.0170721
Homici~10000	.000207	.0014129	0.15	0.884	-.002637	.0030511
_cons	.8341924	.0871888	9.57	0.000	.6586904	1.009694

Figure 3.6: Statistical Significance and Fitness of Results.

[28] By reducing the standard error.

[29] The model performs well despite the use of a fairly small data set (n=58), and is thus able to explain a significant proportion of the variation in vacancy rates. The model does not present serious OLS problems, but it is affected by the presence of outliers (Appendix I), which given the small sample size is problematic and may lead to problems of inference. Yet, a larger sample size could normalize the residuals of the model and yield fairly significant results. Similarly, the inclusion of the municipalities of Estado de Mexico, which has a more normal distribution of municipalities (given that it has many heavily populated municipalities, as well as several smaller ones), is likely to address the two main issues present in the model: outliers and non-normality of error terms.

	(1) VacancyRate	(2) VacancyRate
HtoPRATIO~10	0.00129	0.00129**
	(0.000722)	(0.000454)
HousCH05_10	-0.205*	-0.205
	(0.0853)	(0.109)
Loans05_10	0.0000170*	0.0000170***
	(0.00000648)	(0.00000425)
LoanPen	-0.358	-0.358*
	(0.190)	(0.166)
HHSize	-0.209***	-0.209***
	(0.0274)	(0.0307)
HousingUnits	-0.00000128	-0.00000128*
	(0.000000729)	(0.000000555)
hab_km2	0.000197	0.000197*
	(0.000160)	(0.0000927)
PovRate	0.00270***	0.00270***
	(0.000761)	(0.000741)
MORE2sm	-0.00120	-0.00120*
	(0.000598)	(0.000486)
IIMig0a100	0.0124***	0.0124***
	(0.00230)	(0.00226)
Homici~10000	0.000207	0.000207
	(0.00141)	(0.000993)
_cons	0.834***	0.834***
	(0.0872)	(0.106)
N	58	58
R-sq	0.825	0.825

Standard errors in parentheses
* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Figure 3.7: Statistical Significance of Results after Correcting for Heteroscedasticity with White's Robust Standard Errors.

The simplicity of the present model had many benefits, such as the ease through which one may interpret results. Yet, and potentially beyond the scope of this analysis, the phenomenon under study lends itself for much further inquiry. More complex simultaneous equation models, for instance, may substantiate some of the implications of current housing vacancy rates in Mexico, given that they could uncover not only the influences, but also the consequences of vacancy rates on other given variables. Furthermore, hierarchical models may perhaps also allow for the incorporation of a more disaggregated unit of analysis, such as census tracts, to distinguish, for instance, the role that housing location (e.g. in peri-urban areas) may be playing on vacancy rates. Finally, a housing market model could also further corroborate a supply and demand mismatch in the Mexican context and serve to analyze the range of supply side factors (e.g. public policy, financial mechanisms, etc.) that could be tied to this.

However, data availability poses significant limitations to adequately test these models. Perhaps the most worrisome data constraint was that the Mexican census did not publish vacancy rates for 2015, as it had done previously for the 2010 census and the 2005 population count. I requested access to such data but I was only able to obtain aggregated data at the state level and these data combined information on vacant units with temporary housing.[30] I sent a formal petition making use of the *Federal Law of Transparency and Access to Public Information* to request disaggregated data at the municipal, and census tract levels, but was informed that such data were not produced given the changes in the collection procedures for 2015 data. Thus, I conducted windshield surveys to approximate vacancy rates in selected neighborhoods within the chosen municipalities. The data gathered is thus not comparable to census data but this strategy did prove to be very illuminating and allowed me to document current conditions along with other qualitative information which will be discussed throughout the dissertation.

3.3 The Case Studies

Before introducing the final case studies more fully, this section provides a more detailed discussion of some of the other housing, demographic, economic, social and political factors taken into account in my case selection process. Table 3.4 includes information on five of the states that I initially considered given their performance on housing investment and production, access and vacancy. Jalisco in particular, for instance, offers an interesting

[30] The aggregated percentage of vacant and temporary housing is 24.4 percent at the national level, given that this figure was 19.7 in 2010, one may assume that vacancy rates also went up in this five year period.

analytical case because although it had high housing investment in the 2000s and high vacancy rates in 2010, it had relatively low housing shortages. Thus, it could have offered a good opportunity for comparison. Michoacán, on the other hand, had a very high Housing to Population Growth ratio, indicating perhaps a particularly significant overproduction in that state. Yet, both Jalisco and Michoacán, as can be seen below, are states where migration is very intense, a factor that has been correlated with housing vacancy in the Mexican context but that is not a main focus of this study. One would think that Baja California, a border state, would also have that characteristic, but although it has an important itinerant population and has an important level of integration with the U.S. state of California, the mobility of its population is arguably more dynamic.

Shortage Change (Relative) 2008-2012		
	National	***-0.01***
10	**México**	**-0.03**
12	**Baja California**	**-0.02**
22	Jalisco	0.03
25	Quintana Roo	0.04
26	Michoacán	0.05

Housing to Population Growth Ratio 2005-2010		
	National	***4.30***
2	Michoacán	7.34
16	Jalisco	4.18
18	**México**	**4.02**
20	**Baja California**	**3.88**
31	Quintana Roo	2.45

2006 Governors and Party Alternation since 1989		
Baja California	**PAN**	1
Jalisco	PAN	2
México	**PRI**	**0**
Quintana Roo	PRI	0
Michoacán	PRD	2

Percentage of National GDP 2003-11		
2	**México**	**9.33**
4	Jalisco	6.68
12	**Baja California**	**3.02**
15	Michoacán	2.45
22	Quintana Roo	1.49

Migration Intensity Ranking 2010	
3	Michoacán
13	Jalisco
18	**Baja California**
24	**México**
30	Quintana Roo

Average Yearly Murder Rate 2000-10 (per 100,000)		
	National	**11.28**
4	**Baja California**	**21.81**
7	Michoacán	15.61
10	**México**	**12.06**
15	Quintana Roo	8.35
17	Jalisco	7.40

Table 3.4: Additional Statistics and Considerations for Case Selection.

The chosen case studies have other notable features that were well suited to my purpose. Notably, they both have a similar housing to population growth ratio of around four, meaning that the number of housing units in these states grew four times faster than their populations in the late 2000s during the peak of the country's housing boom, as occurred at the national level. They also represent an important percentage of the national GDP; in the case of the State of Mexico, this is largely driven by its large population size. Their actual growth, however, in both economic and demographic terms (particularly that of Tijuana, Baja California), was much more significant in the 1990s than in the 2000s (Table 3.5). Furthermore, while they seem to attract investment and perform relatively well in economic terms, they both confront very significant social ills. While housing is at the center of this study, both cases have severe issues related to insecurity and violence, for example. These contrasts are particularly stimulating and related to the queries that this research aims to address, as are the local and state politics that the selected case studies embody. The State of Mexico is one of the few states that only been governed by the PRI. This lack of political pluralism has arguably contributed to weak institutional development and to profound governance issues. In contrast, since 1989 Baja California has consistently elected to state government representatives of the PAN – a right-wing and pro-development party. These political and social factors have definitely played a role in recent housing and urban development in the regions under study.

Metropolitan Area	**State(s)**	**Population Growth Rates**		**Surface**	**Density**
		1990-2000	2000-2010	(km2)	(hab/ha)
ZM de Tijuana	Baja California	5.4	2.5	4 422.7	85.0
ZM del Valle de México	D.F.-Hidalgo-México	1.7	0.9	7 866.1	160.1

Table 3.5: Population Growth and Urban Extension and Density by Metropolitan Region.

3.3.1 Tijuana, Baja California

As previously mentioned, Baja California had the highest vacancy rate in 2010 (18.8 percent), the second highest share of households enduring poor housing conditions, and the fourth largest allocation of financing per capita for new housing construction from 2000 to 2010. This state embodies a particularly unique case because 98 percent of its population is urban. Urban areas generally attract industry and house a greater percentage of formal workers who are more likely to qualify for a housing mortgage. This partly explains the relatively large amount of housing credits attracted by the state in the 2000s. Although only about 20 percent of Mexicans can access housing credits, this percentage increases to 35 in Baja California. Furthermore, the state was governed by the same party lines with the federal government in the 2000s, and has been characterized by its strong pro-development stance. The high expectations for growth in the *maquila* industry after the signing of NAFTA might also have incentivized housing construction in the 2000s.

Within this state, an important focus of this study is placed on Tijuana (20.3 percent vacancy rate), which is the state's largest city and has historically absorbed a majority of Baja California's housing funds. Tijuana borders the city of San Diego, California and it is the largest metropolitan area along the U.S.-Mexico border.[31] The city grew particularly fast during the 1980s. Although the government built some low-income housing in the 1990s, rapid population growth contributed to the formation of numerous informal settlements. Service provision, therefore, and in particular water access, has been very limited in various areas of the city. In the 2000s, the city's urban growth was highly

[31] Including the municipalities of Playas de Rosarito and Tecate, it has a population of 1.75 million inhabitants expected to grow to 2.34 million in 2030.

expansive; its annual housing growth more than doubled its population growth and in the early 2000s the city grew an average of 10 acres (4 hectares) a day. During this decade, INFONAVIT granted around 30,000 housing credits a year (INFONAVIT delegate 2016: personal interview).

Given its size and economic importance, Tijuana's local government is also relatively strong when compared to other Mexican municipalities, although the private sector has considerable influence in development matters in the city and state. Notably, the city opened one of the first metropolitan governing institutions (IMPLAN) in the country. Nonetheless, the local government also faces important revenue and service and infrastructure provision challenges, most notably related to water access. Furthermore, only 38 percent of its income came from its own revenue sources (property taxes and service provision) in the 2000s. Furthermore, compared to past decades and other major Mexican cities, Tijuana is losing its competitive advantage (IMCO 2011).

Its proximity to the U.S. and the availability of a cheap labor force promoted the growth of the *maquila* industry in Tijuana, particularly during the late 1990s and early 2000s. Yet, this employment boom arguably failed to provide stable, long-term and well-paying jobs. Instead, over 62 percent of its economically active population is employed in the service sector. Furthermore, although it has an unemployment rate of 5.4 percent, 22.6 percent of its population earns less than two minimum salaries (about 8.5 USD/day), a standard metric used to indicate a very low-income in Mexico. The 2008 economic crisis hit Tijuana and other border cities especially hard (ONU-Habitat 2016). Shortly thereafter, some of the largest housing developers in the country, with a strong presence in the region, started to experience financial troubles and left thousands of unfinished housing units in the city and the state.

3.3.2 Huehuetoca, Estado de Mexico

The state of Mexico had the largest number of vacant housing units in the country in 2010 (11 percent of the national share), received the second largest amount of housing finance for new construction from 2000 to 2010 (9.2 percent of the national share), and had the third highest number of households enduring poor housing conditions. Since the 1980s, 97 percent of the population growth in Mexico City's metropolitan region has occurred in this state; during this time, the metropolis expanded its territory 3.6 times. In the 2000s, the annual housing growth rate of the metropolitan region was of 5.4 percent, whereas its annual population growth was only 2.2 percent. Most of the Mexico City metropolitan area's housing growth occurred in the State of Mexico in a sprawling and unplanned manner. Services and infrastructure have generally been particularly deficient in the state of Mexico. In terms of public transit in the region (subway, light rail and BRT systems), for instance, 83 percent of the coverage is found in Mexico City and only 17 percent in the state of Mexico. Yet, 56 percent of the metropolitan population lives in an area that is 4 times bigger than that of Mexico City (Medina Ramírez 2017).

Although the Mexican president and former governor of the state of Mexico, Enrique Peña Nieto, has recently criticized the housing policy of his presidential predecessors, his own state policy at the time was very much aligned to theirs. During his administration (2005-2011), he launched a project called Bicentennial Cities that included six largely rural municipalities[32] in the state to promote the modernization of their real estate and construction industries. These municipalities were chosen for their strategic location surrounding the Mexico City and Toluca metropolitan regions, and their proximity

[32] Huehuetoca, Tecámac, Jilotepec, Zumpango, Almoloya de Juárez and Atlacomulco.

to national highways that connect the country from east to west. This project was presented in a series of comprehensive development plans, with economic and infrastructure components. Yet, when offered cheap and vast amounts of land, some of the country's major developers built dormitory suburbs for low-income residents. Although they were arguably envisioned as self-sustaining satellite cities, today they face several issues regarding mobility, service access, economic development and housing vacancy and abandonment. Housing construction in these municipalities has slowed down but continues, particularly in areas that have been able to attract some industry (Villamil 2010, Alcántara 2013).

One of these municipalities – Huehuetoca (45 percent vacancy rate) – experienced very significant housing development in the 2000s and is located on the northern portion of Mexico City's metropolitan region. It was selected for further local-level analysis. In the 2000s, Huehuetoca experienced the highest population and housing growth rates in the metropolitan region, 10 and 20.8 percent, respectively, through the development of large housing complexes on previously agricultural lands. During the 2000s, Huehuetoca's population grew from 38,458 inhabitants to 110,023[33] and its housing stock from 7,958 to 52,841. Currently, the municipality has 33 housing developments and 85 thousand authorized housing units. Some of these new lower-middle income housing developments have high concentrations of vacant and abandoned housing (Huehuetoca Urban Development official 2016: personal interview).

Given their small size and economic performance, municipal governments like Huehuetoca tend to have very limited resources and a weak institutional capacity. Furthermore, metropolitan governance is highly fragmented with different regional plans

[33] With a population of 128,486 in 2015, it is expected to grow to 173,524 inhabitants in 2030.

drafted by Mexico City and the state of Mexico. Yet, for its size, Huehuetoca has a relatively high 40 percentage of its budget stemming from its own income (IMCO 2011). Of its economically active population, 57.8 percent works in the service sector, 34 in the manufacturing sector, and 5.7 percent in the primary sector (e.g. agriculture). Economically, however, the municipality is strongly dependent on employment from Mexico City and the urban agglomeration of Tula-Tepeji in the state of Hidalgo. This increases commuting times and expenses considerably for many residents. Housing development also produced very significant land use changes in this municipality, as well as changes in the local economy, which only a few years ago was primarily based on farming. While the unemployment rate in Huehuetoca is only 4.9 percent, almost 32 percent of the population earns less than two minimum salaries (ONU-Habitat 2016b).

The three graphs below (Figures 3.8-3.10) paint a very interesting picture. Particularly at the national and state levels, population growth rates were not the drivers of the impressive upticks in housing growth since around the turn of the millennium. Thus, this unprecedented housing push was not sustainable, although Huehuetoca has sustained it somewhat longer than Tijuana. These contrasts support the case for studying the housing and development patterns of such different municipalities. Although their different sizes and natures make their analytical assessment complex, their analysis will yield a richer level of understanding of how higher level housing and development policies operate in diverse local and sociopolitical settings. While studying Baja California and Tijuana allows understanding of a case paralleling national trends, the Huehuetoca case allows for more fine-grained review at a smaller scale using available data. Neighborhood scale analysis would not be feasible, both in terms of data availability and institutional complexity in the Mexican context.[34]

The main objective of this research is to analyze the influence of various public and private agents, at different levels, on housing development, access, and vacancy since the implementation of the neoliberal reforms of the 1990s. In parallel, it examines some of the socioeconomic implications for low and middle-income residents, government and financing institutions, and developers, as well as their more recent social and institutional responses. Thus, the present study intends to fill an important gap in the understanding of the relationship between market-driven housing policies and their implications at the local level, particularly as they have manifested in the Mexican context.

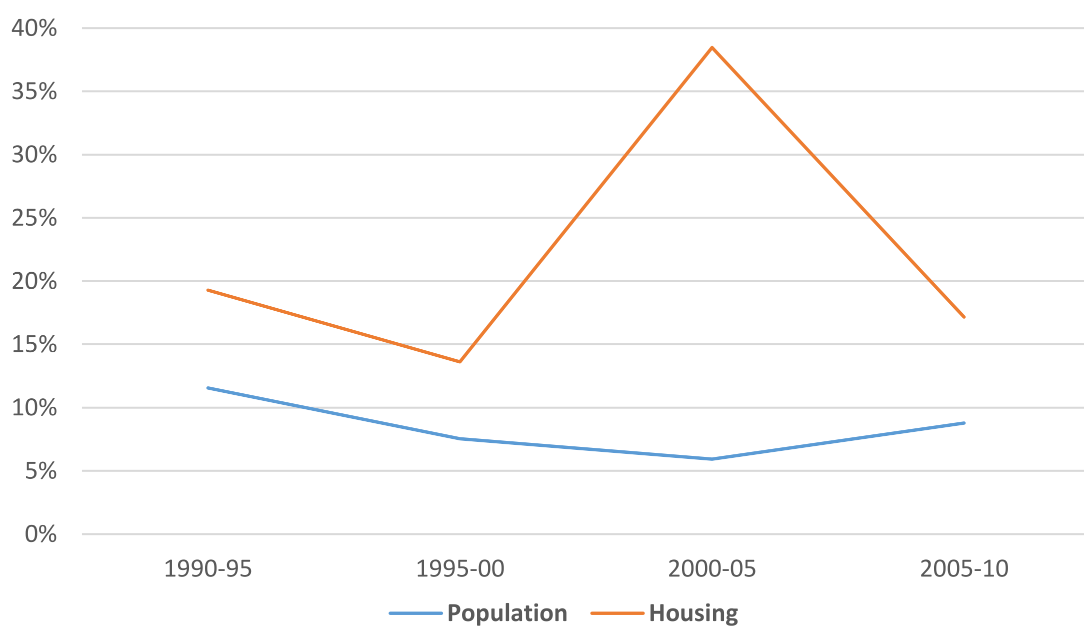


Figure 3.8: National Population and Housing Growth Rates.

[34] Neighborhood Plans or Organizations, for instance, are extremely rare in Mexico.

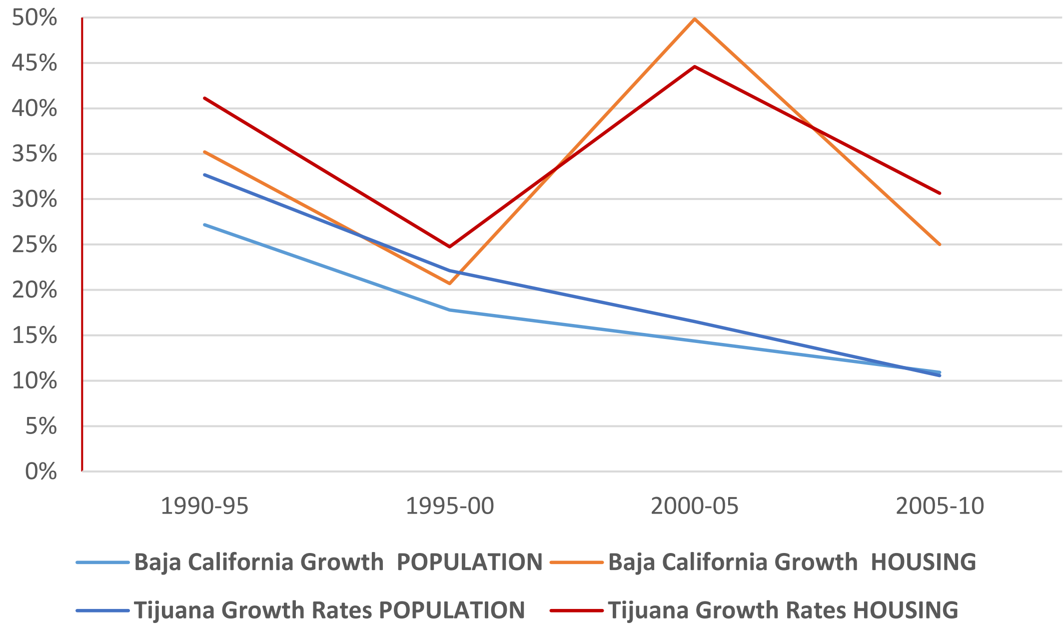


Figure 3.9: Tijuana and Baja California Population and Housing Growth Rates.

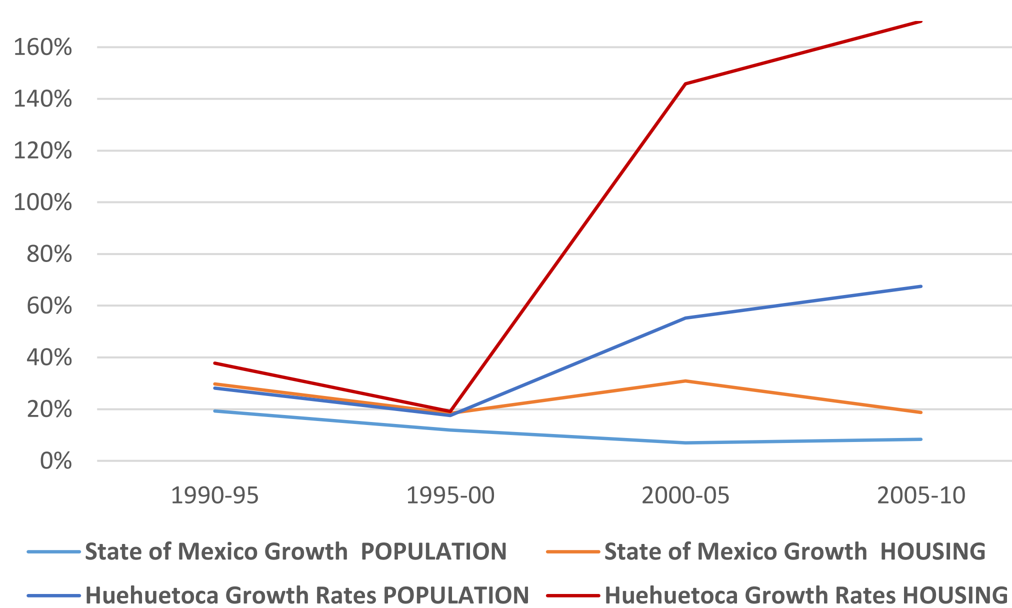


Figure 3.10: Huehuetoca and State of Mexico Population and Housing Growth Rates.

Chapter 4: Housing Finance and Credit Expansion in Mexico's Neoliberal Era

This chapter discusses a major shift in Mexico's housing policy and development model. Starting in the 1990s, the national government, driven largely by macroeconomic forces, implemented a series of neoliberal housing reforms to promote credit liberalization and mortgage expansion. These policies accelerated housing production and facilitated the rise of private capital and development companies. Yet, this new housing remained inaccessible to very low-income, informal and rural populations, typically enduring the most detrimental living conditions. Furthermore, despite parallel decentralization efforts, local governments had very limited fiscal and institutional capacity to manage new housing development, which lead to the construction of poor quality housing in remote areas with limited access to adequate infrastructure and services. Similarly, housing development occurred with no civic involvement or consultation. The largest housing developers in the country eventually faced significant financial troubles due to leverage issues and a supply-demand imbalance, among other issues. The following chapter will provide a detailed analysis of the significant implications that arose at different scales due to this latter downturn. I first introduce the chapter's main themes, which are then discussed in more detail in subsequent sections.

As a product of economic crises and the Washington Consensus, housing reforms in the 1990s and early 2000s sought to restrict public involvement in housing production and liberalize Mexico's housing market. Since 1972, when INFONAVIT was founded, the institute was directly involved in housing construction and development.[35] Yet, in 1990 INFONAVIT began its transformation into a fiscally autonomous mortgage agency,

[35] The INFONAVIT was founded by law to exercise the constitutional mandate of securing Mexicans' right to adequate housing.

primarily to finance the purchase of new dwellings.[36] To improve efficiency and increase its returns on investment, the institute passed its management to professionals recruited from the financial sector, established more rigid sanctions against delinquent mortgages, increased its lending volume, and instituted longer loan terms, higher credit caps and interest rates indexed to inflation (Coulomb and Schteingart 2006).

Additional reforms fostered the expansion of the private construction and real estate industries, which had suffered during the 1994 crisis when banks ceased lending, by facilitating access to loans for participating developers, offering construction loans connected to mortgages, and assisting builders with state and local permitting processes as well as with land acquisition. The communal *ejido* tenure system, created during the Mexican revolution with the purpose of land redistribution, was also dissolved to allow for the privatization and development of rural land surrounding Mexican cities. International institutions, such as the World Bank and the International Monetary Fund, along with the federal governments of the 1990s and 2000s, argued that liberalization and credit expansion, as well as mass and private housing production would help Mexico address its extreme housing shortages (IMF 2008).

INFONAVIT became the largest housing finance institution in the country and drove a significant acceleration in housing production. Despite the 1994 economic crisis, the institute more than doubled the number of mortgages it granted per year during the 1990s and then again in the 2000s.[37] In 2001, when Victor Manuel Borrás Setién became INFONAVIT's managing director, the institute started to allow workers who earned more

[36] Nonetheless, INFONAVIT took it upon itself to develop and, in theory, implement dwelling construction rules and building codes.
[37] From under 90 thousand in 1990, to 250 thousand in 2000. During this decade, this number continued to increase and reached half a million in 2011 and 667,626 in 2013.

than four minimum salaries[38] to obtain mortgages with private banks or Sofoles[39] while using their INFONAVIT savings as financial guarantee. In 2004, INFONAVIT also entered the stock market to expand its income sources and launched co-financing mechanisms with numerous financial entities.[40] By 2005, about 10 percent of INFONAVIT mortgages were co-financed with 16 Sofoles and 6 banks, a percentage that doubled by 2010 (INFONAVIT 2017).

Prior to these reforms, most Mexican households built their homes through incremental and informal processes using their own resources. By 2005, however, a majority of households bought homes built by private developers through mortgages financed by INFONAVIT, along with other financing institutions (OECD 2015), and in 2011, INFONAVIT reported that 22 percent of Mexicans lived in a house financed by them (INFONAVIT 2017). Yet, although there was a definite housing boom in the 2000s, only around 20 to 30 percent of Mexicans are mortgage-eligible and around a third of Mexican households still live in poor housing conditions (UN-Habitat 2011; SHF 2015).[41] Furthermore, while there is increasing consensus that a majority of the detrimental housing conditions in Mexico could be addressed through rehabilitation, in the 2000s over 92 percent of INFONAVIT mortgages went to new construction (Eibenschutz and Goya Escobedo, 2009; SHF 2011; IDB, 2011 Ponce Sernicharo 2011; Ward et al., 2015).

[38] Lower-middle income and above. A minimum salary in 2001 was around 40 MxP a day.
[39] Financing institutions that specialized in single-purpose lending and raised funds through capital markets,
[40] This allowed INFONAVIT to collect over 50 million MxP by 2010 from foreign investment to finance over 260 thousand mortgages. Hipotecaria nacional, Su Casita, Patrimonio, Metrofinanciera, Banorte, Scotiabank, BBVA Bancomer, Santander, Hipotecaria Crédito y Casa, e ING Hipotecaria were among the most prominent partners (INFONAVIT 2017).
[41] Officially, housing shortages are defined as the number and/or percentage of households living in overcrowded conditions or on very poor quality housing. Overcrowding is defined as more than 2.5 inhabitants per room. Poor quality housing includes that which does not have sewage, or is built with precarious materials: waste, cardboard, perishable/untreated wood, palm leaves, mud, metal sheets, asbestos, or dirt floors.

Additionally, while INFONAVIT collects funds through mandatory contributions from formal private sector workers, developers had the most power to guide housing development (Eibenschutz and Goya Escobedo 2009; Isunza Vizuet and Méndez Bahena 2011). Particularly in the 2000s, homebuyers had to conform to the supply of developers who saw in the investment capital of INFONAVIT their main client and partner. This allowed the private sector to focus on production levels rather than the quality of their product, and seeking to maximize profits, to develop housing in urban peripheries where land was cheap.

Many state governments also frequently backed development projects aligned with their economic development plans – even when they imposed severe fiscal burdens on local governments and limited residents' access to jobs, amenities, infrastructure and services. Although the decentralization of government functions was also an important feature of neoliberal reforms in Mexico, local governments have generally lacked the resources and capabilities to plan and regulate housing and urban development. During the housing boom, short-term administrations and weak finances gave municipal governments little negotiating power in front of large developers with, in many instances, a larger institutional capacity.

While in the 2000s Mexico's housing market was seen as an attractive investment for private equity funds eager to capitalize on the returns associated with the inexpensive housing sector, an overdependence on debt and speculative real estate practices eventually became signs of alarm for investors (BMI 2011; Soederberg 2015).[42] In 2014, INFONAVIT cut almost in half the amount of mortgages granted with respect to the

[42] Stock market debt was the second major source of financing for Mexico's major developers during the housing boom.

previous year (INFONAVIT 2017). Developers saw this and densification strategies at the federal level (which devalued their peri-urban territorial reserves) as pivotal factors in the weakening of the construction sector.[43] By 2014, three of the six major housing developers saw their market value reduced between 30 and 40 times and a crisis in the housing sector detonated their debt 667 percent with respect to their best trimesters in 2007 and 2008. ARA, which survived the crisis, has declared that around 2010 it recognized that the market had changed so it adjusted its products and entered new markets.[44] When some companies faced bankruptcy, they were unable to pay millions of Mexican pesos in infrastructure and service fees to municipal governments. Furthermore, some developments were also left partially unfinished or occupied and residents were left in a legal limbo in which neither developers nor local governments were made responsible for their living situation (SHF 2012; Alcántara 2014; Arteaga 2015; Chávez et al. 2015; Valle 2015).

4.1 El Tren de Vivienda: Mexico's New Housing Model and the Politics of Housing Production

Housing construction still constitutes one of the most important economic activities in Mexico and government officials and business leaders continue to envision housing production as a chief economic engine for the country. An INFONAVIT delegate from Baja California (2016) asserts that "housing [construction] impacts dozens of economic sectors, so it is not up for discussion, it is necessary to keep fomenting housing

[43] Demand also fell significantly around this time, particularly in regions that had previously experienced housing booms, such as Baja California and the state of Mexico. With a lag of a couple of years, the 2008 subprime crisis affected Mexico's housing sector at a rate 2.4 times greater than the rest of the economy. This also generated uncertainty among investors and liquidity shortfalls (SHF 2012, 2014).

[44] During the 2000s, the six major developers dominated over 50 percent of the market. Currently, a larger number of regional developers are gaining importance but still dominate less than 40 percent of total production.

production". This was particularly the mindset in the 2000s, when production expanded very quickly and around 7 million units were built. INFONAVIT played a key role in the acceleration of housing production through its expansion of mortgage lending. INFONAVIT was able to provide a continuous stream of housing finance based largely on a compulsory 5 percent payroll tax on affiliated formal workers, loan payments and interests on financial products (Figure 4.1). This effectively shifted much of the risk of new construction away from housing developers.

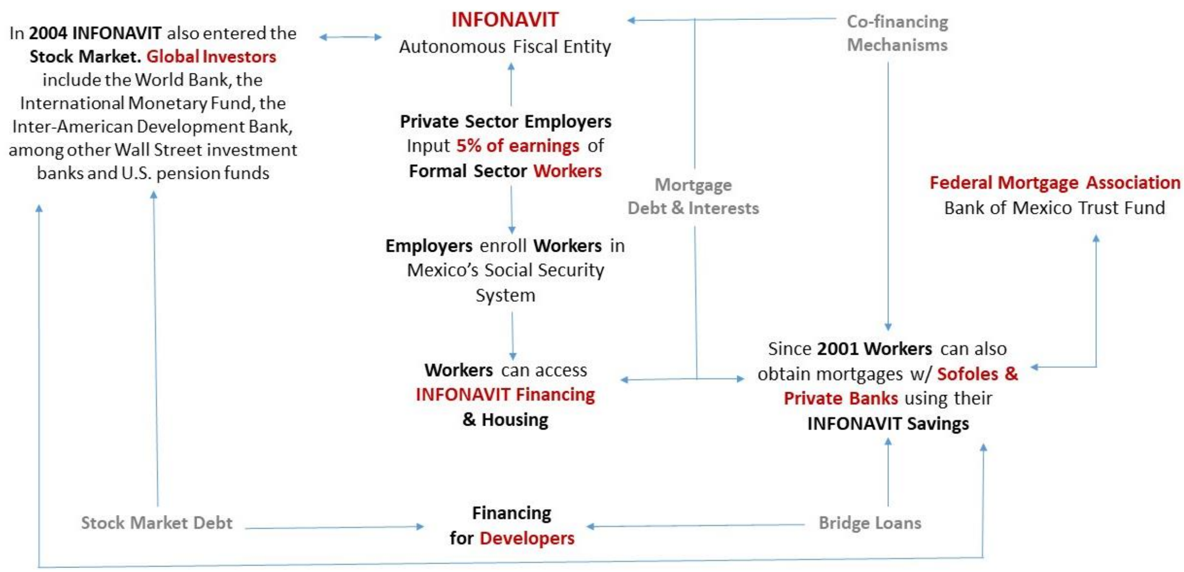


Figure 4.1: INFONAVIT's Financing Scheme.

Graphic by the author.

Furthermore, Sofoles, non-depository financial institutions that raise funds through capital markets (e.g. pension funds) rather than people's savings and specialize in single-purpose lending, were also created in the 1990s to expand mortgage and construction lending through bridge loans and securitized mortgages, among other financial products. Particularly in the late 2000s, INFONAVIT and Sofol lending increased significantly, thus accelerating the scale and pace of housing development (Figures 4.2 & 4.3). Although by 2013 Sofoles were extinct, a select number of real-estate companies grew significantly and very rapidly as a result of this investment.[45]

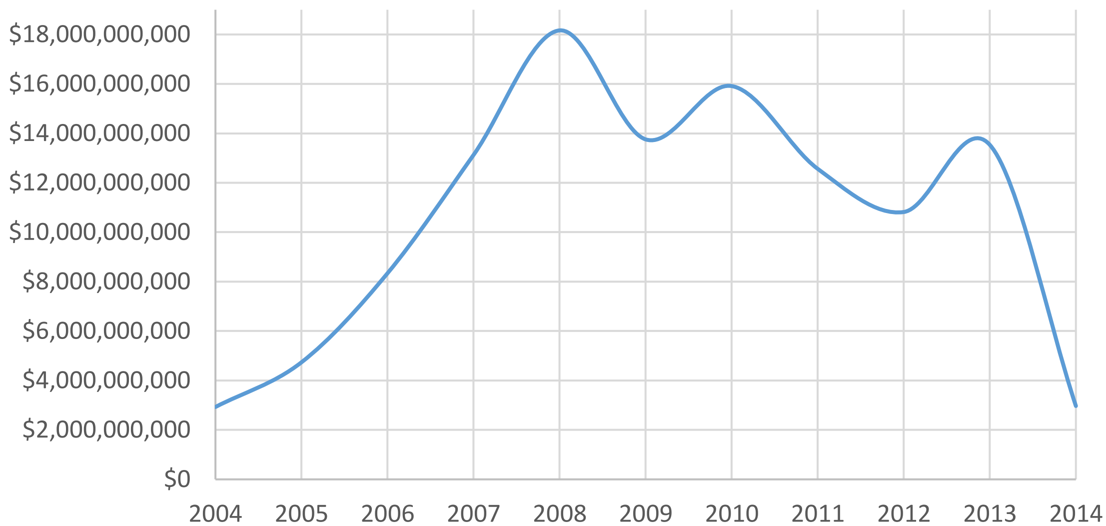


Figure 4.2: INFONAVIT Mortgage Securities per Year (in Millions of 2014 MxP). Graphic by the Author. Source: SHF 2015.

[45] Since the 1990s, Sofoles and INFONAVIT have granted about three quarters of the mortgages in Mexico. Most other mortgages have been granted by commercial banks and FOVISSSTE.

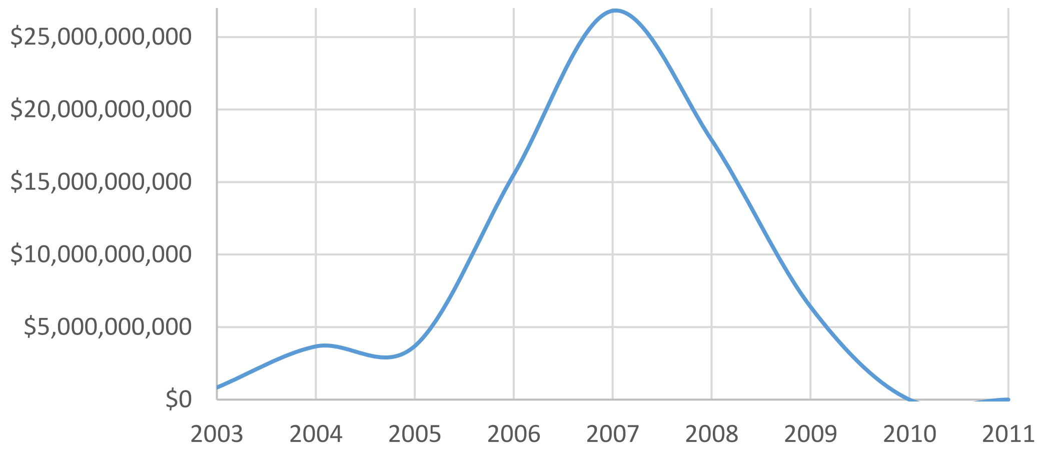


Figure 4.3: Mortgage Securities by Sofoles & Sofomes (in 2011 MxP).

Graphic by the Author. Source: Comisión Nacional Bancaria y de Valores (CNBV).

4.1.1 INFONAVIT Steers the Way through Mortgage Expansion

Housing reforms and mortgage expansion were based largely on recommendations from international institutions who had an amplified voice in the policies of debtor countries. With the advent of the 1982 debt crisis, the 'Washington Consensus' established that only through the application of neoliberal policies could 'Third World' countries overcome their development challenges. Thus, a number of Latin American countries, including Mexico, shifted from a policy framework of Import Substitution Industrialization (ISI) to a neoliberal one with an emphasis on market-led growth and private as opposed to public means of production. The opening of markets, the privatization of state enterprises, and the reduction of the state's directive role in the economy was pursued with strong guidance from global institutions such as the World Bank and the International Monetary Fund (Coulomb and Schteingart 2006).

In Mexico, this neoliberal turn was consolidated and deepened with the signing of the North American Free Trade Agreement (NAFTA) in 1994. Scholars have focused on the impact of this agreement on labor markets, where informal employment has expanded as formal industrial and public employment declined. Since then, the Mexican government has had to walk a fine line between appealing to international investors while practicing brokerage politics at home by implementing popular and politically necessary programs. Yet, even with the continuous expansion of domestic debt, economic restructuring placed a significant strain on social programs. In addition, recurring crises and a decline in real wages eroded the capacity of individuals to access goods and services, such as adequate housing (Portes and Roberts 2005; Pérez Sáinz 2005; Ward 2005).

The shift away from state-led housing production also had the effect of transforming INFONAVIT and other housing institutions into mortgage providers to promote private production. Before, INFONAVIT, along with labor unions and other government agencies, had a more direct involvement in the construction and placement of housing. Reforms, however, transformed this and other housing institutes into autonomous financing institutions with the chief goal of earning returns on investment. Although labor union leaders and government officials are still part of the governing structure of INFONAVIT, private organizations, such as housing chambers composed largely of housing developers, became a central part of the institutional framework as well (Figure 4.4). Efficiency was sought by reducing subsidies, instituting higher loan caps and interest rates indexed to inflation, and ensuring the payment of loans that had become delinquent. In the early 2000s reforms continued to 'modernize' INFONAVIT by passing its management to professionals recruited from the financial sector with the ultimate goal of significantly increasing its lending volume.

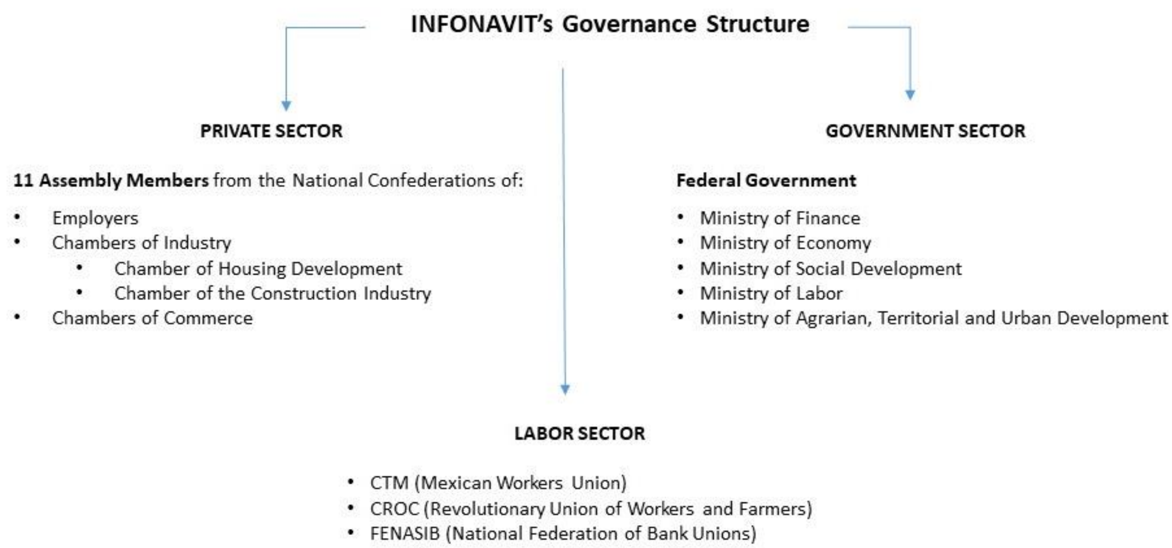


Figure 4.4: INFONAVIT's Institutional Framework.

Graphic by the author.

Reforms also fostered the expansion of the private construction industry, which had suffered during the 1994 crisis when banks ceased lending. They facilitated access to loans for participating developers, offered construction loans connected to mortgages, and assisted builders with state and local permitting processes and land acquisition. An additional and relevant reform was the legalization of the privatization of land governed by the communal *ejido* tenure system created during the Mexican revolution with the purpose of redistribution, and where a large share of housing has been built over the last couple of decades. Overall, the reforms to INFONAVIT and Mexican housing policy[46] should be

[46] Although INFONAVIT is the largest and most important housing finance institution in Mexico, others merit mention. FOVISSSTE provides loans for government employees. CFE and PEMEX, the two largest state-controlled companies, also offer housing finance for employees. A National Fund for Popular Housing, FONHAPO, provides a small amount of subsidized loans for low-income households, largely in rural settings. Importantly, the SHF (Federal Mortgage Association), is a trust fund of the Central Bank of Mexico which provides loans for social interest housing with the primary goal of developing a secondary mortgage Market, previously through Sofoles that were created as part of NAFTA. Sofoles also received funds from the World

understood as part of broader governmental reforms following market notions, such as the reduction of state intervention and regulation (Coulomb and Schteingart 2006; IMF 2008).

Over the last decade or so, the private sector has considerably increased its role in housing finance, and developers have had substantial leverage to influence housing and urban development in the country. Yet, and particularly since 2000, INFONAVIT has come to be regarded as a central agent guiding Mexico's housing development and policies. This has been possible due to its financial capacity, stemming largely from workers' contributions, and resulting stability (PROVIVE 2016: personal interview).[47] Mortgages issued by INFONAVIT jumped from 70 thousand a year in the 1980s to over 200 thousand in 2001, over 400 thousand by 2006 and peaked at almost half a million in 2008. From 1998 to 2014, INFONAVIT thus granted around 5.4 million housing mortgages (Eulich 2013; INFONAVIT 2014).

INFONAVIT expanded mortgage lending, along with parallel agencies, for first-time buyers with modest incomes and little savings, a sector that had been seen as too risky before by private banks. Although the INFONAVIT is increasingly serving higher income households, since the late 1990s about three quarters of INFONAVIT mortgages have been granted to lower-middle households earning between two and seven minimum salaries. Thus, although housing finance has remained inaccessible to many, and particularly to very low-income, informal and rural populations, INFONAVIT opened up the Mexican mortgage market and allowed others to envision in it an attractive investment opportunity.

Bank, U.S. non-bank financial institutions and Canadian investment societies; they were intended to increasingly obtain funds through mortgage-backed securities traded on the Mexican stock exchange, but after the global financial crisis Sofoles collapsed.

[47] INFONAVIT's income is composed almost in 60 percent by worker contributions, in over 37 percent by loan recovery (principal and interest payments on mortgages), and only in about 2 percent by financial products (e.g. securitization) (INFONAVIT 2014).

Global investors, such as the World Bank, the Inter-American Development Bank, Wall Street investment banks and U.S. pension funds also poured billions of dollars into Mexico's housing sector.[48] This investment and a pipeline of pre-qualified customers gave developers a magnificent business opportunity to build and sell homes. The largest developers in the country thus eventually "claimed to have perfected the mass production of affordable housing priced from $15,000 to $35,000. Executives boasted that construction crews could put up an entire house in one day" (Marosi 2017).

INFONAVIT is Mexico's most prominent housing agency, accompanied at a much smaller scale by FOVISSSTE, which serves public employees. Thus, as can be seen on Figure 4.5, INFONAVIT increased its housing investment quite significantly since the 1990s. Other financial institutions followed but with a lag of several years and are just starting to converge. It is important to note that most of these financial institutions belong, strictly speaking, to the private sector, but that Mexico's central bank also created a trust fund, the Federal Mortgage Association, which has accounted for more than half of the housing finance coming from this sector.[49] Although federal subsidies have increased a bit since the late 2000s, their contribution to housing finance and that of other state agencies remains marginal.

[48] To augment public efforts, the WB and the IDB invested close to $3 billion USD in Mexican housing, providing funds for the country's development bank and taking equity stakes in mortgage lenders and construction companies (Marosi 2017).
[49] El Banco de Mexico is, since 1994, an administratively autonomous institution.

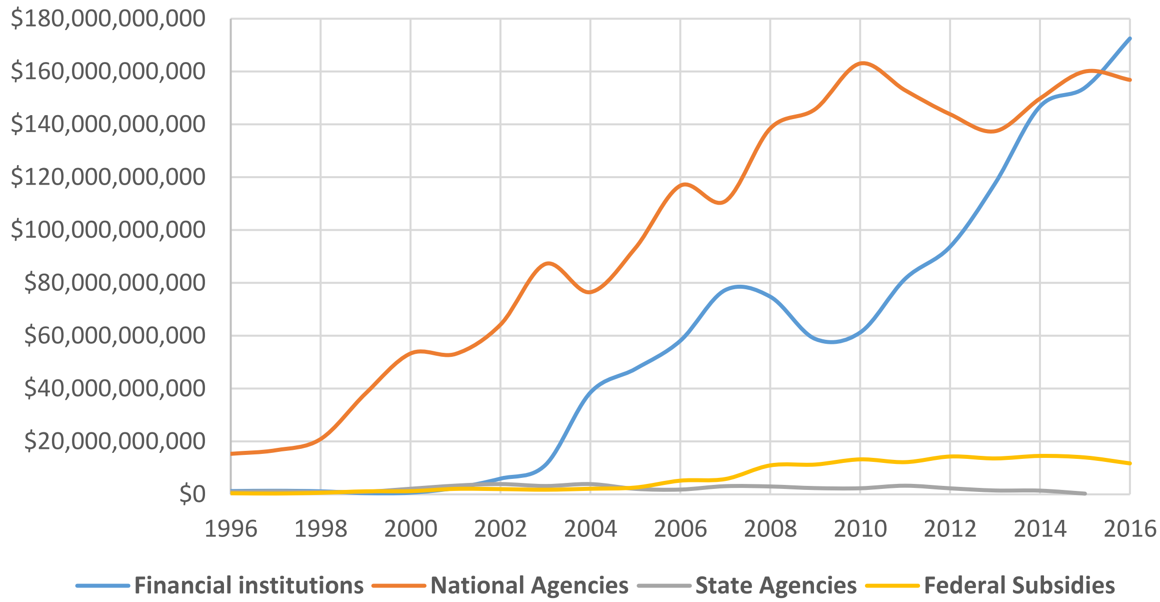


Figure 4.5: National Housing Finance per Sector (MxP). [50]

Graphic by the author. Source: SNIIV.

There are some regional variations that are worth mentioning, particularly relating to the areas that experienced notable housing booms. There are evidently both similarities and differences, but interesting shifts occur particularly at smaller scales. If we look at the State of Mexico, for instance, we observe a relatively similar growth in housing finance that started with national agencies, of which the most prominent is INFONAVIT, and was followed by other financial institutions (Figure 4.6). Yet, the same is not true of municipalities within the state that have experienced some of the most significant housing construction, such as Huehuetoca. As can be seen on Figure 4.7, almost the totality of the housing finance increase in this municipality has come from national agencies. In 2010, for instance, at the peak of housing finance in Huehuetoca, INFONAVIT granted over 77

[50] As outlined in the text, National Agencies include INFONAVIT and FOVISSSTE whereas financial institutions include private banking and Mexico's Federal Mortgage Association or SHF for its acronym in Spanish.

percent of the housing finance in the municipality. FOVISSSTE was second place with almost 21 percent, which is also a relatively high percent in comparison to the rest of the country. Perhaps given the low economic productivity of Huehuetoca, local government employees compose a significant segment of the economically active population. INFONAVIT financing most likely corresponds to workers from other parts of Mexico City's metropolitan region purchasing affordable housing in this peripheral municipality. Lastly, it is also notable that although the increase in housing finance did stagnate at the national level after 2010, both the State of Mexico and Huehuetoca saw a more precipitous decline in housing finance.

In the case of Tijuana, Baja California, both at the local and state levels, financing institutions increased their participation in the housing sector quite significantly in the early 2000s. Yet, they were not able to sustain it in the latter part of the decade and are just now getting closer to the housing finance provided by national agencies such as INFONAVIT. Border towns and states tend to be much more susceptible to global economic booms and boosts and are particularly affected by U.S. economic trends such as the 2008 financial crisis. Across the board, the interplay between INFONAVIT and other financial institutions is evident, and in the latter example, we can see almost mirroring behaviors between national agencies and financial institutions. This again points to the economic stabilizer effect that INFONAVIT has played over the last couple of decades.

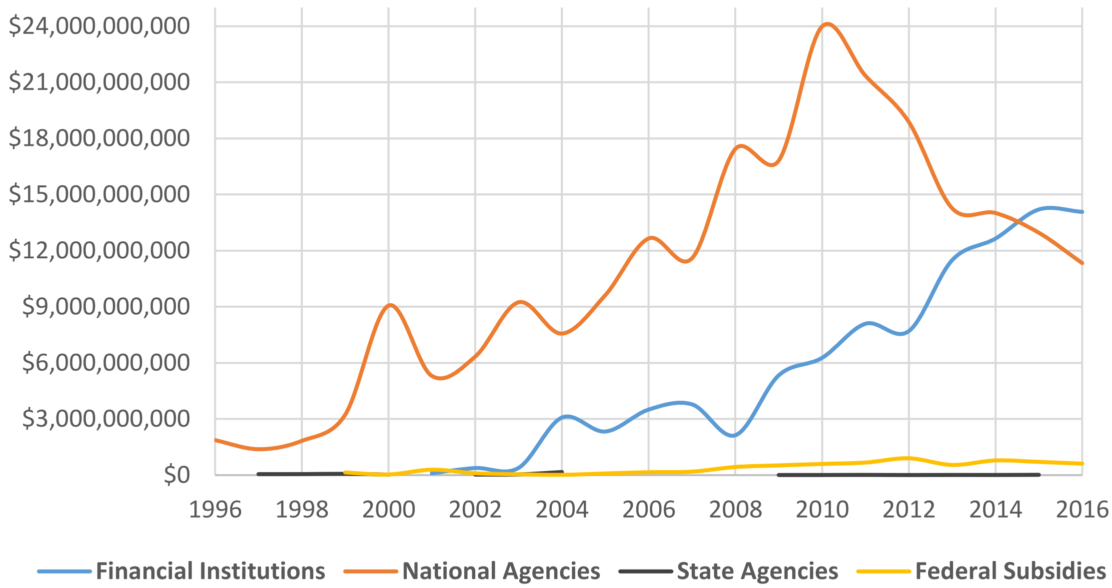


Figure 4.6: Housing Finance per Sector in the State of Mexico (MxP).

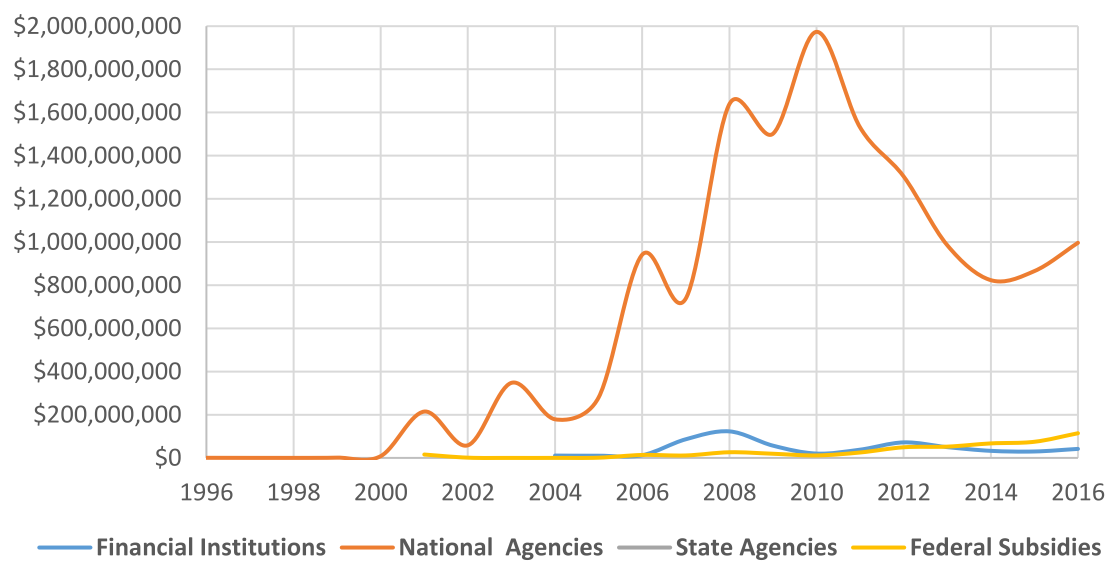


Figure 4.7: Housing Finance per Sector in Huehuetoca, State of Mexico (MxP).

Graphics by the author. Source: SNIIV.

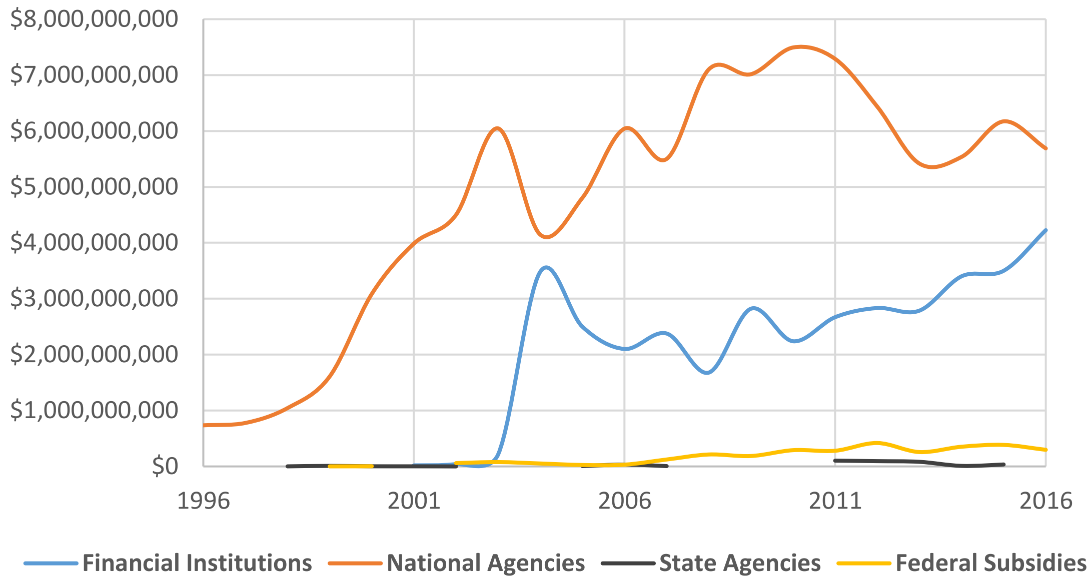


Figure 4.8: Housing Finance per Sector in Baja California (MxP).

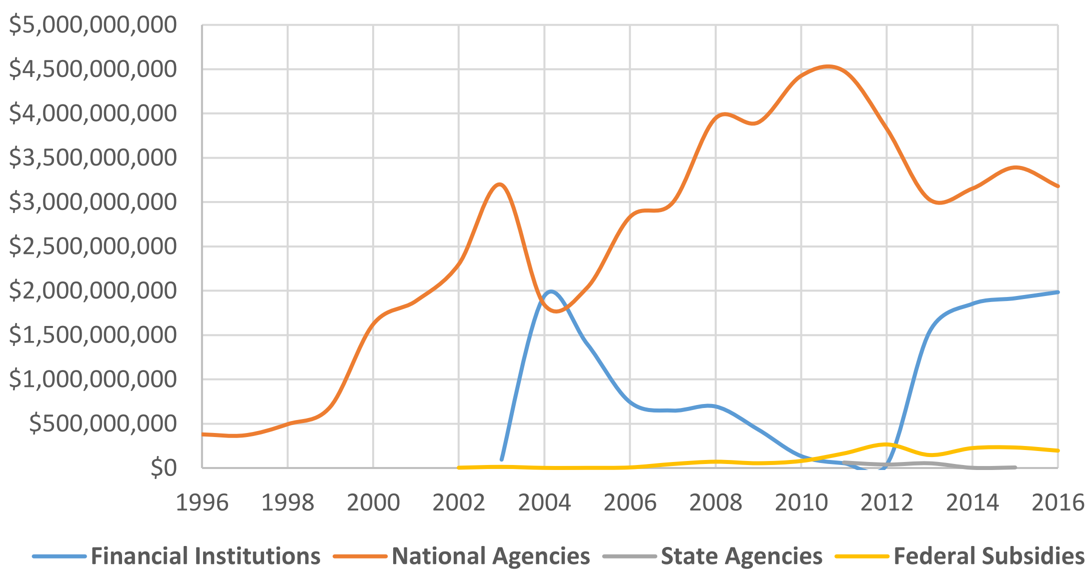


Figure 4.9: Housing Finance per Sector in Tijuana, Baja California (MxP).

Graphics by the author. Source: SNIIV.

4.1.2 State Governments' Support and Incentives

In Mexico, state governments are generally in charge of drafting urban development laws, comprehensive plans, and guidelines to provide technical support to local or municipal governments as they determine future infrastructure and service needs and the environmental impacts of projected development. Housing institutes also generally exist at the state level, although they generally have very limited resources to promote housing production. Furthermore, in most instances, these institutes focus mostly on regularizing informal settlements and granting housing tenure to residents of these settlements

The analysis of the politics and practices of state governments on development matters sheds light on the incentives and support they generally provide to the private sector and to private actors and interests, as has been the case in both of the case studies examined in this research. Baja California's geographical and historic isolation and confrontation with the federal government led to the establishment of a right wing and pro-development government since the 1990s, when the *Partido Acción Nacional* (National Action Party - PAN) won the state elections. In subsequent years, the state experienced a significant development boom and a state housing council was formed with the active participation of the private sector, the governor, and various public entities, such as the ministries of finance, infrastructure and urban development.

These public institutions began promoting key infrastructure projects, such as the *Tijuana-Rosarito 2000* freeway to expand access to undeveloped land, and water infrastructure projects to serve new peri-urban areas. Public-private negotiations also led to the divestment of government land for the private sector to produce low and middle-income housing projects. In addition, governors have been very active in lobbying for federal housing resources. This allowed the state to receive a relatively large amount of

INFONAVIT credits, particularly during the 2000s housing boom, when the federal administrations were also from the PAN. Most of these credits went to its two biggest cities, Tijuana and Mexicali – particularly the former.

Similarly, the government of the State of Mexico played a very important role in the housing boom of the 2000s. A chief urban development strategy during the administration (2005-2011) of then governor and now president of Mexico, Enrique Peña Nieto, was the promotion of development in designated *Ciudades Bicentenario* (Bicentennial Cities). This effort included six largely rural municipalities in the State of Mexico chosen for their strategic location on the edges of Mexico City and Toluca metropolitan regions, and their proximity to national highways which connect the country from east to west. Development plans incorporated economic and infrastructure components and proposed the construction of half a million homes by 2020 (Table 4.1). The main developers involved were GEO, ARA, SADASI, URBI, Hogares Unión and SARE, and the most important finance sources for construction were the Inter-American Development bank and the federal government through its program for Sustainable Urban Developments, or DUIS (for its acronym in Spanish). The financial sector, both banks and non-depository Sofoles were also central partners in the development of *Ciudades Bicentenario* (Villamil 2010).

Municipality	Developable Hectares	Housing Units 2010	Housing Units 2020	Population 2010	Population 2020
Tecámac	6,095	87,700	155,300		
*Huehuetoca**	4,203	30,800	104,100	132,000	447,700
Zumpango	7,832	47,500	111,000		
Jilotepec	6,018	20,200	26,600		
Almoloya de Juárez	4,518	37,800	58,600		
Atlacomulco	2,787	24,200	38,400		
Total	**31,453**	**248,200**	**494,000**		

** Special focus of study*

Table 4.1: Growth Projections of Ciudades Bicentenario.

Source: Espinosa Castillo 2014.

Through this initiative, the state government sought to attract private investment by ensuring land use and development certainty through intergovernmental coordination and facilitation in the provision of construction permits, fiscal incentives, and public infrastructure investment. The hope was that the private sector would then continue to purchase land to develop more housing, industry, commerce and other services. Although these projects were envisioned as self-sustaining satellite cities, they were ultimately developed as dormitory suburbs for low-income residents. Some infrastructure projects also never materialized, such as light rail and other transportation and highway nodes that would connect these areas (Secretaría de Desarrollo Urbano del Estado de México 2007 & 2008; Alcántara 2014).

An important issue during the development of *Ciudades Bicentenario* was also the possibly corrupt behavior of a number public officials. Perhaps the most emblematic case was that of Marcela Velasco, Secretary of Urban Development when Peña Nieto was governor. She was accused by several social organizations of covering up for URBI, one of the major development companies involved in housing construction, particularly in

Tecámac. URBI was accused of installing low quality water pipes, which led to water leaks, damage, and shortages. Allegedly, they also did not comply with state codes that mandate the construction of sewage and water catchment infrastructure for large development projects. Additionally, residents have endured construction or structural issues within their homes, flooding, and constant blackouts. This has likely been made worse by the passage of a state law in 2002, when Arturo Montiel Rojas was governor, that promoted incremental development by allowing developers to sell housing units before the entire development was complete and before service provision was secured (Pensamiento 2010; Eulich 2013). Notably, the State of Mexico is one of the few states in the country that has only been governed by the PRI, or Partido Revolucionario Institucional. Thus, although civic society in the state, similar to the Mexico City context, has a strong history of organizing, it has remained largely unable to affect change locally in the face of its weak democratic context.

4.1.3 Local and Intergovernmental Crises

Reforms in the early 1990s were also intended to push for the decentralization of government to make it less bureaucratic and more democratic and efficient. In 1993, the Mexican Constitution was amended to allow local governments to define how to use their resources and plan their development, among other capabilities. Article 115 was drafted as an amendment to the General Law of Human Settlements to give municipal governments the power to guide urban development. Specifically concerning housing development, local governments are thus responsible for assessing its feasibility, primarily in terms of infrastructure and service provision. Yet, although their responsibilities have increased, municipalities are still subject to the normative and financial control of their states. *De* *facto*, local governments have had limited capacity and resources to effectively draft, implement and regulate their plans and programs.[51]

The housing boom of the 2000s, therefore, made it very hard for most Mexican cities to manage urban development. Although this was also true at the state level in many instances, local development plans and construction regulations, among other norms and documents, were commonly out of date and obsolete. Furthermore, the short 3-year period of office for local administrations created a disincentive for long-term planning and overall accountability. Many local governments, for instance, were compelled to attract housing investment and development without fully assessing future service and infrastructure needs and costs. Thus, they have routinely fallen short on construction and development oversight tasks, which has resulted in the careless execution of development projects and poor construction quality standards. Some 'formal' housing has even been developed on environmentally sensitive or structurally compromised areas (SHF 2013; WRI 2016: personal interview; Urbano 2017).

A significant issue has also been the unsustainability of local government finance given their insufficient revenue streams, based largely on their limited collection capacities. The property tax is one of the main instruments that local governments have to strengthen their finances. Yet, Mexican municipalities generally hold very poor property tax collection records – making them even less capable of fulfilling their responsibilities.[52] The Urban

[51] During the first half of the 2000s, only about 3 percent of the national budget was distributed to municipal budgets. Furthermore, in 2007 (SHF) less than half of urban municipalities had zoning and land use regulations.

[52] On average, in OCDE countries property taxes contribute in 3.9 percent to the GDP of their nations, compared to 0.2 percent in Mexico. Only about a third of the municipalities in the country collect more than 60 percent of the property tax they should. Some of the main issues that enable this poor record are the absence of sanctions and cadastral updates, private tax evasion, technological lags in the collection systems, and tax exemptions to private activities, such as mining, airports, seaports, and railway terminals, along with some public services (Vargas 2016).

Development director of the State of Mexico (2016) claims that municipal governments "base their finances on state and federal contributions that barely cover their administrative expenses and do not allow them to adequately provide, improve or expand services". During the 2000s, property taxes collected by most municipalities constituted less than 40 percent of their budget. In the municipality of Tijuana, property tax collection constituted only 16.8 percentage of its budget during the second half of that decade. In the same state of Baja California, its capital, Mexicali, went bankrupt in 2017 and yet still decided to forgive a portion of the municipality's property tax debt. While this will benefit some residents, this has been criticized as a political and financially unsustainable decision in the long-term for the municipality (Morales 2011; Hernández 2017; Cuéllar 2017).

Particularly during the 2000s housing boom, construction permits therefore constituted the bulk of municipal revenue.[53] This has allowed large developers with significant lobbying capacity to bend and modify land uses and development rules or even directly draft or finance urban development plans and projects. A former IMPLAN (Municipal Planning Institute) official from Tijuana (2016) narrates how developers have been

> "very involved in developing urban development plans and programs. One of the first programs they financed, which then became a common practice, was the *Programa de Crecimiento Urbano de Rosario*, which included all of the Santa Fe area. Private consultants Carlos Mora and Daniel Rubio, one of whom later became the IMPLAN's director, drafted that program. They also financed the *Programa de Mejoramiento Urbano de Valle de las Palmas*, a DUIS, and *Ciudad Natura*, among other DUIS… Nowadays the private sector has the most influence through its associations such as CANADEVI, CANACINTRA, professional associations, you just have to look at who makes up the governing board of directors, there's a couple

[53] Developers contribute around $27,000 MxP per housing unit in licensing permits.

> of scholars and representatives of other guilds, but mostly it's just developers, construction chambers and similar groups that can influence and change things to their convenience. Workers only have the power to choose their living situation according to their salaries."[54]

Furthermore, development companies are often larger and have more institutional capacity than small local governments. Land use changes, for instance, commonly respond to impact analysis performed by the private sector. Similarly, developers were able to influence local legislation to build houses as small as 26 square meters (INFONAVIT delegate 2016: personal interview).

Lacking their own resources and under pressure from development interests, local governments have frequently engaged in practices that, at the very least, have exhibited significant conflicts of interest and distorted development processes. Large and established developers, for instance, tend to have close relationships with local authorities. This often inhibits competition and the participation of smaller or new development and construction companies. Perhaps more worrisome is that in 2015 municipalities in Mexico had accumulated 215 thousand 456 million MxP in spending they could not justify, of which a major area of concern has been infrastructure spending. Recurring inconsistencies come up in this department year after year and across municipalities (Paladin 2016, SEDATU official 2016: personal interviews).

Conflicts of interest and financial improprieties have been noted and challenged by civic organizations. Residents in Tecámac, State of Mexico, for instance, recently initiated a lawsuit against one of their former majors, Aarón Urbina, for holding a public act in the

[54] CANADEVI: Cámara Nacional de la Industria de Desarrollo y Promoción de Vivienda (National Chamber of the Housing Development and Promotion Industry).
CANACINTRA: Cámara Nacional de la Industria de la Transformación (National Chamber of the Transformation Industry).

2000s in which he falsely claimed that a number of housing development projects had been finished and that a 30 million MxP guarantee had been received by the municipality as construction insurance of urban infrastructure projects. However, the development had not been finished and the electric, water and sewage installation had not been completed in these developments (Méndez et al. 2017).

The Director of Urban Development in Huehuetoca (2016), State of Mexico, another *Ciudad Bicentenario*, argues that local administrations rarely follow plans or have a long-term vision and that they even commit legal transgressions.

> "Real estate companies did not fulfill their obligations, public authorities showed no commitment, we are still building housing units and do not have a prompt solution, and we are drowning… The private sector always seeks to invest little and win a lot, and housing was a profitable business... Once the state government gave the OK to a development project we really could not deny them the permits, but these problems came back to us, by accepting deficient infrastructure projects, for instance, we had to then repair them or fund their upkeep… There are developers that do the feasibility studies and we just sign them."

In Baja California, Governor Francisco Vega de Lamadrid, started his career in the private sector and then moved into politics in the 1990s as the director of the state's housing institute. He then became Mayor of Tijuana in 1998, at which time he unincorporated public lands that were then sold to family members or associates. These lands also appreciated significantly afterwards. In addition, he promoted the construction of a road where he later built a private residential complex. This exemplifies the recurring level of impunity of elected officials acting to enrich themselves and their private partners across the country (Sandoval Alarcón 2013; Espinosa Castillo 2014; Méndez 2015).

Although reformers hoped that decentralization would come with greater coordination among localities and regional governance, this has not happened. Intergovernmental and institutional cooperation has proven a difficult task, contingent on administrative priorities, political alignments and electoral cycles. In 2011, only 40 percent of the 400 most important municipalities in Mexico had some type of agreement with state or other municipal governments in relation to urban affairs, of which only half had more than one agreement (IMCO 2011). This has led to the lack of articulation between different local governments in a variety of matters, such as water and public transportation systems, among other important infrastructure and services. An important attempt to address these issues has been the creation of IMPLANs (Municipal Planning Institutes), to promote metropolitan coordination. Tijuana actually had one of the first IMPLANs in the country. Yet, it has proved to be a weak institution often influenced by politics, rather than the autonomous agency that it was set up to be. The division of special projects, for instance, is informally nicknamed the '*bomberazos*' unit, slang for last minute urgent projects pushed forward by the municipal president. A prominent example of this was the vigorous promotion of the satellite city *Valle de las Palmas* around 2000 (Former IMPLAN official 2016: personal interview).

In larger and more fragmented metropolitan regions, multi-level governance is even more difficult and complex. The most extreme example of this is the Mexico City metropolitan region composed of dozens of municipalities and three different state governments. Multiple (non-binding) comprehensive plans have been drafted for this metropolitan area, some by members of the academic community, as well as by different state governments to assess the major metropolitan issues and propose guidelines and strategies to address them. Yet, there is no mechanism to implement these plans or adequately monitor government actions. Aside from water and waste management, the governments of Mexico City and the State of Mexico have virtually no collaboration on urban and housing development matters. Arguably, federal, state and local governments follow different legal frameworks for urban development that are not always aligned with each other, the Mexican Constitution, the General Law of Human Settlements, state constitutions, and municipal laws. They all aim to influence overlapping territories but very often have different priorities. On top of this, each government level houses ministries and offices with conflicting interests that draft different plans and programs (Urban Development Ministry of the State of Mexico 2016: personal interview).

4.2 The Model Crumbles

"Housing construction skyrocketed and these super big developers were born, Geo, Ara, Urbi, Homex, and they had an incredible bonanza period… They started building, building, building, and people buying, buying, buying, offhandedly, and frequently, it was not the right product for that person. In extreme cases, you arrived with your INFONAVIT credit to buy a house because you qualified and the developer would tell you: 'I have this house for you, it is the one I have in production', without considering the client's needs, the size of its family, its income, the location. Clients adapted to the developers' production systems. It got to a point where the three largest companies produced around 50 thousand units a year, each, they were listed in the Stock Exchange, they were the stars of the market, but then the system started to fail because it had structural issues. They had to produce more and more units and keep growing to give positive reports to their investors" (Paladin 2016: personal interview).

4.2.1 Questions of Supply and Demand

Particularly in the 2000s, developers sought to produce at a scale commensurate with the number of INFONAVIT affiliated workers who qualify for a mortgage at a given moment. In a way, the client really has been INFONAVIT rather than residents and demand has conformed to the developers' production system. As a former Tijuana IMPLAN official (2016) put it:

> "Developers produce housing of a certain price and for a certain income sector, but the client for them is INFONAVIT and the credits it will offer, they [developers] will compete to get those mortgages… INFONAVIT has a lot of weight in this, if it grants x number of credits, developers will produce x number of units, who cares if people will inhabit them or not… It did not matter if people had a house or not, production had nothing to do with the [housing] deficit, it was directed to people who were mortgage-eligible and had a formal job".

An official from the National Housing Commission also notes that "in some places, this mass production logic generated market distortions in terms of the supply and demand balance" (CONAVI official 2016: personal interview). We can see this clearly at the state level. In one extreme, we have the state of Oaxaca, which received 27.9 percent of the housing credits it would have required in 2007 to fulfill its housing demand, while Baja California received 184.9 percent of the credits its demand would have justified (SHF 2007). Not surprisingly, and given that most of Baja California's credits go to the city of Tijuana, this is one of the cities that is experiencing one of the highest vacancy rates in the country. These distortions have been fueled by a variety of factors. As previously noted, workers can only access an INFONAVIT loan if they are part of the formal sector, thus, eligible workers are concentrated in large and industrial cities. Furthermore, during the housing boom, many developers established a close relationship with INFONAVIT, a bond that also seems to have deformed the mortgage allocation system and detached it somewhat from the actual housing demand (SHF 2014). Similarly, good relationships between different government levels and INFONAVIT may have also influenced mortgage allocation.

These practices have also proven to be problematic for homebuyers in a number of ways. First, while workers might qualify for a credit given the time they have been employed, their ability to pay a mortgage varies. This is because the income of INFONAVIT affiliated workers also varies widely, as do the mortgage terms of different homebuyers (INFONAVIT 2013). Even within the private sector it has been recognized that

> "while many more mortgages were being granted, to activate the economy, perhaps this was an abuse, and an oversupply of mortgages entered into conflict with a lagging economy, insufficient employment growth, inflation, economic crisis, and people started having issues paying their mortgages (CADENA 2016: personal interview).

While INFONAVIT created a strong incentive for affiliated workers to make use of their line of credit, on the supply side there have also been a number of issues (SHF 2014). Although this will be more fully discussed in the next chapter, the location of these housing developments, their limited access to infrastructure and services, and the quality of housing have been problematic (CONAVI official 2016: personal interview). Small and formerly rural municipalities, such as Huehuetoca in the State of Mexico, for instance, had a relatively stable demand in the last decade in terms of people who qualified for an INFONAVIT mortgage. Yet, many more mortgages have been granted in this municipality over the years (Figure 4.10). Huehuetoca has thus become a peri-urban municipality of Mexico City and a dormitory town struggling with many issues.

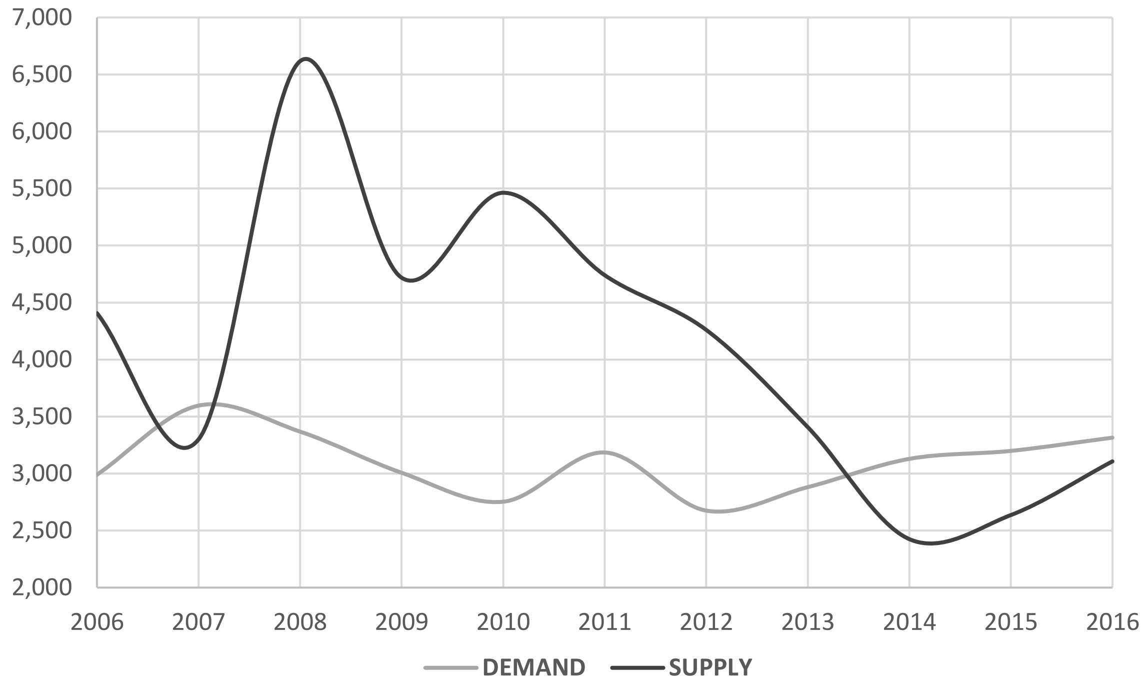


Figure 4.10: INFONAVIT Credits: Potential Demand & Supply in Huehuetoca.

Graphic by the author. Source: SNIIV.

4.2.2 Boom and Boost of Housing Developers

The six major housing developers in Mexico (ARA, GEO, HOGAR, HOMEX, SARE & URBI) rose through the production of low and middle-income housing (Table 4.2). During the 2000s, these companies had a presence in almost 80 percent of the country and produced around 50 percent of the new national housing stock (SHF 2007).[55] Most of them reached their peak between 2007 and 2008, when they were each selling around 50 thousand units a year (Valle 2015). "Investors and construction executives reaped

[55] ARA, GEO, SARE & URBI had presence in Baja California and ARA, GEO, HOMEX, SARE & URBI in the State of Mexico.

enormous profits, hailing themselves as 'nation builders' as they joined the rank of Mexico's richest citizens" (Marosi 2017).

	ARA	GEO	HOMEX	SARE	URBI
Low-income (%)	43	68.5	87.7	21.6	91.6
Middle-income (%)	57	31.5	12.3	78.4	8.4
Total units sold	3,647	13,555	8,738	85	6,984

Table 4.2: Developers' Income by Housing Type & Units Sold in 2012.

Source: Bloomberg 2012.

Since 2008, however, three of the major housing developers in the country (HOMEX, URBI & GEO) started to see significant reductions in their market values (Figure 4.11 & Table 4.3).[56] They eventually had to cease operations in 2013 and file for bankruptcy between 2014 and 2015. These companies exhibited significant leverage issues and started defaulting on loan obligations which forced them to restructure their debt and issue many of their shares to creditors. Compared to their peak in 2007, their debt in 2014 was in average 667 percent higher. It has also been noted that companies funded through capital markets and that resorted to securitization eventually became more vulnerable (Bloomberg/Financiero 2015).[57] The bankruptcy of some of these companies halted development projects and some were left unfinished. Their default also affected big banks, some of which had to make use of their reserves, and generated uncertainty among investors and liquidity shortfalls (González 2013).

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[56] As can be seen on the table below "Developers' Income by Housing Type and Units Sold in 2012", these three companies have specialized more heavily on the production of low-income, rather than middle-income housing.

[57] The two main sources of financing for Mexico's major developers during the housing boom was their equity capital and stock market debt, followed by their bank credit and bridge loans (SHF 2012).

GEO was the first to declare bankruptcy, but it was quickly followed by HOMEX and URBI. These industry titans blamed housing and urban development policy shifts as the source of their failure. They argued that a shift in government policy toward densification policies, favoring central locations, devalued much of their peri-urban territorial reserves and that institutional support for the flow of mortgages dwindled with the new federal administration.[58] Yet, ARA executives, for instance, have claimed that they survived the crisis because they recognized that the market was changing and they adjusted their products to enter new markets (Valle 2015). Smaller and regional developers seemed more willing to adapt to new conditions, and have eventually been able to enter the market in a more competitive fashion (Arteaga 2015).

> "The largest housing developers in the country, several of which went bankrupt, did not evolve like the Mexican housing market was evolving. They continued purchasing territorial reserves farther and farther away from the urban cores, they did not pay attention to the need to produce different and better products, and to compete by producing quality housing in better located places and with value added. They failed, but the market opened to other intermediate and regional developers, such as VINTEL, ARA, and others in the north of the country, that were better at adapting to the conditions of the new market and the new incentives of INFONAVIT, CONAVI and SEDATU, and before it was created, SEDESOL" (WRI 2016: personal interview).[59]

[58] The policy shift in fact surprised many actors in the construction sector, particularly given their previous ties with EPN. Further strategies, such as fiscal reforms, also took away fiscal stimulus previously used to activate the real estate market.

[59] CONAVI: Comisión Nacional de Vivienda (National Housing Commission).
SEDATU: Secretaría de Desarrollo Agrario, Territorial y Urbano (Urban and Regional Development Ministry).
SEDESOL: Secretaría de Desarrollo Social (Social Development Ministry).

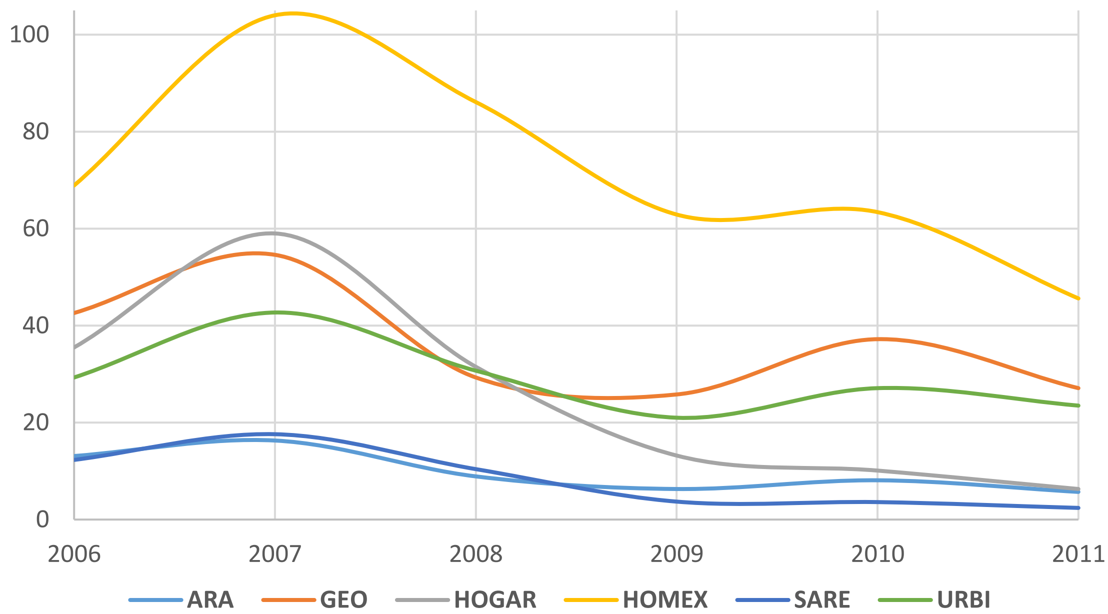


Figure 4.11: Mexican Pesos per Share of Major Housing Developers.

Graphic by the author. Bloomberg 2012.

	ARA	GEO	HOGAR	HOMEX	SARE	URBI	HABITA
2006	13.1	42.6	35.5	68.9	12.3	29.3	653.0
2007	16.3	54.6	59.0	104.0	17.6	42.7	907.0
2008	8.9	29.3	31.5	86.1	10.4	30.7	608.9
2009	6.3	25.8	13.2	62.9	3.7	21.0	439.2
2010	8.1	37.2	10.1	63.4	3.6	27.1	537.7
2011	5.7	27.1	6.3	45.6	2.4	23.5	403.3
Annual Growth Rate (%)	-15.3	-8.6	-29.2	-7.9	-27.8	-4.3	-9.2

Table 4.3: MxP per Share and Average Annual Growth Rate of Major Developers.

Source: Bloomberg 2012.

The growth and practices of some companies deserve special mention. In 2002, HOMEX received $32 million USD from the Equity International Investment Fund I. This investment fund concentrated on Mexico and aimed for a 20 percent annual rate of return for its U.S. investors, which included the General Motors Investment Management Corporation and the John D. and Catherine T. MacArthur Foundation. The fund raised $368 million USD, of which it used $32 million to purchase a stake in HOMEX worth about 26.5 percent of the company. This helped the company to expand from producing 5,000 homes a year in 2002 to 13,000 a year later and 57,000 in 2008. HOMEX adopted U.S. accounting standards and went public in 2004 with a $100 million USD valuation, which eventually soared to $3 billion.

Company executives went to the New York Stock Exchange as ambassadors for Mexican entrepreneurship and joined the ranks of North America's largest homebuilders. HOMEX was actually able to expand production to other countries, such as Brazil, Egypt and India. Such housing investment and development was also advertised as "helping solve global housing shortages" (Marosi 2017). By 2009, an estimated 1 million people lived in HOMEX housing and Equity International boasted publicly of its success in Mexico; profits from HOMEX topped $500 million USD for the fund's investors in 2009. Yet, since 2006, Sam Zell, head of Equity International,

> "started selling off big chunks of the fund's holdings, and by 2008 Equity International had divested the last of its HOMEX shares… In 2010, two years after the fund divested from HOMEX, Zell wrote in a Mexican real estate magazine that he had brought U.S. standards of transparency to the Mexican company with his investment" (Marosi 2017).

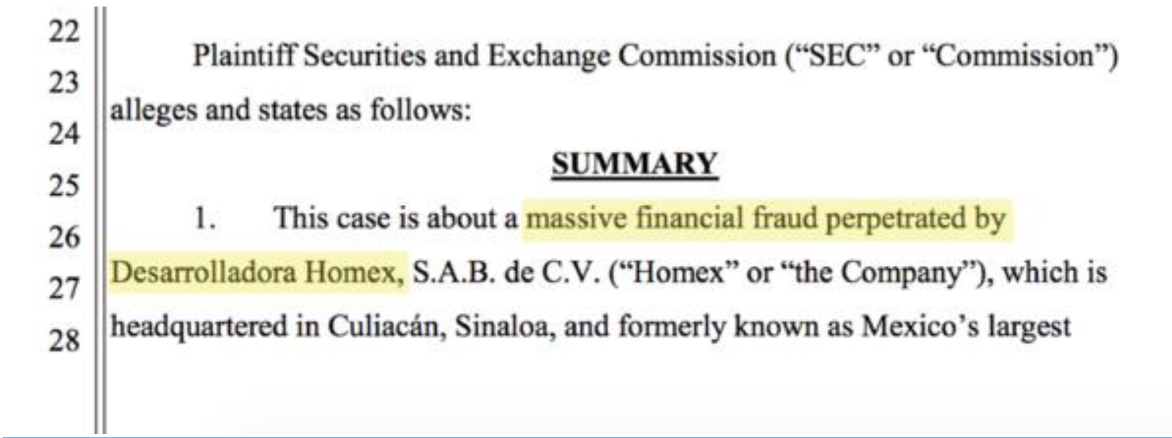
In 2006, however, the U.S. Securities and Exchange Commission inquired why "the company's net income was reported differently under Mexican and U.S. accounting rules"

(Marosi 2017). In 2008, the SEC asked for more information about the number of homes sold and questioned the company's practice of including inter-company loans as cash flow. Furthermore, in 2011 HOMEX reported selling 52,486 homes, but the SEC said it had only sold 11,006 homes that year and asserted that

> "the company had inflated revenue by counting sales of homes that were never built… [The SEC] accused HOMEX of massive financial fraud, alleging that the company faked the sales of tens of thousands of homes. The company settled the charges without denying or admitting wrongdoing" (Marosi 2017).[60]

Figures 4.12a-b show fragments of the case in mention that compare development plans containing units that HOMEX claimed to have built and sold from 2009 to 2011, with an actual satellite image in 2012 with only a small fraction of actually built units. Although perhaps investors were not aware of these investigations, in 2012 HOMEX secured a $75 million credit line from the World Bank and raised $400 million on the U.S. bond market. Furthermore, Moody's Investor Service gave the company's bonds a stable rating outlook that same year and stated the following: "HOMEX's capable management team executes strong internal controls, construction expertise and efficient practices".

[60] The SEC said the ruse was part of a massive fraud by HOMEX to inflate revenue by $3.3 billion from 2010 to 2012. The SEC also said that HOMEX had defrauded Mexican banks in a $7.7 billion Ponzi-like scheme (Marosi 2017).



Plaintiff Securities and Exchange Commission ("SEC" or "Commission") alleges and states as follows:

SUMMARY

1. This case is about a massive financial fraud perpetrated by Desarrolladora Homex, S.A.B. de C.V. ("Homex" or "the Company"), which is headquartered in Culiacán, Sinaloa, and formerly known as Mexico's largest

Figure 4.12: SEC Complaint Fragments.

In July 2014, HOMEX filed one of the largest corporate debt restructurings in Mexican history. Shortly thereafter, the company gave notice to several municipalities, such as Huehuetoca, about its bankruptcy status and its inability to pay a debt of half a billion MxP in infrastructure and service fees. This left 40 thousand houses and 100 thousand residents without services and infrastructure along the nine sections of the Santa Teresa development. Before its bankruptcy, HOMEX finished three of the nine sections and submitted the legal documentation that makes the municipality responsible for the services and infrastructure of housing developments. The rest remain in an irregular status and the municipality's budget does not consider those areas for service provision. Thus, many streets remain unpaved and water access has become a significant issue.[61] In general, HOMEX developments have been said to be "riddled with infrastructure and construction defects and residents abandoned them by the thousands, helping trigger the collapse of the housing industry" (Marosi 2017). Nonetheless, after emerging from bankruptcy protection in late 2015, HOMEX secured $240 million USD in new financing to build upscale homes for middle-class buyers (Chávez et al. 2015).

Also significant, is the story of URBI. Rene Jaime Mungarro, a shareholder and legal representative of this company, was detained a few years back for his involvement in frauds related to the sale of thousands of low-income houses built on unstable lands and overpriced by up to 40 percent in several municipalities of the State of Mexico. His apprehension occurred after several years in which a group of residents of different developments filed lawsuits against URBI for building structurally deficient units. Similarly, and given the financial troubles faced by large real-estate companies (Figure 4.13 & Table 4.4), several developments built by URBI and GEO, such as Valle de las Palmas, Valle San Pedro and Villas del Campo, stand in the middle of nowhere outside the city of Tijuana. They house thousands of residents, some of whom do not have access to basic services such as potable water, electricity, garbage collection, transportation, schools, fire

[61] In Santa Teresa, most of the housing units are 30 square meters and were bought for around 166 thousand MxP with INFONAVIT 30 year mortgages (Chávez et al. 2015).

stations or clinics. In early 2014, Banamex, a private bank, also initiated a lawsuit against URBI for its failure to make a payment of 320 million MxP plus interests (Alcántara 2014; Gómez 2014; Méndez 2015).

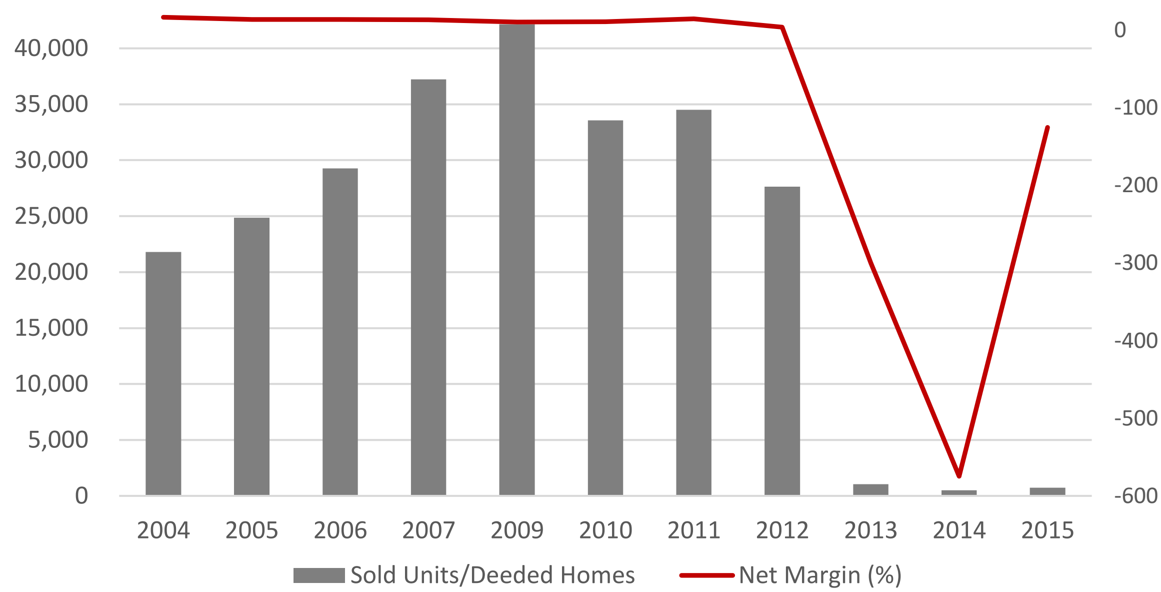


Figure 4.13: URBI's Sold Housing Units (left axis) & Net Margins per Year (right axis).

	Sold Housing Units*	Sales (Millions of MxP)	Growth in Sales (%)	Gross Margin (%)	Operating Margin (%)	EBITDA Growth (%)	EBITDA Margin (%)	Net Margin (%)	Millions of MxP in Cash
2004	21,791	6,575	19.5			27.1	25.0	16.8	
2005	24,865	8,194	20.6			25.9	26.2	14.1	
2006	29,283	10,057	18.0			20.6	26.9	13.8	
2007	37,231	12,779	22.5			24.4	27.2	13.7	
2009	42,144	13,057		30.3	21.5		29.4	10.7	4,393
2010	33,567	14,977		28.4	19.4		27.2	11.2	6,155
2011	34,515	16,328		27.8	19.4		26.7	14.8	5,529
2012	27,646	12,912		28.4	10.7		21.6	4.1	2,477
2013	1,054	1,976		27.4	**-61.0**		**-33.9**	**-299.6**	
2014	497	1,099		50.2	**-71.4**		**-64.3**	**-574.7**	
2015	727	357		54.0	18.0		28.0	**-125.2**	

*They switched their nomenclature from 'Sold Units' to 'Deeded Homes' in 2009, along with their use of other indicators.

The EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization) margin is a measurement of a company's operating profitability as a percentage of its total revenue (EBITDA/Total Revenue) and can provide an investor with a clear view of a company's operating profitability and cash flow.

Table 4.4: URBI's Operating Indicators.

4.3 Conclusion

The housing development model outlined in this chapter has had critical implications that will be discussed further in the next chapter. While credit and mortgage expansion was promoted, other housing strategies, such as rehabilitation, which often serve very low-income, informal and rural populations, took a back seat. Thus, arguably, more than attempting to reduce Mexico's housing shortage, housing production has primarily been valued as an important engine of the country's economy. INFONAVIT, as well as other government institutions at different levels, therefore, made an extraordinary effort to provide a very attractive business opportunity through a development model that facilitated the mass and quick production of housing with little to no financial risk to developers and financiers. Financial and regulatory institutional support to the private sector played a pivotal role. At the local level, governments had very limited capacity and incentives to regulate housing production and the public virtually no say in development matters. In comparison, developers had considerable leverage and influence. Conflicts of interest, distortions in development processes and legal transgressions became commonplace, as did the formation of public-private power monopolies.

During the 2000s housing boom, a number of developers therefore grew significantly. About six companies monopolized the production of low and middle-income housing, but a number of issues emerged rapidly. Arguably, developers regarded INFONAVIT as their client and guided their production according to its potential demand – the mortgages the institute would grant in a given year. This, again, promoted housing construction not where there was the greatest need, but where formal workers are generally concentrated, urban and industrial areas. Yet, to maximize profits, development generally occurred in peripheral areas with cheap land. Market distortions that promoted an oversupply of housing, fraudulent practices, the inability of many low-income households to sustain their mortgages, and the inadequate location and quality of many new developments, eventually rendered the housing production model unsustainable. The increasing debt issues faced by developers also prevented them from growing as their investors expected and with their bankruptcy the issues posed by their developments became increasingly evident.

The two housing issues that this research is concerned with are those of vacancy and access, particularly as they relate to policy decisions at different levels. Thus, this chapter has discussed the roles played by different government levels, and the private sector, in carrying out Mexico's housing development model, born out of reforms in the 1990s, and implemented most forcefully in the 2000s. Although many of the shortcomings of this development model were outlined above, the following chapter will focus on the analysis of some of the issues that resulted from it. On the one hand, even when mortgage access was expanded, it would be hard to argue that housing policies were directed towards those with the most need. Furthermore, the lower and middle-income residents that were benefited by such mortgage expansion, were quickly confronted with multiple issues, such as an increasing mortgage debt, low-quality housing, and the isolation of living in remote peripheral areas with very limited or deficient access to basic infrastructure and services.

Chapter 5: Emerging Issues of Housing Inaccessibility and Vacancy

The development and credit expansion model outlined in chapter 4 was promoted, in theory, to reduce housing shortages, officially defined as the number of people living in overcrowded or poor housing conditions.[62] Yet, other strategies, such as rehabilitation, which often serve very low-income, informal, and rural populations with the most pressing housing needs, took a back seat.[63] As a result, the shift in the housing shortage was marginal, and the shortfall actually increased in absolute terms. The reliance on a market logic, rather than social goals and housing rights, is seen in the resulting exclusion of a very large segment of the population, which cannot access credit and adequate housing to this day.[64] Furthermore, lending models, rooted in financialization and securitization contributed to the development of housing in inaccessible locations and offering unsustainable credit terms, both of which have contributed to an increase in vacant housing. In parallel, lack of local oversight of adequate housing and infrastructure construction standards also contributed to the reproduction of both poor housing conditions and vacancy, particularly in peripheral urban areas.

In extreme but not uncommon instances across the country, developers facing financial problems left partially built housing developments in which neither municipalities nor developers have been held responsible for finishing infrastructure projects or providing

[62] Officially, housing shortages are defined as the number and/or percentage of households living in overcrowded conditions or on very poor quality housing. Overcrowding is defined as more than 2.5 inhabitants per room. Poor quality housing includes that which does not have sewage, or is built with precarious materials: waste, cardboard, perishable/untreated wood, palm leaves, mud, metal sheets, asbestos, or dirt floors.

[63] The Mexican housing finance system has directed most of its funds to manufacturing centers and cities that concentrate the country’s formal employment, rather than to the areas with the most pressing housing needs (Soederberg 2015).

[64] In 2014, over half of Mexican households could not access or purchase a 200 thousand MxP home, which was the average price for a low-income housing unit in urban areas (SHF 2014).

adequate services to the thousands of affected residents. Arguably, therefore, rather than addressing housing needs, this development model defined the housing shortage as one of aggregate supply and allowed market actors to set the standards attached to development and lending, thus effectively furthering the commodification of housing. As households in inaccessible peripheral areas have started to face significant challenges sustaining their mortgages, and have struggled to live in poorly constructed, inadequate homes, the result has often been rising housing vacancy and abandonment. Thus, whether the country's housing boom – the largest in Latin American history – has improved living conditions in Mexico is hotly debated.

Many of the mortgages granted to lower income residents provided security to investors but onerous loan terms for prospective homeowners, pushing many of them to default and foreclosure as banks and bondholders have begun to seize homes. These so-called "social interest"[65] loans were created as a means of extending homeownership more broadly and analysts assumed that loans would be given to credit-worthy borrowers whose salaries would keep up with inflation, and that housing values would increase. Yet, many loans were made to people who could not afford them, wages remained stagnant, and housing values dropped or stayed flat. Lax lending oversight allowed salespeople to assure buyers that mortgage payments would remain stable, and to promise them fixed interest rates for up to 30 years, while in fact loans were granted in investment units (UDIS) or minimum salaries indexed to inflation. Thus, some homeowners will end up repaying as much as seven times the amount of the original loan.

In addition, although these new housing units do not fit within the official definition of poor quality housing (e.g. built with precarious materials such as waste, cardboard,

[65] For low-income workers earning less than five minimum salaries.

perishable or untreated wood, palm leaves, mud, or metal sheets), many homes were poorly constructed and have leaking roofs, cracked walls, electrical short circuits, and are susceptible to fires. Developers also built about 1 million one-bedroom units as small as 325 square feet, which are often occupied by large families. Their access to adequate services and infrastructure has also been limited and at times characterized by water and energy shortages, burst sewage pipes, sunken or unfinished streets, crumbling sidewalks, pitch-black streets at night, no trash collection or policing, and promised parks and schools that never materialized. Builders have "abandoned hundreds of developments without completing infrastructure, resulting in a patchwork of public services" (Marosi 2017). Many developments were also built far from employment and economic centers.

INFONAVIT has recently acknowledged that housing location, and access to infrastructure, services, employment and social networks, has played an important role in the decision of households to abandon their homes. Yet, the topic, definition and even the measurement of housing vacancy in Mexico has become increasingly contentious.[66] Mexico's 14.2 percent vacancy rate is well above the international average and signals important deficiencies in the housing market. While many factors may influence housing vacancy, 60 percent of the 5 million vacant units in Mexico are in urban areas. Furthermore, in 2010, 20 percent of INFONAVIT financed houses were vacant, and some new housing developments have reached vacancy rates of almost fifty percent (SHF 2012, 2013, 2014 & 2015; Torres 2013; INFONAVIT 2016). While this clustering of vacant or

[66] The Mexican Census only distinguishes between vacant and temporary housing and INFONAVIT only has a count of its delinquent portfolio, rather than its financed vacant units. This research makes the distinction between vacant and abandoned housing, the latter being that which shows a significant degree of deterioration besides being vacant. Furthermore, it will discuss the different typologies of vacant housing, such as unfinished by developer, foreclosed, and disputed tenure, as well as the matter of home occupations.

abandoned housing has mostly affected lower-income areas, some middle-income developments have also been affected.[67]

While high concentrations of vacant or abandoned housing have affected people across the country, clustering is most common in peri-urban areas, which then deteriorate and depreciate considerably.[68] Real-estate company bankruptcies have exacerbated conditions in some areas by leaving entire developments unfinished. These partially built developments typically have a small fraction of units sold and even inhabited, but because the developments were never officially incorporated into the municipality, residents are left in a limbo where no one is responsible for the provision of services and infrastructure. Furthermore, residents in these scantily populated areas often face high crime rates and live in fear of having their own or neighboring houses robbed, vandalized, or invaded. Such conditions have, in turn, spurred more households to leave.

Homeowners that abandon their housing and/or default on their mortgages face significant economic hardship as a result: they face the loss of the resources invested in a lost mortgage, and the difficulty of affording the rent of an alternative home. Some people have resorted to living with extended family members in more consolidated and central locations, likely contributing to overcrowding. In addition to the impacts that vacancy and

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[67] A reform was passed in 2015 to define abandoned housing as that which is vacant and with an owner who cannot be located, or which conditions pose risks to its habitability or its appraisal. This definition was created to strengthen mortgage collection, particularly for INFONAVIT. The previous foreclosure system took about nine months with the assistance of local governments or even longer if a judicial process had to take place (SHF 2014).

[68] Several of the municipalities in Mexico with the highest vacancy rates in the country are in Mexico City's metropolitan region in the State of Mexico. Tijuana is a very big and extended municipality, but its most peripheral census tracts also experience the same phenomenon, as do other Mexican cities. At lower rates, some central city locations are also experiencing a varying degree of housing vacancy, but generally not as concentrated. Very elevated land and housing prices and speculation in central locations may partially explain some of these vacancies. Generally, in a well-functioning and tight market, the opposite would occur, but given the low-purchasing power in Mexico it seems that conditions have reversed.

abandonment bring for residents and homeowners, local governments and INFONAVIT face serious problems as well. The latter has had to deal with the deterioration and depreciation of its delinquent portfolio. Local governments have struggled to provide adequate services in remote and dislocated areas and are likely to continue to do so for many years.

5.1 ISSUES OF ACCESS

Officially, the National Housing Commission defines the housing shortage as the number or percentage of households living in overcrowded conditions or on very poor quality housing.[69] Over the last couple of decades, in relative terms and at the national level, the housing shortage thus defined has been reduced, but significant unevenness remains in conditions across regions, and in some areas shortages have increased in absolute terms. This chapter looks beyond this official metric and documents some of the ways in which access to adequate housing has been hindered. For example, access is precluded when households are offered unsustainable mortgages. Similarly, even when newly built housing meets basic and official standards, it is often poorly constructed and in locations without adequate access to infrastructure and services, resulting in inadequate housing and detrimental living conditions for its residents. Such factors have helped produce rising housing vacancy and abandonment, with consequences for an array of actors – particularly financing institutions such as INFONAVIT, local governments, and households. Thus, the

[69] Overcrowding is defined as more than 2.5 inhabitants per room. Poor quality housing includes that which does not have sewage, or is built with precarious materials: waste, cardboard, perishable/untreated wood, palm leaves, mud, metal sheets, asbestos, or dirt floors.

following sections seek to problematize the extent to which Mexico's recent housing boom has improved the quality of life of residents

5.1.1 *El Rezago Habitacional* and the Right to Adequate Housing

> *"Market housing production is for those who can afford it, housing rights are for everyone"* (Habitat International Coalition-América Latina 2016: personal interview).

Arguably, over the last couple of decades, housing production in Mexico has transitioned from being primarily through informal practices to a formal system, and it has done so, in theory, to address the country's significant shortage of adequate housing.

> "Prior to the creation of INFONAVIT, most homes were built through an incremental, informal process using household resources to acquire the land and construct the house. By 2005, however, a majority of Mexican households bought homes built by private developers with mortgages financed – for the majority, and at least in part – by government agencies with tight restrictions on both the borrower and the type of housing eligible to receive financing. Mexico's housing transition also hinged on the complete transformation of the country's construction industry: prior to the 1990s, most construction companies were small-scale operations, but by 2004, nine of the country's largest developers controlled a quarter of the market share. INFONAVIT, for its part, played a pivotal role in the country's housing transition, thanks to its market dominance in mortgage lending and, in the early years, a close relationship with large-scale developers" (OECD 2015).

Yet, new housing production – the focus of policy over the last couple of decades – has not adequately addressed the needs of those too poor to access formal housing finance systems or who thus may require assistance addressing conditions in their current housing, requiring rehabilitation or other resources. Recent Mexican housing policy also contains an implicit urban bias, given that cities and manufacturing centers concentrate the country's formal employment, and it is these workers who have access to housing credits. Thus, housing funds are not necessarily going to the poorest regions or to the households with the most urgent housing needs. In other words, the liberalization of credit linked to new housing production, coupled with speculative and unregulated development practices, is not responding to the actual housing needs and demands of the Mexican population. In 2014, for instance, over half of Mexican households did not have the financial means to acquire a 200 thousand MxP home, the average price of a low-income housing unit in urban areas (SHF 2014; Soederberg 2015).

Officially, the number of households living in poor housing conditions in Mexico has remained relatively stable since the year 2000 at above 9 million, or approximately 30 percent of all households. Regional variations are notable, however, ranging across states from 8 percent in Aguascalientes to 72 percent in Chiapas. Such dramatic extremes may reflect differences in urban settlement patterns: while the former state is very small and urban, the latter is larger, in both population terms and territory, and has an extensive and scattered rural population. Between these two extremes but above the national average is Baja California, in which more than half of the population lived in poor or overcrowded conditions in 2010. Furthermore, although in relative terms the housing shortage decreased in this state in the 2000s, in absolute numbers it increased from 405,927 in 2000 to 448,256 in 2010. In the city of Tijuana, the housing shortage is slightly lower in relative terms, 43 percent, but also rose slightly in the 2000s in absolute terms from 183,627 to 184,171.

Almost 280,000 housing units were built in the state during the 2000s, almost half of which were built in Tijuana (an increase of 47 percent). Although Baja California is not a small state in terms of population or territory, it contains only five municipalities with most of the population of the state in urban areas and located to the north close to the U.S.-

Mexican border. As we can see in the graph below (Figure 5.1), the core and most urban municipalities in the state – Tijuana and Mexicali – had relatively smaller shortages in 2000. In this case, it is interesting to note that most of the state experienced significant housing growth rates in the 2000s, likely because Tijuana has started to absorb Tecate and Playas de Rosarito as part of its metropolitan region. In the case of Ensenada, it is probable that its location near the sea has also rendered it an attractive location for development.

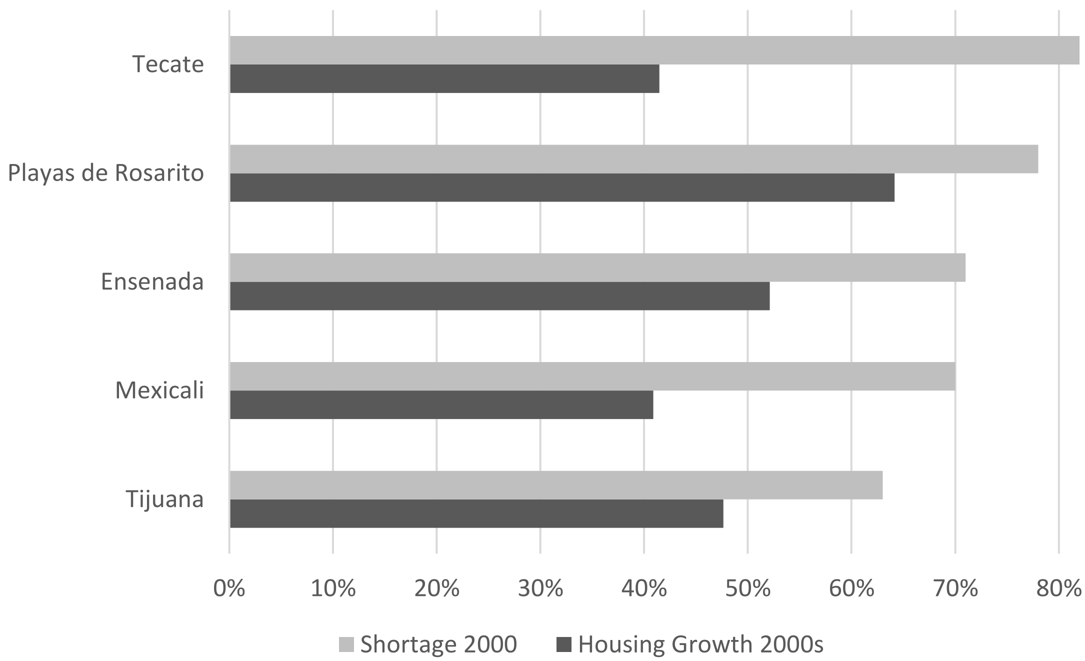

Figure 5.1: Housing Shortages (2000) and Housing Growth (2000-2010) in Baja California. Graphic by the author.

Source: Sistema Nacional de Información e Indicadores de Vivienda (SNIIV).

Below the national average but notable for the size of its shortage in absolute terms is the state of Mexico. The state's housing shortage fell in absolute terms in the 2000s, from

950,992 to 840,786. Its relative housing shortage was therefore at 23 percent of all units in 2010. At the same time, the state's housing stock grew by 859,530 units – a growth rate of 30 percent for the decade. The pace of housing construction is important to understanding conditions in small municipalities, like Huehuetoca, where the share of inadequate housing fell from 27 percent in 2000 to 15 percent in 2010, according to official counts. This, however, has much to do with the impressive amount of units built in the 2000s, over 15 thousand, which almost tripled its housing stock. Furthermore, the number of households enduring a housing shortage increased from 2,193 to 3,544. Thus, while the housing shortage has been contained in relative terms, the efficiency in achieving this is questionable.

Compared to Baja California, the state of Mexico has a larger rural population. Perhaps for this reason in more than a quarter of its 125 municipalities over 65 percent of households lived in poor or overcrowded housing conditions in 2000. Almost all of these municipalities are rural and small, and housing finance programs and other public resources generally did not reach them in the 2000s. Previously rural municipalities did experience very notable housing growth rates, however, when located in close proximity to large urban areas, such as Mexico City and Toluca. Twenty such municipalities experienced a housing growth rate of over 50 percent in the 2000s. Many of these are now experiencing vacancy rates well above the national average. Hueheutoca (to the north of the map below) is one of such municipalities, which we will continue to discuss throughout this chapter and research (Figure 5.2).

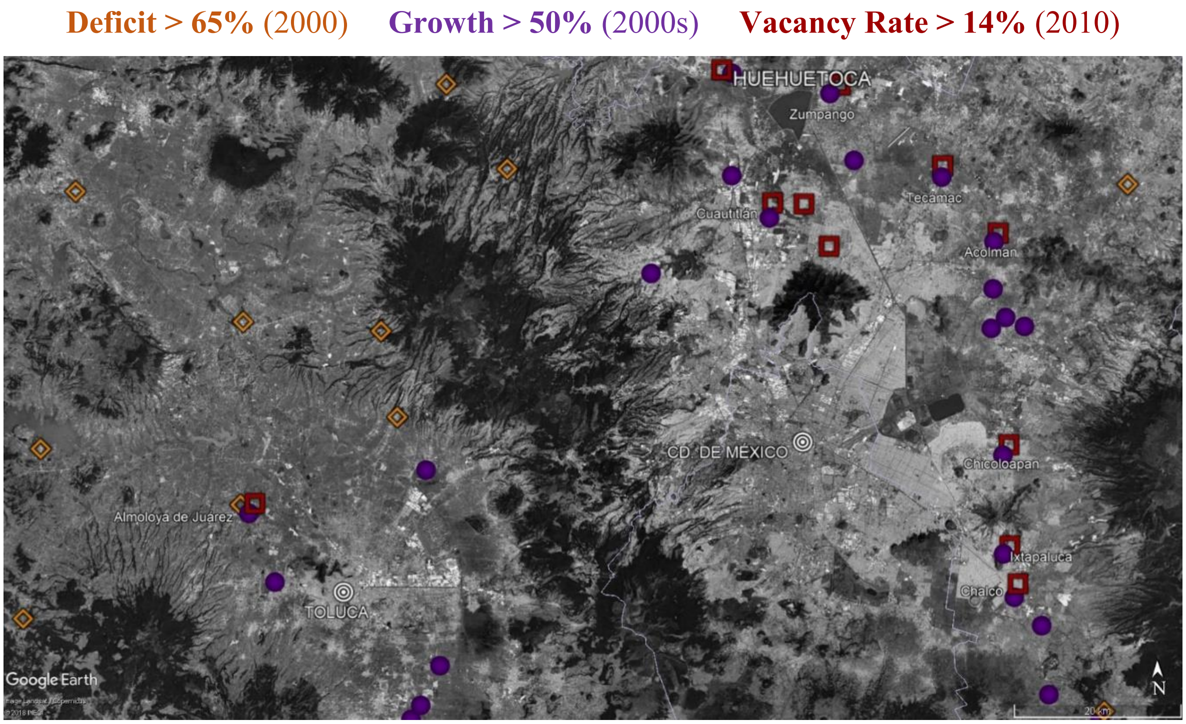

Figure 5.2: Municipalities with High Housing Deficits, Growth and Vacancy in the State of Mexico.

Illustration by the author. Source: SNIIV.

At the end of the day, over 50 percent of the Mexican population employed in the informal economy cannot access any type of credit or social security. This simple fact calls into question the feasibility of effectively addressing the housing shortage through credit expansion, Mexico's main strategy since the 2000s, and of making the constitutional right to adequate housing a reality. In Mexico, the right to housing is thus predicated on formal employment, and even then, the quality of housing for low-income households is questionable. Together, these factors suggest that housing is a good rather than a right in the country (TECHO México 2016; WRI 2016; INFONAVIT delegate 2016: personal interviews).

While new housing developments were not built with precarious materials, many of these housing units have fostered overcrowding given their very small sizes (Figure 5.3). About 1 million units have only one room and are smaller than 30 square meters (around 300 square feet). Thus, often

> "living rooms double as bedrooms. Dining tables are shoved against walls to make way for bunk beds. Couples sleep in nooks meant for washing machines. At mealtime, children stand or take turns at tiny dining tables… Cars parked on the dirt driveways out front often serve as second bedrooms or recreation rooms for teenagers seeking privacy. They take naps, play cellphone videos and hang out with friends… The hallway is a storage area, jammed with boxes of clothing. The living room, dominated by a queen-size bed, serves as Jose and Julia's bedroom. Jose's ironworker tools are stored on the roof. The front yard doubles as the laundry room; that's where they've put the washing machine. Across town at El Laurel tract, Saira Reyes, her husband and two daughters sleep on side-by-side mattresses in the bedroom of their mini-casa." Enrique Cruz, who lives at Villa del Alamo in Tijuana said "we live like birds in a cage, flying around crashing into each other" (Marosi 2017).

Housing units were built fast and cheap and profits appear to have been more of a concern than residents' quality of life. The small size of units was justified as a way to provide housing to low-income groups who could not afford much else, but the units being produced did not necessarily provide habitable conditions. A member of El Barzón Baja California argues:

> "Those real estate companies did not build houses, they built *pichoneras* (pigeonholes)…people live in hallways, if you go to the houses that are by San Pedro, you can only fit a small twin-size bed in the bedroom, dining rooms do not fit a family to eat and gather, those are not homes… the worker is the one that loses on every side of it, the person, the Baja Californian, the Mexican seeking to create a patrimony" (El Barzón BC 2016).

In 2013, the government stopped granting credits and subsidies to such small units. Yet, those who bought these homes remain locked in 30-year mortgages. Similarly, although harder to track, it is likely that people who have been evicted or who have decided to abandon their homes, may now be living with relatives, often in overcrowding conditions (Fundacion Tú+Yo 2016; TECHO México 2016: personal interviews).

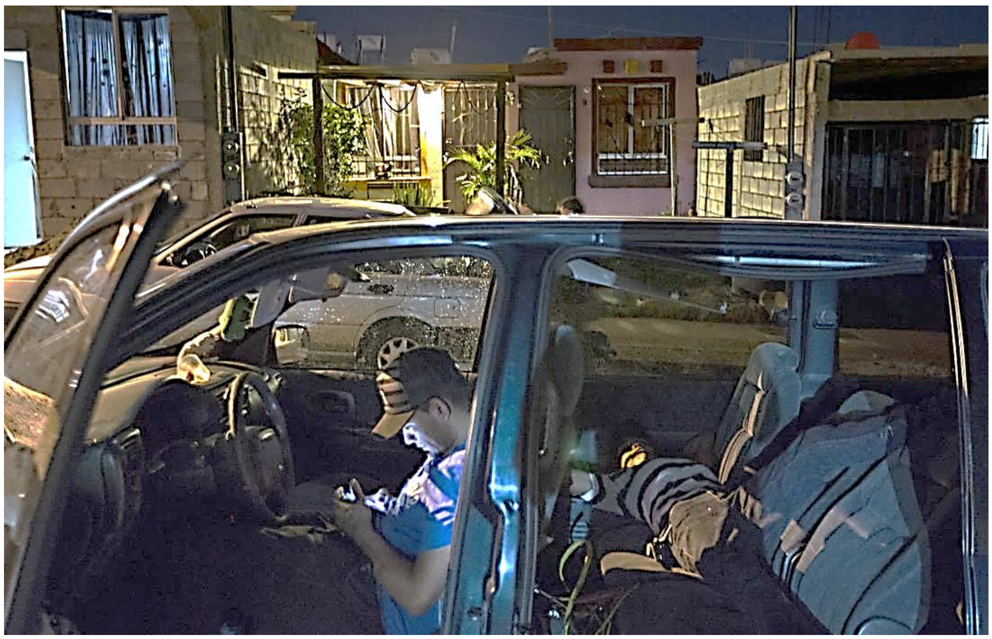

Figure 5.3: Teenagers Resting in a Car Parked in front of a One-bedroom Home in Tijuana

Source: Los Angeles Times 2017.

The quality of construction of new developments is also an important concern. Quick construction and the minimal development regulation and oversight under which many of these housing developments were built, often yielded substandard construction (SHF 2007).[70] In Vista de Palmillas, Tijuana, residents live in homes tagged with signs

[70] Around 2012, over half of the almost 4 thousand housing units in El Barreal, a housing complex in Ciudad Juárez, Chihuahua, were abandoned because they were built on muddy grounds that flood regularly. The residents that remain continue to struggle with floods and the damage or loss of their possessions. Although

declaring them at high-risk of landslides and floods because of unstable soil conditions. A member of Fundación Tú+Yo in Tijuana narrates:

> "Some developments were built on unsafe slopes that were improperly filled. During the rainy season, they overflow and retaining walls are too weak to sustain the weight. We have cases in Hacienda las Delicias, for instance, where it has rained and landslides have literally covered peoples' houses… In Cañadas, many neighbors left because of the infrastructure. Retaining walls were tilting and so were houses… One of the neighbors also discovered his foundations were not strong enough when a hole started forming in his floor... In the last couple of years, 3 houses have fallen, by themselves, two-story houses, and in different socioeconomic areas, because construction practices are not adequate, particularly those of big developers" (Fundación Tú+Yo 2016).

In Huehuetoca, which experienced very rapid housing growth but had few local officials to monitor these processes, developers were required to build streets and sidewalks, among other infrastructure. However, they frequently skimped on asphalt when they paved roads, leading them to pound into dust after a few months (Figures 5.4 - 5.6). Faulty storm drains also contributed to the washing away of curbs and sidewalks after heavy rains and the flooding of streets and even houses. This has been commonplace in poorly graded developments throughout the country, leading to frequent floods. These issues have been exacerbated in instances in which developments were left unfinished by developers and never formally incorporated into the municipality, which would then be responsible for infrastructure upkeep. In Zumpango, State of Mexico, a city official compares the flooding season to natural disasters: "We have emergency plans for

hydrological studies advised against construction of this development, it was approved. Some homeowners continue to pay their abandoned units while others have defaulted on their mortgages but a group of residents decided to begin a lawsuit against the developers, despite the fact that they built with government approval (Muñoz Ríos 2017; Villalpando 2017).

hurricanes, but we also need an emergency plan for dealing with all the housing failures" (Marosi 2017).

Homex, one of the developers with the poorest track record, argued that it was merely following local zoning laws that permitted development in high-risk zones, and that it was the responsibility of homeowners and local governments to maintain their homes and streets. In reality, however, the company had federal and state backing in the 2000s and was able to steamroll municipal regulators (Marosi 2017). This allowed such conditions and those described earlier to flourish in developments across the country. Problems were extreme in a number of cases, such as the intense flooding experienced by one of their developments in Veracruz, and the collapse of some of their units in Baja California Sur (Figures 5.7 & 5.8).

Figure 5.4: Santa Teresa Housing Development in Huehuetoca.[71]

Source: Los Angeles Times 2017.

[71] This development was built by HOMEX.

Figure 5.5: El Dorado Housing Development in Huehuetoca.

Source: Picture taken by the author in 2016.

Figure 5.6: Cañadas del Florido Housing Development in Tijuana, Baja California.

Source: Los Angeles Times 2017.

Figure 5.7: Colinas de Santa Fe in Veracruz Developed by Homex.[72]

Figure 5.8: Colapsed Homex Development in Cabo San Lucas, Baja California Sur.

Source: Los Angeles Times 2017.

[72] This development was partially built on a wetlands area on the northern outskirts of Veracruz. Its underground drainage system and water treatment plant collapsed. Thus, rainwater and sewage back up into streets and homes during the rainy season and giant craters have formed in the streets. During the dry season, sewage that spills into the roads dries into a fine dust that winds kick as swirls of filth into the air. This development is 10 years old but has among the most decayed infrastructure and homes in the city. In Cabo San Lucas, two buildings constructed in creek beds collapsed (shown in the following image). Homex also developed housing in dry lakebeds and wetlands prone to flooding in Ciudad Juárez and Acapulco. In Monterrey, it failed to properly grade the land, causing soil erosion and instability; "walls cracked, concrete slab floors ruptured, sidewalks sank and rainwater puddled in patios and streets" (Marosi 2017).

5.1.2 Location and Issues of Access to Infrastructure and Services

"The right to housing cannot be promoted by building millions of houses in the periphery" (Habitat International Coalition-América Latina 2016: personal interview).

Recent housing production and urban growth trends in Mexico and other Latin-American regions have exacerbated socioeconomic segregation through the financing and production of homogeneous and peripheral housing developments. In Mexico, housing developments that speculatively leapfrog over vacant land became the norm in the 2000s, imposing severe fiscal burdens on municipalities required to provide adequate infrastructure and services, and significantly deteriorating residents' quality of life by isolating them in areas with limited access to job opportunities and amenities. Such isolated areas are also generally more vulnerable to crime, violence and other social ills that tend to reproduce and intensify social inequality (Esquivel Hernández, 2006; Eibenschutz and Goya Escobedo, 2009; Ward, 2009; Isunza Vizuet and Méndez Bahena, 2011; Ponce Sernicharo, 2011; Monkkonen, 2011b; Bouillon, 2012; González Hernández, 2013; Fuentes and Hernández, 2014; Soederberg, 2015).

While Mexico's urban population doubled from 1980 to 2010, the territory covered by Mexican cities grew seven times. Furthermore, housing production has concentrated in a number of states, municipalities and peripheral metropolitan regions. Peripheral municipalities and census tracts have absorbed housing production and the mortgages of workers who are generally employed in inner-cities or urban and economic centers. Mexico City, for instance, has the most notable divergence between INFONAVIT affiliated workers and the number of mortgages absorbed by the city; while it employs 20 percent of the workers in the country who qualify for an INFONAVIT credit, only 3 percent of the country's housing demand is satisfied within its boundaries. Evidently, for most people it is prohibitively expensive to live in the city. Conversely, if we look at a municipality like Huehuetoca, in the State of Mexico and in the peri-urban fringe of Mexico City's metropolitan region, between 2006 and 2013, it absorbed 39,466 INFONAVIT mortgages while having only 6,895 INFONAVIT affiliated workers already living – and working – there. This has made this and other similar municipalities grow considerably over the last couple of decades, and has also left cities like Huehuetoca with some of the highest vacancy rates in the country (SHF 2012; INFONAVIT 2014; Rosas 2017b).

These development patterns have significantly raised infrastructure and service costs related to transportation, water provision, electricity and drainage. Urban sprawl has also made Mexican urban residents increasingly reliant on the automobile, and has promoted the transformation of agricultural or even environmentally sensitive areas into residential zones. In 2011, the average Mexican household spent 30 percent of its income on transportation. Yet, this was significantly higher in certain parts of the country. In the State of Mexico, for instance, household transportation expenses rise to over 52 percent on average (SHF 2012 & 2014).

Not only do infrastructure and services represent a considerable expense for residents of peri-urban developments, they also are often inadequate. Mass transportation systems, for instance, generally take time to establish in new developments, and in low-density areas, they often run infrequently and only during the day. Similarly, road infrastructure projects, designed to serve newly developed areas have not been completed. Such has been the case of the Boulevard Machado in Tijuana, originally proposed to connect Urbi Villa del Prado to the city. In the State of Mexico, a light rail project was suspended, affecting municipalities like Huehuetoca in particular (CADENA 2016;

INFONAVIT delegate 2016; IMEVIS Toluca 2016; SEDATU 2016; Urban Development Ministry of the State of Mexico 2016: personal interviews).

To better understand conditions in areas with concentrations of vacancy, this chapter reports on research in selected areas in both Huehuetoca, State of Mexico and Tijuana, Baja California (Figures 5.9 & 5.10). These areas have also experienced a significant lag in the arrival and establishment of commercial, health and educational services, among others, generally until and if these new developments consolidate with enough population. Clinics and schools generally take the longest time to establish. Figures 5.11 and 5.12 show the density of clinics, schools, convenience stores and transportation services in both municipalities, and when compared to the previous vacancy figures, we can quickly see that these peripheral high vacancy areas have the lowest density of services.

Figure 5.9: Concentrations of Census Tracts with Vacancy Rates above 55 Percent in Huehuetoca (2010).

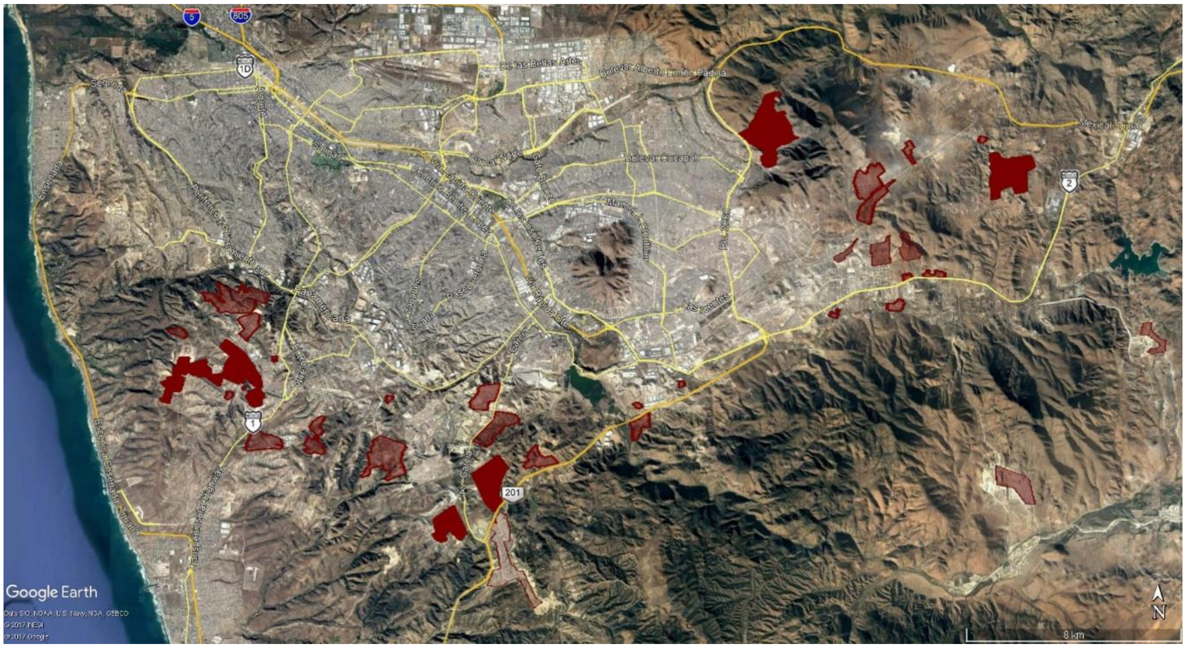

Figure 5.10: Concentrations of Census Tracts with Vacancy Rates above 40 Percent in Tijuana (2010).

Illustration by the author. Source: Instituto Nacional de Estadística y Geografía (INEGI).

In the case of Huehuetoca, all of the red census tracts on Figure 5.9 are developments built after the year 2000. The municipality itself is peripheral to Mexico City's metropolitan region, but given that it used to be a rural municipality, its original municipal center, to the southeast, does not present a severe issue of vacancy, and has a higher density of services. In the case of Tijuana, Figure 5.10 shows a belt of census tracts with high vacancy rates. Tijuana is a very large municipality and city in itself, which makes its analysis significantly distinct from that of Huehuetoca. While vacancies in the whole municipality are not as high, they tend to be in certain areas, and they are particularly concentrated in the periphery. Only about half of these areas are new developments, however, some of them are informal settlements. Yet, both types of housing are often very close to each other, although as we can see on the map above, these residential areas are fairly scattered. Turning to density of services, we do see a similar trend to that of Huehuetoca, less accessibility in peripheral and high vacancy areas (Figure 5.12).

Either because of lack of municipal resources, or in instances in which developments were not completed by developers and incorporated into corresponding municipalities, several new developments also lack adequate services and infrastructure such as garbage collection, policing, paved streets or public lighting, and the maintenance of public spaces, among others. As can be seen on Figures 5.13 and 5.14, housing developments in Huehuetoca, Villa del Rey and Santa Teresa, built by URBI and HOMEX, respectively, only have partially paved street and public lighting coverage. The same is true of Santa Fe and Quinta del Cedro built by URBI in Tijuana (Figures 5.15 & 5.16).

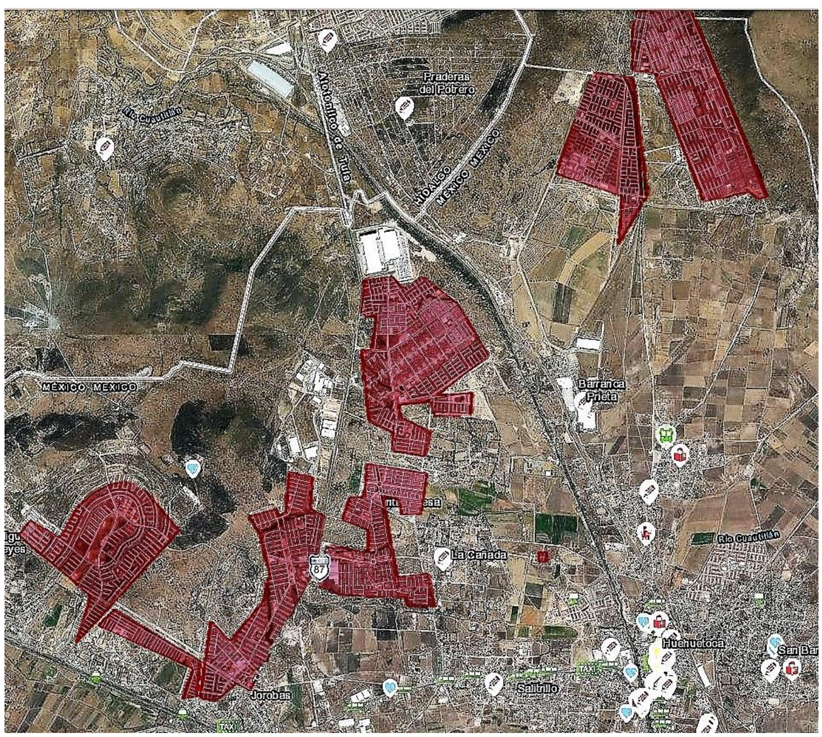

Figure 5.11: Density of Clinics, Schools, Convenience Stores and Transportation Services in Huehuetoca (2015).

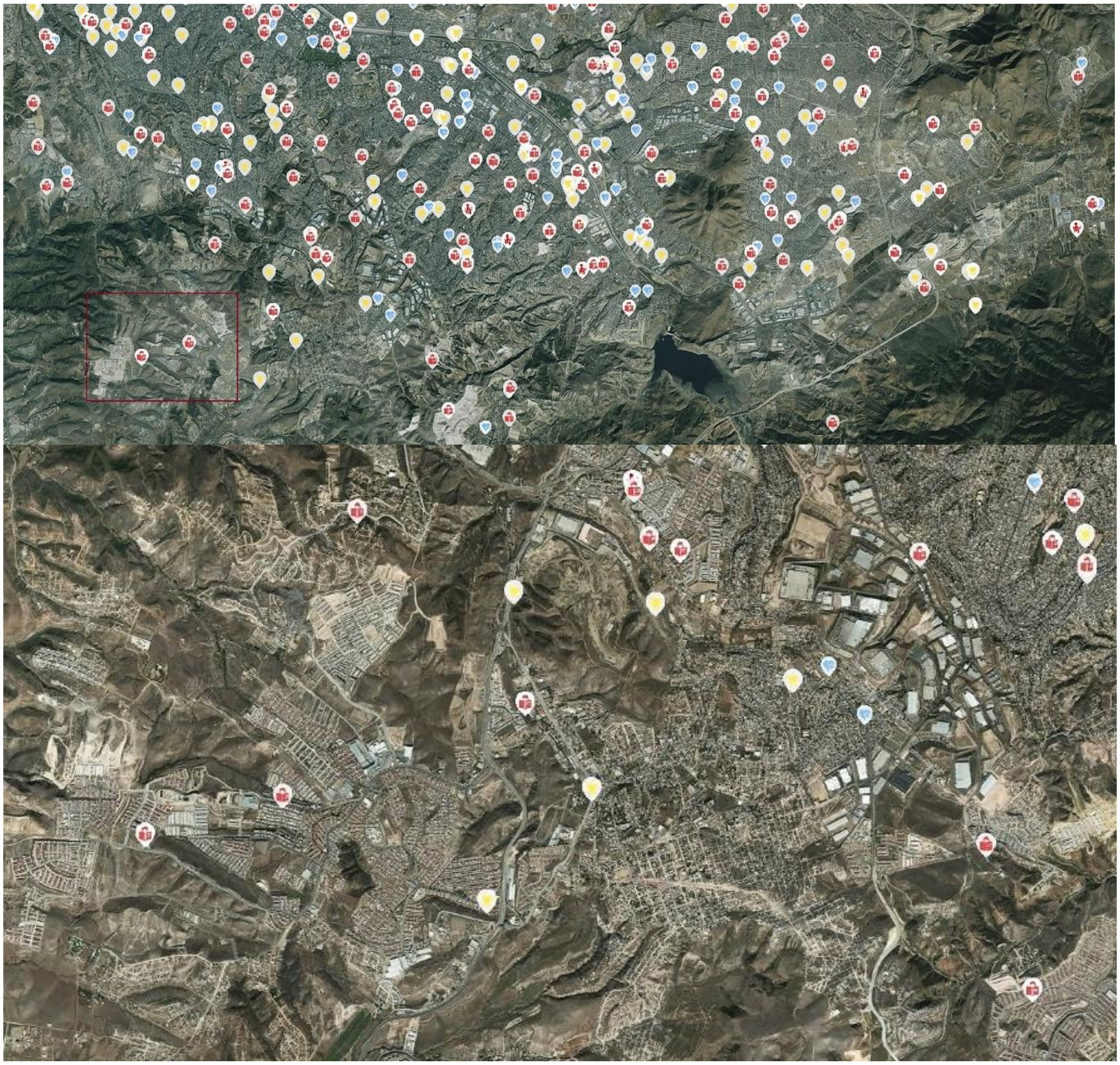

Figure 5.12: Density of Clinics, Schools and Convenience Stores in Tijuana and a Zoom-in to the Santa Fe Developments to the Southwest (2015).

Source: Registro Único de Vivienda (RUV).

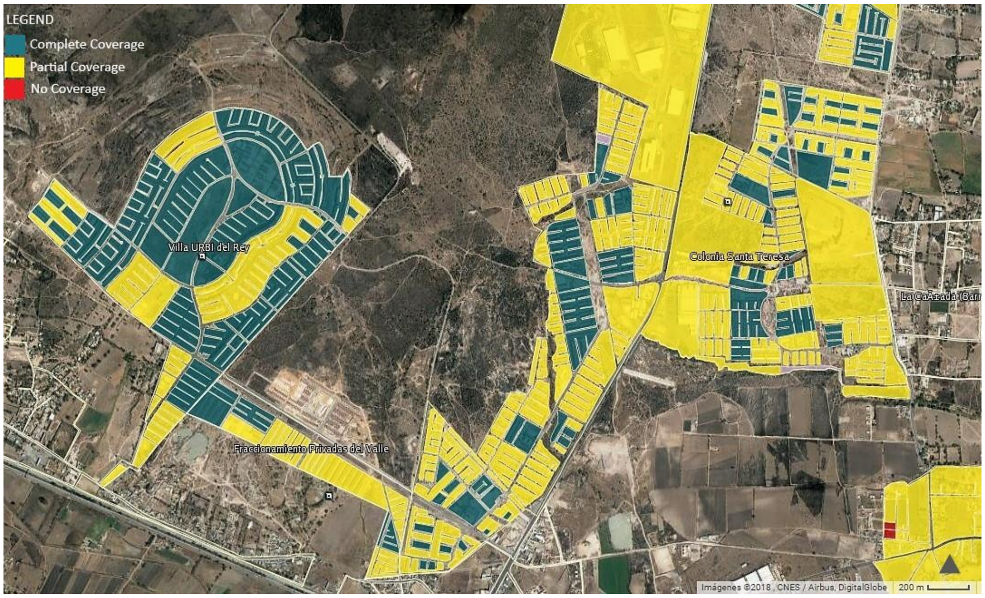

Figure 5.13: Paved Street Coverage in Villa del Rey and Santa Teresa, Huehuetoca (2016).

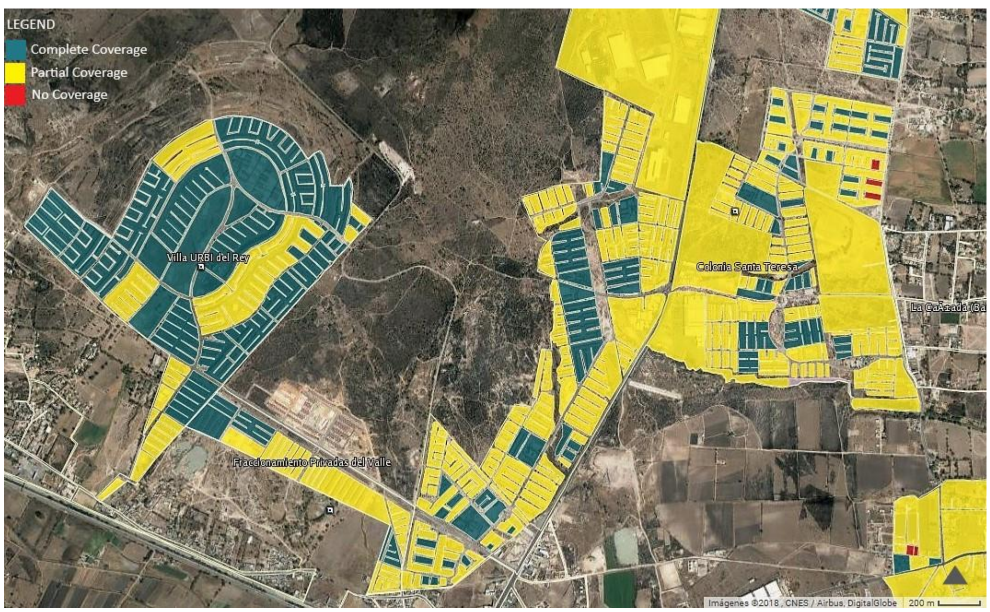

Figure 5.14: Street Lighting Coverage in Villa del Rey and Santa Teresa, Huehuetoca.

Source: Inventario Nacional de Vivienda (INV).

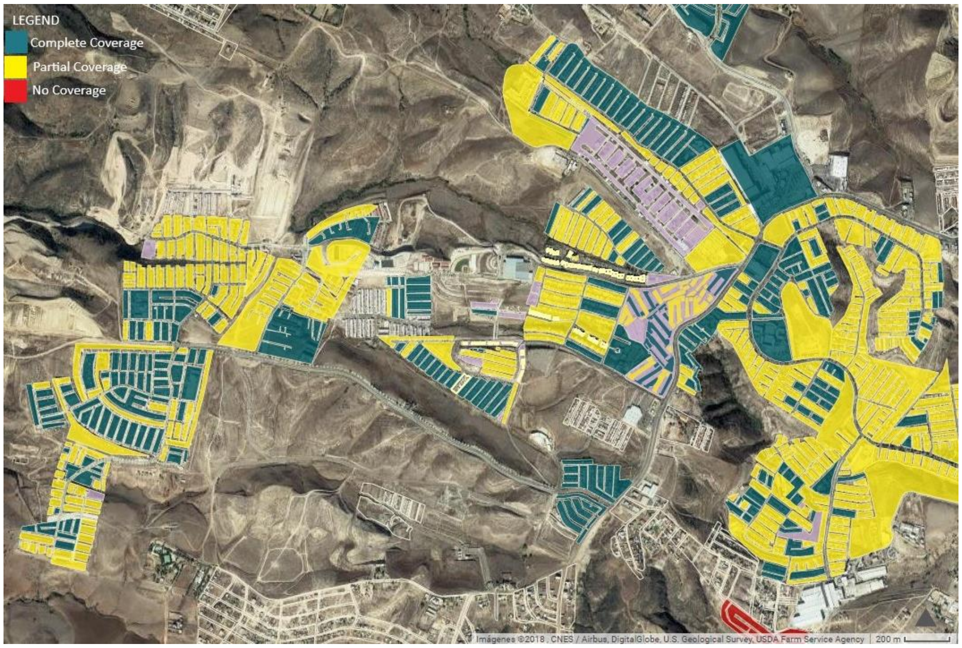

Figure 5.15: Paved Street Coverage in Santa Fe and Urbi Quinta del Cedro, Tijuana.

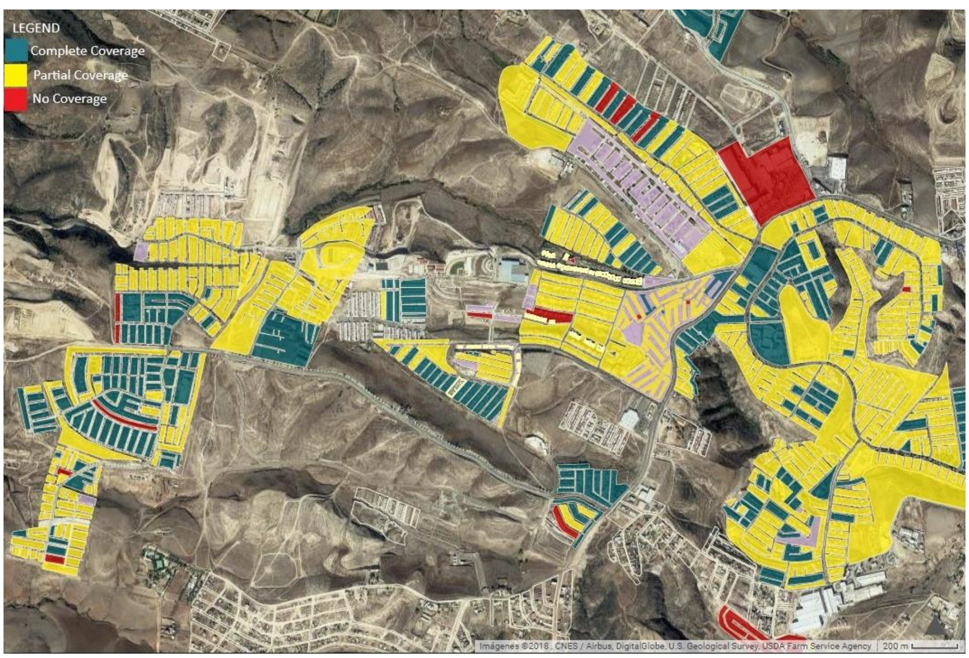

Figure 5.16: Street Lighting Coverage in Santa Fe and Urbi Quinta del Cedro, Tijuana.

Another matter that has exacerbated the above issues is that housing developments in many states were built in stages and while residents bought or moved into housing built in the first stages once it was completed, some infrastructure and services were not completed or provided until the entire development was finished. Thus, when they are able to afford them, residents have had to resort to hiring private and more expensive services, most notably private security and garbage collection. A realtor in Tijuana narrates: “If you go there at night, you will not find a single light post, there is no transportation, only in the morning, so if you have an emergency, you are stuck if you do not have a car” (API Tijuana 2016: personal interview).

Basic and vital services, such as water, are inadequate in developments like Santa Teresa in Huehuetoca. The development company Homex built more homes than the zone could sustain, overwhelming this areas’ well capacity. Thus, much of Santa Teresa has not had running water since 2016. In the neighboring municipality of Zumpango in the same state, “residents of a Homex project called La Esmeralda rely on diesel generators for electricity because the company didn’t connect large parts of the development to the electrical grid” (Marosi 2017).

As previously mentioned, unfinished developments across the country have exacerbated such problems. An estimated 300,000 people live in more than 40 incomplete tracts in Baja California as do between 200,000 and 500,000 in the State of Mexico. Although these developments were formally approved, many of them have now fallen into an informal status because they were not completed and thus were never incorporated into the municipality and have no service access. Yet, they are partially occupied, either by their original owners or sometimes by squatters occupying vacant or abandoned houses (Rosas

2017b). Meanwhile "tens of millions of dollars' worth of construction bonds intended to make repairs and finish infrastructure remain unused or unaccounted for" (Marosi 2017).

In the selected neighborhoods that were 'formally' developed in Tijuana (with a population of approximately 29,000), about a third of housing units did not have access to all basic services (water, electricity and drainage). The lines between formal and informal development have blurred. The city of Tijuana has identified informal areas in the city and included formally developed housing that developers have failed to finish and that the municipality has not formally incorporated into its jurisdiction – a condition that generally leads to service inaccessibility (Figure 5.17). This is the case of a portion of Tijuana's Santa Fe development showed on the map below. It is also interesting to note that informal settlements surround this supposedly 'formal' development. In many instances, squatters have also occupied this vacant housing (Figure 5.18). In Huehuetoca, of the selected formally developed areas (with a population of around 25,000), the proportion of housing units without access to all basic services was lower but still significant, at about 13 percent. Moreover, close to five percent of households in these areas live in overcrowded conditions. Thus, although the 2000s saw a housing boom, the extent to which this led to an improvement in the quality of living conditions is questionable given the inadequate design and location of new housing (SHF 2007; IMCO 2011).[73]

[73] In 2013 and 2014, when a residential satisfaction survey was administered in housing complexes across the nation to assess the physical, spatial, functional, and environmental characteristics of housing, the index came out unsatisfactory with a rating of 6 on a scale from 5 to 10 (SHF 2015).

Figure 5.17: Informal Developments and Settlements in Tijuana.[74]

Figure 5.18: Informal Occupation of Vacant Developments in Tijuana.

Source: Los Angeles Times 2017.

[74] At the center of this image is an example of formally developed housing in Santa Fe, Tijuana currently categorized as informal, most likely because it was not finished and handed to the municipalities, and thus lacks adequate service coverage.

5.1.3 Finance and Foreclosures

During the federal administration of Vicente Fox Quezada (2000 - 2006) Mexico's mortgage portfolio practically doubled and in 2006 it represented close to 10 percent of the national GDP, considered high for a developing country, although considerably below the rates found in countries like the U.S. Yet, only an extremely small portion of INFONAVIT loans – 13 percent – went to the purchase or rehabilitation of used housing, compared to 85 percent in the U.S. (SHF 2007). Although INFONAVIT certainly led mortgage growth in the 2000s, other private financial institutions quickly entered the market. From 2004 to 2015, BBVA Bancomer increased its mortgage financing from 40.6 million MxP to 163.6, Banorte/IXE from 15.7 to 90.2 and Banamex from 25.9 to 78 (numbers adjusted to inflation). Thus, by 2015, these three banking institutions had financed around sixty percent of the total mortgage market. This was also possible because in the late 2000s INFONAVIT entered an alliance with some private financing institutions to launch a program to support the construction and commercialization of housing developments. These institutions initially provided financial support in the form of bridge loans to fifteen developers, largely to build housing worth less than half a million MxP and complete projects in less than four years (Colin 2010; SHF 2015).

In addition, many Sofoles (for their acronym in Spanish), financial institutions with limited scope (non-depository banks), specialized in mortgage lending to serve INFONAVIT or FOVISSSTE (mortgage institutions for government employees) affiliated workers and other individuals who could verify their incomes. They offered long-term loans of up to 30-years with as little as 0 percent down payment for lower-income households, conditions that were not provided by banks before, particularly after the crisis they experienced in the 1990s. Sofoles could also finance development and became particularly important funders in the early 2000s; at their peak some became larger than many banks. In 2006 they were substantially deregulated, allowing the creation of 120 Sofoles with assets of more than 210 billion MxP. Yet, soon thereafter, with the advent of the U.S. mortgage crisis in 2008, private and public funding was cut off to most of these institutions, particularly those actively investing in stock markets. This accelerated the decline of Sofoles, particularly those that specialized on providing bridge loans to developers and securitized mortgages. Many declared bankruptcy, merged or disappeared. By 2012, there were only 18 Sofoles left with a value of around 32 million MxP and they went extinct in 2013. There are still unregulated Sofomes, which are similar institutions but with multiple lending scopes, meaning that they do not only specialize on mortgage lending, for instance (Juárez 2013; SHF 2015).

One of the most prolific Sofoles in the 2000s was *Su Casita*, which with others, received funding from the International Finance Corp., an arm of the World Bank. The Inter-American Development Bank also provided about 3 billion USD to Mexico's Federal Mortgage Society to promote this type of loan. Other US-based companies that played a role in America's mortgage crisis also backed other Sofoles. Yet, while the subprime loans that led to the U.S. housing market collapse, had some precautions against skyrocketing payments, such as lifetime caps on interest rate increases, many Mexican loans had none. Yet, pamphlets from *Su Casita* read, "The social interest loan is provided on very accessible terms. In the long run it represents an important saving and a magnificent investment" (Marosi 2017).

Credit Suisse won an award in 2007 for underwriting UDI loans created by *Su Casita* and GMAC Financiera, the General Motors-affiliated financial services company.

Loans were later pooled into mortgage-backed securities by Wall Street investment banks and sold to bondholders. Income from the bonds came from the mortgage payments made by homebuyers until they started to fall behind on their payments and the bondholders started launching foreclosure actions. By 2016, the default rate on Credit Suisse and *Su Casita's* UDI loan portfolio had reached a default rate of 80 percent. *Patrimonio*, another prominent Mexican mortgage company, advertised their approach at a finance conference in Miami in 2011 through a presentation titled "The region's high yield, stressed and distressed deals: Turning ticking time bombs into opportunity" (Marosi 2017).

With mortgage expansion in the 2000s, a significant issue was the granting of credits to individuals with very limited or no debt capacity.[75] Realtors were in charge of profiling potential homebuyers but were also interested in selling as many units as quickly as possible (Certified Housing Credit Adviser 2016; personal interview). Thus, during Felipe Calderón Hinojosa's federal administration (2006-2012), the mortgage delinquent portfolio increased by 181 percent (Banco de México 2012). One of the products of the relaxation of Sofoles was the granting of credits in investment units (UDIs for its acronym in Spanish). UDIs were introduced in the late 1990s to protect lenders while offering mortgages to people that previously were not creditworthy. The value of UDIs' rise are adjusted with inflation; initially 1 UDI was equivalent to 1 MxP but in 2016 1 UDI was worth 5.4 MxP, which led mortgages granted in UDIs to have the highest delinquency rates in 2015. Credits granted in pesos had a default rate of 13.5 percent and those granted in

[75] Although each financial entity has different mortgage requirements, in general, individuals have to be employed and have a minimum household income of around 2.5 minimum salaries and be between the ages of 18 and 50 to qualify. Nowadays, having enough savings for a down payment and a positive credit history is also important. Thus, of the 31.5 million households in Mexico, only 6.4, around 20 percent, possesses all of these characteristics, and only 4.3 million are affiliated to INFONAVIT or FOVISSSTE.

UDIs had a rate of 42.1 percent.[76] Similarly, Sofol mortgages had a delinquency rate of 53.5 percent, compared to INFONAVIT and FOVISSSTE's 8.4 percent. These latter institutions have had lower delinquency levels than banks and Sofoles, largely because they deduct mortgage payments directly from workers payrolls. Yet, if workers lose their employment, they must wait two years before contemplating the possibility of restructuring their loans.

Yet, frequently INFONAVIT financing was insufficient to purchase housing, particularly in big cities. Thus, INFONAVIT introduced co-financing schemes with private institutions, where second liens were often granted in UDIs. Furthermore, housing institutes' desire to ensure the liquidity of their loan portfolio also drove them to use onerous mortgage and securitization schemes that allowed mortgages to be easily sold off to investors. INFONAVIT credits in the 2000s were largely granted in minimum salaries that rose through the years, pushing up the mortgage debt of families. In 1995, the minimum salary was 15 MxP – it currently stands at 80 MxP. Thus, a household seeking to repay a debt taken out in 1995 would now be repaying a loan worth more than five times as much as the original loan. By the end of 2015, only slightly more than 10 percent of INFONAVIT's portfolio was in pesos rather than minimum salaries. Furthermore, loans were often structured so that most workers paid mostly only interests for the first third or half of their mortgage term. As a result, those defaulting had not build any equity in their homes – on top of a debt that had grown tremendously. Although monthly payments generally started as a 25 percent paycheck deduction, they also rose in many instances, rendering workers increasingly unable to meet their mortgage payments (SHF 2007 &

[76] Banks and mortgage lenders made about 850,000 loans from 2000 to 2013, most of them in UDIs (Marosi 2017).

2015; Reza 2013). INFONAVIT mortgage management also presented a number of opportunities for fraud in the 2000s, such as phishing, clientelism and sham mortgage contracts. Thus, of the authorized businesses operating in 2012, 41 percent – or almost 31,000 – were closed due to irregularities (INFONAVIT 2013).

The selling apparatus of large housing developers also grew very quickly and became very profitable. In the absence of regulatory and oversight mechanisms, home sale teams would routinely misinform buyers in order to secure a sale and minimize financial perils. Realtors were usually very aggressive in their selling pitches; a common practice was to tell potential buyers that they would lose their INFONAVIT line of credit if they did not use it soon. Other known practices were to promise subsidies or other false benefits. Potential buyers were ultimately seen as 'walking commissions' – a slang term used by sellers. Large construction companies like Homex were making sales without regard to borrowers' long-term ability to pay, and even allegedly through fraudulent loan applications. The current director of the Federal Mortgage Society said in an interview: "The only thing construction companies cared about was getting people into houses. They didn't care if borrowers could pay or not" (Marosi 2017). Later, collection practices also had little oversight and both INFONAVIT and private institutions outsourced to collection companies the recovery of their past-due or delinquent portfolios. This often resulted in very aggressive practices towards debtors, although civic organizations have tried to halt this in recent years (Certified Housing Credit Adviser 2016; El Barzón BC 2016; Former IMPLAN official 2016: personal interview).

The combined effect of these issues was to ensure that many owners ended up with a debt larger than the value of their home. The problem of growing debts was made worse when properties depreciated in value due to their location, deficient access to infrastructure and services, or the abandonment of nearby homes. As many homeowners started to miss payments, some sought to restructure their debt, a task that proved to be particularly hard with INFONAVIT. While INFONAVIT grants grace periods of up to 24 months to affiliates who lose their employment, interests and the value of the debt (if in minimum salaries or UDIs) continues to accumulate during such periods. Ultimately, the institute has a legal obligation to reclaim its delinquent portfolio to ensure its financial stability.[77] Furthermore, since 2005 INFONAVIT sold 55,000 credits, at 20 percent of face value, to Capmark, a subsidiary of General Motors. Controversially, the sons of then-first lady, Martha Sahagún, also bought a portion of the delinquent portfolio that year. While some charged that this was influence peddling, it ended up having no legal implications. The following years saw a rise in foreclosures and evictions and in 2013, INFONAVIT outsourced mortgage collection to 21 legal offices (Muñoz 2012; Reza 2013; Esparza 2014; Muñoz 2017a).

As previously mentioned, in the aggregate, INFONAVIT's delinquent portfolio has been contained when compared to that of Sofoles. Yet, it has increased slightly – particularly since the late 2000s – and more notably when combined with its past due portfolio (Figure 5.19). Furthermore, there are also some important regional variations, and our case study regions exhibit a higher default rate (and increasing) than that for the nation as a whole (Figures 5.20 & 5.21). Several different factors may be influencing this, including local economic conditions and repossession policies, which vary from one place to another. But they are not unique: several of the states that experienced significant production booms in the 2000s are now exhibiting higher delinquency rates.

[77] One of the most notable and recent foreclosure cases occurred in 2017 when INFONAVIT foreclosed 10 thousand housing units in Ciudad Juárez.

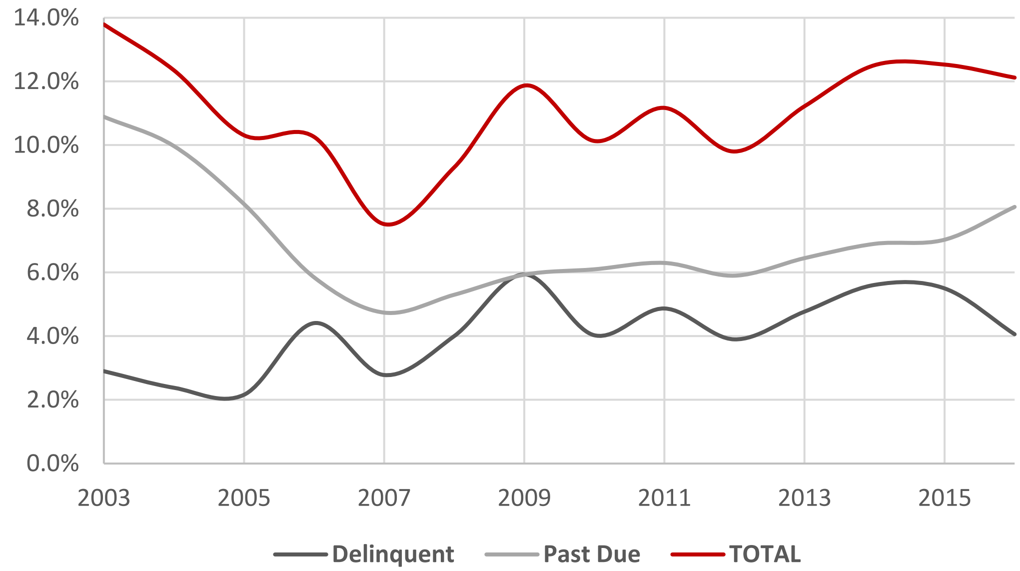

Figure 5.19: Fluctuation of INFONAVIT's Delinquent and Past Due Portfolio.

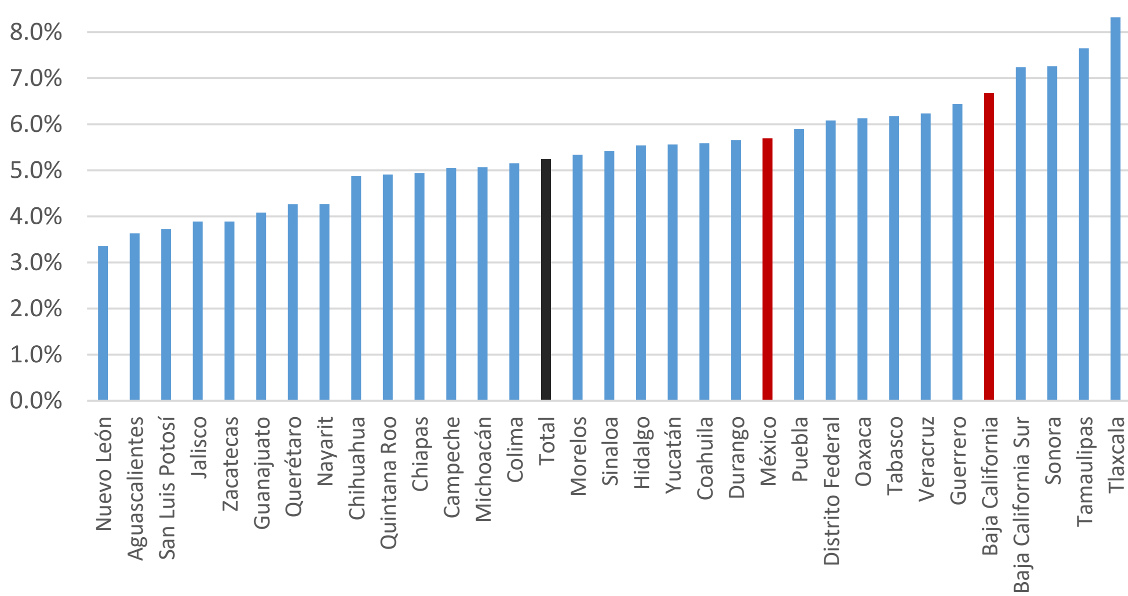

Figure 5.20: INFONAVIT's Delinquent Portfolio by State (2015).

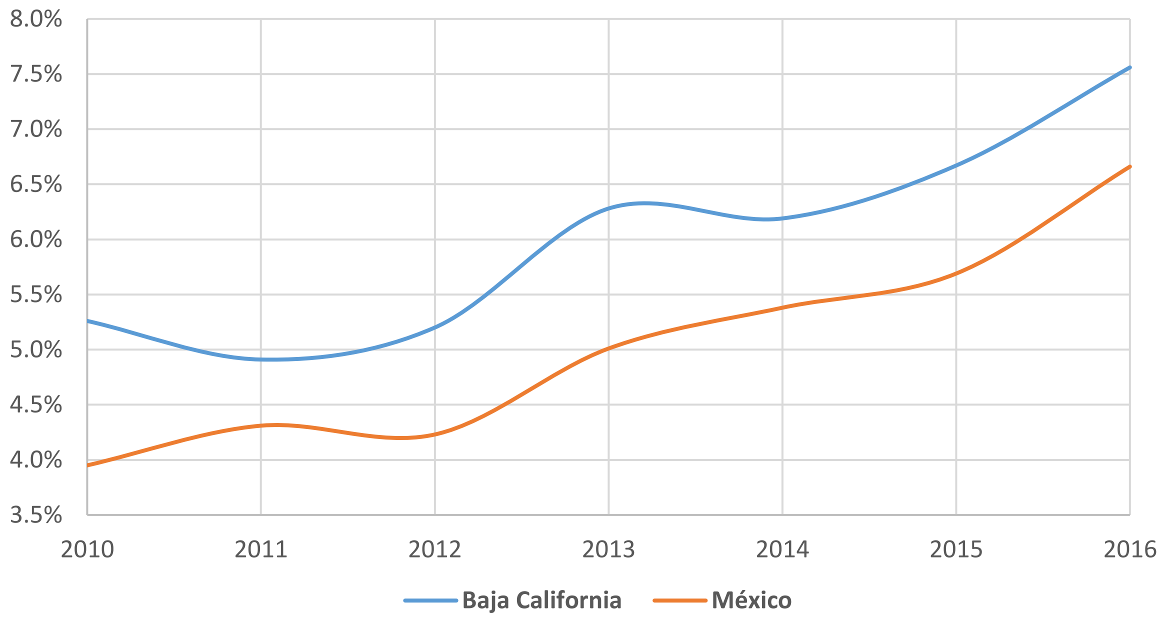

Figure 5.21: INFONAVIT's Delinquent Portfolio in Case Studies.

Graphic by the author. Source: SNIIV.

Private lenders facing numerous defaults (from both developers and homeowners) have arguably offered more loan restructuring possibilities. A reason for this may be that they have feared complications related to entering unfamiliar, long, or bureaucratic legal battles. Nonetheless, in some instances lenders have chosen to sue or go to trial to repossess properties, a process that generally now takes from 3 to 5 years – after a 2003 reform increased lender protections. An important change (for lenders) was the simplification of the foreclosure notification process. The lender can publicize the notification in newspapers of wide circulation and official gazettes of the state where the debtor is being sued, which often is not the same in which they live, which evidently makes the process more complex and expensive for the defendant. Foreclosures may also be expedited and executed by a private institution if real estate investment or guaranty trusts are used by the lender. These trusts are thus widely used, particularly by cross-border lenders, and yield a foreclosure process that generally takes six months to three years, the latter if the borrower refuses to vacate the premise, in which case the matter must be settled in court (Alcocer Chauvet 2009). The recent use of oral proceedings has also allowed foreclosures to move very quickly in some states.

On the side of borrowers,

> "one of the tactics most commonly employed by borrowers wishing to stall or avoid administrative foreclosure involves filing a lawsuit to enjoin the trustee from transferring title without a court order… The legal argument of the borrower in these cases is often that the trustee transferring the property to a third party without the judge's intervention is tantamount to depriving the borrower of property rights without due process of law and is therefore unconstitutional. These arguments, however, are not always successful… In the end, then, borrowers choosing to fight foreclosure are doing so only with the goal of improving their negotiating position with the creditor, often with an eye towards forcing the lender to consider restructuring the debt or granting an extension or forbearance" (Rosen and Alcocer Chauvet 2010).

In other instances, the debtor who has lost his property will file a federal injunction called an 'amparo indirecto'. The debtor may allege, for instance, that he was not properly served, thereby nullifying the trial and requiring the creditor to begin the process anew. This *amparo* is typically filed when the creditor/new owner attempts to take possession. Thus, in practice, the time and expense involved in foreclosure in Mexico will vary significantly from case to case and from debtor to debtor (Rosen and Alcocer Chauvet 2010).

Lastly, as noted earlier, while low-income families in particular have faced escalating mortgage debt, they have also seen the value of their homes either stagnate or depreciate. Figure 5.22 shows that very clearly in the case of Tijuana. The city as a whole saw housing prices increase until about 2010 when the local economy and construction sector began to face significant challenges. Only in the last couple of years, has the city started to see a rise in housing investment, particularly for higher-income housing. Yet, lower-income housing (*vivienda económica* and *social*) has depreciated since the mid-2000s. In the case of Huehuetoca, although lower-income housing rose in value around the mid-2000s, it has depreciated since then and it is at a similar value to what it was ten years ago (Figure 5.23). There are also abrupt fluctuations in the value of middle-income housing, which might indicate the manipulation of this market segment and the expectation that more residents from the metropolitan region might arrive to this peri-urban location, but housing prices in general have stagnated since the late 2000s.

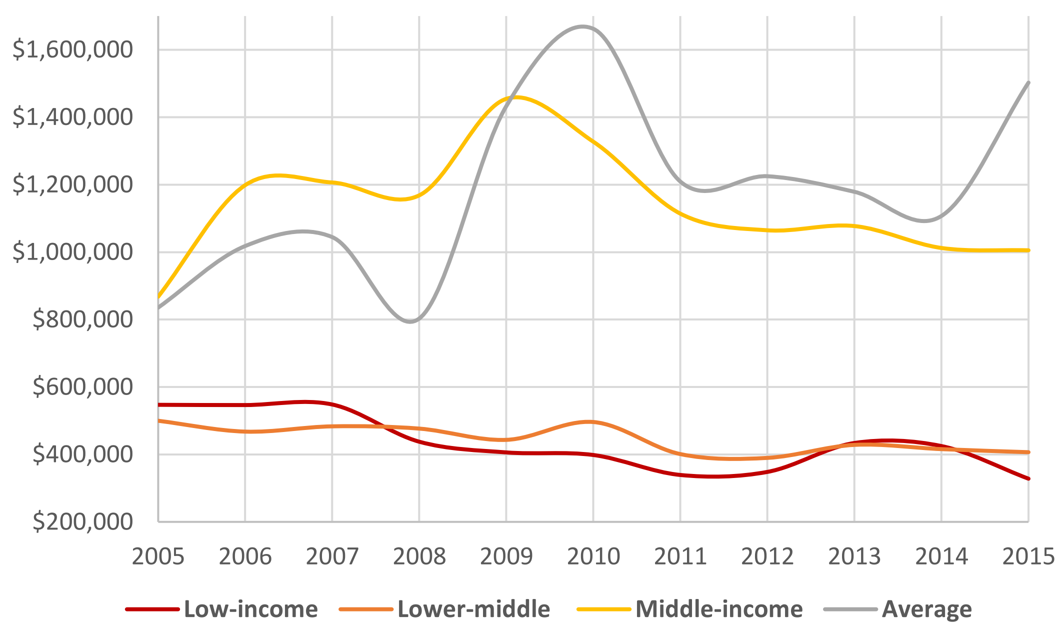

Figure 5.22: Housing Prices in Tijuana (2015 MxP).

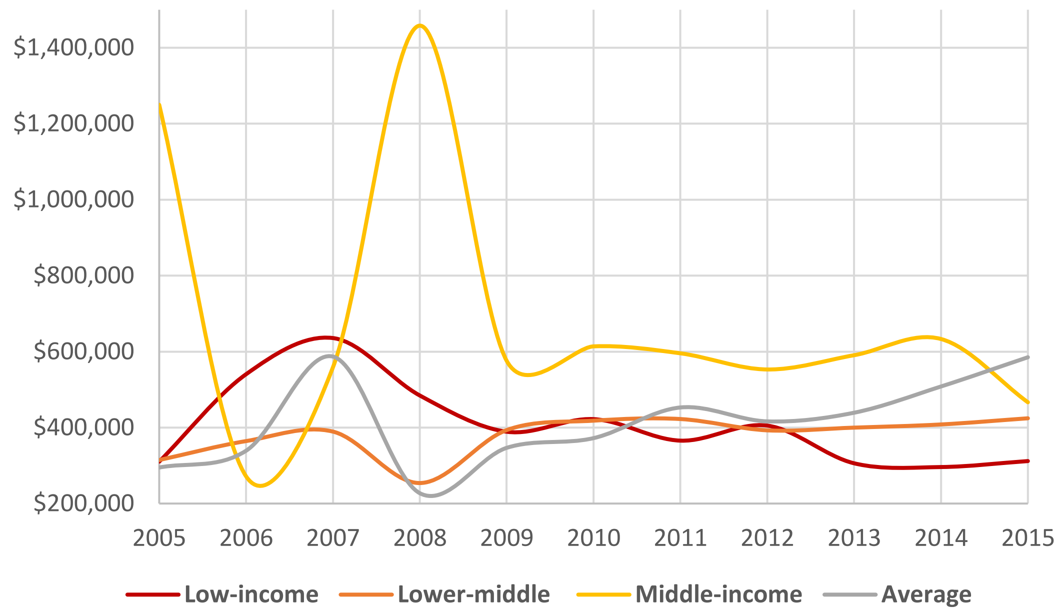

Figure 5.23: Housing Prices in Huehuetoca (2015 MxP).

Graphic by the author. Source: SNIIV.

5.2 Housing Vacancy and Abandonment

Mexico's 14.2 percent vacancy rate in 2010 was the highest among current OECD countries and is probably indicative of important deficiencies within its housing market.[78] Furthermore, 60 percent of the 5 million uninhabited housing units counted in the 2010 Mexican census are in urban areas and in that year, it was calculated that around 20 percent of INFONAVIT financed housing units were vacant (Torres 2013). INFONAVIT has recently acknowledged that individuals have been forced to make mortgage decisions without adequate information and that this has lead many households to lose their homes. An INFONAVIT study published in 2016 also indicates that abandoned housing is

[78] Only the aggregate vacancy rate was reported for 2000, when there around 3 million vacant housing units in the country, which accounted for 11.6 percent of the housing stock (SHF 2007).

particularly concentrated in municipalities with low levels of urban integration and consolidation, largely peri-urban areas of large cities in central and northern Mexico. Distance to employment is strongly related to housing abandonment; an increase in the distance to employment centers of one kilometer correlates to the abandonment of an additional 500 units. Vacancy, in the percentages experienced in many Mexican regions, generally produces important externalities, such as increased service, infrastructure and commuting costs, lower property values, while undermining social cohesion and economic productivity, among other factors (SHF 2012, 2013, 2014 & 2015; INFONAVIT 2016).

Based on the limited vacancy data and on field research, this section will focus on analyzing housing vacancy and abandonment and its implications in areas where it has clustered in both Huehuetoca and Tijuana. As shown in Figure 5.24, Huehuetoca in particular, experienced exponential housing growth in the 2000s, along with a rise in housing vacancy during the second half of the decade, according to official metrics available. Tijuana also experienced significant, although more linear growth in the 2000s, and a less steep but important increase in housing vacancy (Figure 5.25).

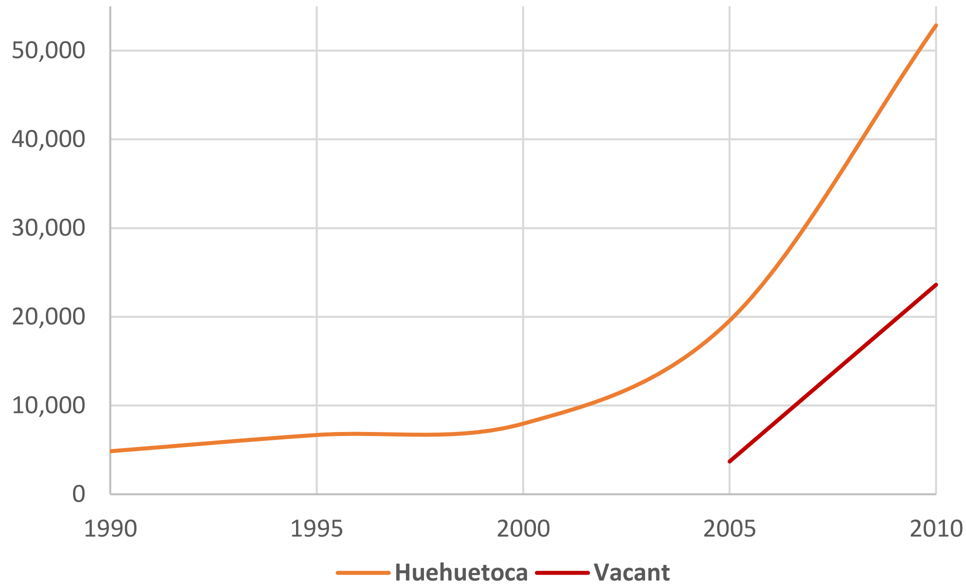

Figure 5.24: Housing Units in Huehuetoca, State of Mexico.

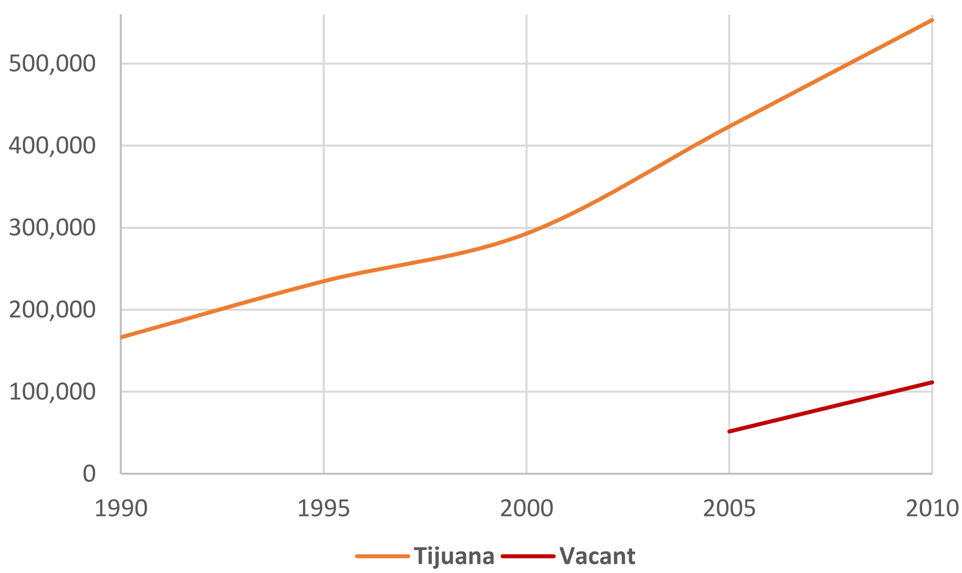

Figure 5.25: Housing Units in Tijuana, Baja California.

Graphic by the author. Source: INEGI.

5.2.2 Vacancy Clusters in Peri-Urban Areas

Although there is some variation across Mexican regions and some urban core areas have also experienced relatively elevated vacancy rates, on average, vacancy rates tend to be higher in peri-urban areas (SHF 2014). Moreover, in these areas they tend to be fairly concentrated and thus more problematic.[79] Several of the municipalities with the highest vacancy rates in the country are in the State of Mexico and form part of Mexico City's metropolitan region. No Mexican metropolitan area, however, is as large and fragmented as that of the country's capital, which incorporates the 16 districts of Mexico City and 60 municipalities in 2 other states. If we take a city like Tijuana, on the other hand, while it is a fairly large municipality and is beginning to expand into neighboring municipalities, some of the most significant vacancy concentrations are located in its own peripheral census tracts.[80]

The last disaggregated official information on vacancy was gathered during the 2010 Mexican census. Although housing development has slowed down considerably in recent years, it has certainly continued after 2010. Field research was especially useful for assessing current vacancy conditions and areas that have developed since 2010. Furthermore, urban census tracts in Mexico include only areas that cross a 2,500-inhabitant/population threshold, thus, 'rural' localities routinely fall outside of statistical analyses. This can easily be seen by comparing Figures 5.26 (below) and 5.10 (in the previous section of this chapter). Figure 5.26 shows four major vacancy concentrations, while Figure 5.10 includes localities with less than 2,500 inhabitants and shows more of a belt surrounding the urbanized area of Tijuana. On Figure 5.10, 32 more localities were added with vacancy rates ranging from 21 to 85 percent. Together, they gather a population

[79] Urban core vacancy may be linked to speculative practices and the high price of living in these areas.
[80] Appendix F shows a similar trend for Guadalupe-Zacatecas (pilot study).

of almost 17,000 residents.[81] Of these 32 localities, 14 are real estate developments like the ones we have been discussing, and 14 are informal settlements, and both categories often exist right next or very close to each other in this peripheral belt.[82] I also outlined to the south of the map above (Figure 5.10), the Natura development, built after 2010 but known to have important vacancy issues.

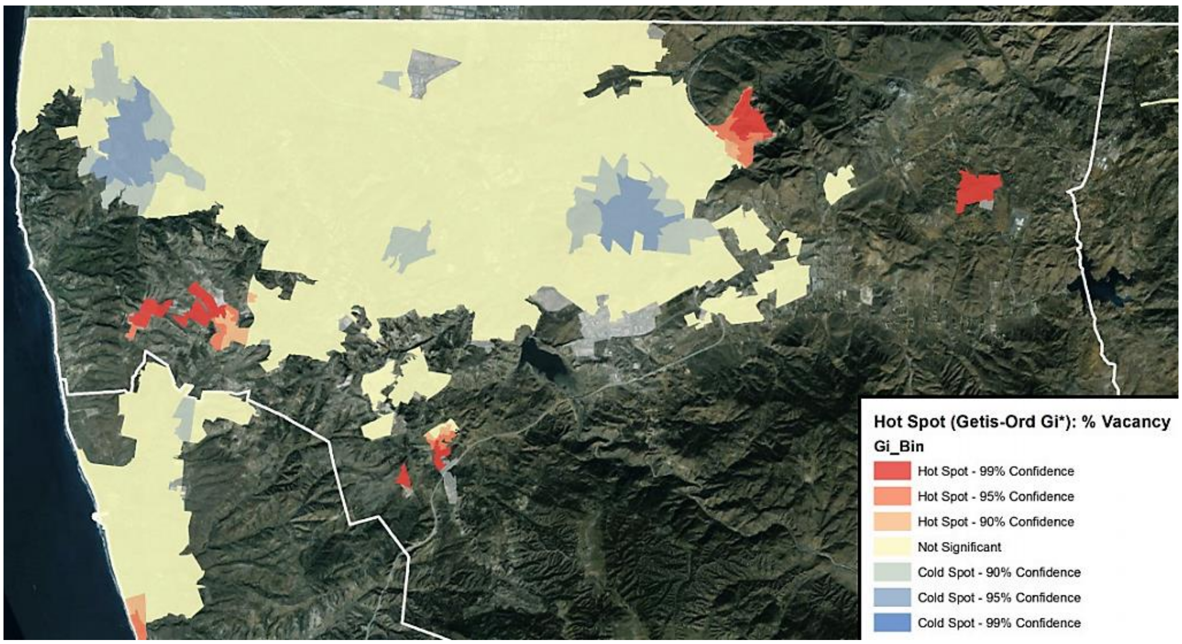

Figure 5.26: Tijuana's Most Significant Vacancy Concentrations (Hot Spot Analysis).

Source: INEGI.

Huehuetoca requires a different analysis. This municipality is located at the far peri-urban fringe of Mexico City's metropolitan region, adjacent to the state of Hidalgo and as a

[81] Their age distribution is as follows: 36 percent are 0 to 14 years old, 25 percent are 15 to 29 years old, 36 percent are 30 to 59 years old, and 2 percent are over 60 years of age.
[82] In the pilot study of Zacatecas three major housing typologies were identified in these high vacancy areas: INFONAVIT financed housing, incremental housing financed by the state government and somewhat consolidated irregular settlements.

whole has one of the highest vacancy rates in the nation. Yet, its newest developments are the ones experiencing particularly high concentrations of vacant and abandoned homes, as was shown in the map at the beginning of this chapter. The municipal center, which used to be a rural town, provides better access to infrastructure and services. Yet, most of Huehuetoca's new housing developments and high vacancy areas are urban census tracts, except for three localities with a combined population of only 627 inhabitants – almost 86 percent of which are vacant. The combined population of these tracts and new localities in 2010 was 25,467 inhabitants, with a vacancy rate of 71.4 percent.[83]

I visited selected neighborhoods in both contexts to update this information, document current conditions, and estimate vacancy rates through a windshield survey. My estimates, however, are very conservative, since I did survey every unit, but only counted the houses that were visibly vacant or appeared abandoned from the outside. Thus, this count cannot be directly compared to figures produced for the 2010 census, but it does provide a sense of present conditions in these areas. In Huehuetoca, I visited Santa Teresa, Urbi Villa del Rey and El Dorado. As shown in Figure 5.27, these developments began to be built when Peña Nieto was governor of the state (2005-2011), but construction continued into the following administration. In 2010, these neighborhoods had a population of 24,213 inhabitants and a vacancy rate of 66.6 percent. In 2016, I counted 32,252 units, of which 20.5 percent were clearly vacant or abandoned. The area with the highest vacancy/abandonment rate was El Dorado, to the north of Huehuetoca, with a vacancy rate of 36.8 percent, while Santa Teresa had the lowest vacancy rate at 15.7 percent. Urbi Villa del Rey had a 29 percent vacancy rate. These numbers highlight the still high vacancy rates

[83] Their age distribution is astoundingly similar to that of similar areas in Tijuana: 37 percent are 0 to 14 years of age, 23 percent are 15 to 29, 37 percent are 30 to 59 and 2 percent are over 60.

in these newly constructed areas – well above the 2010 national average – and the issue of housing abandonment.

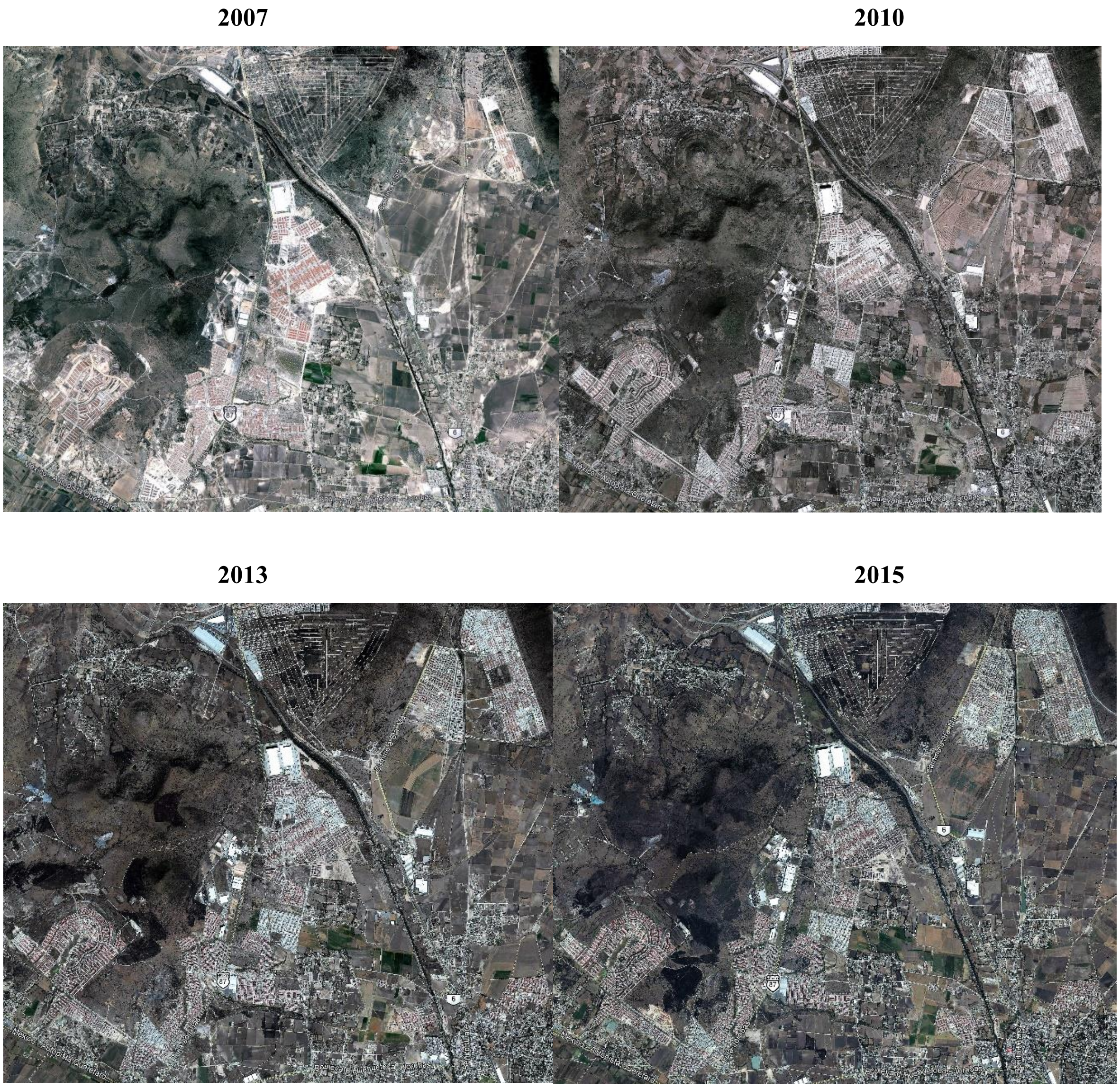

Figure 5.27: Housing Development in Huehuetoca.

Source: Google Earth.

In Tijuana, I visited Villa Santa Fe, a development to the west of the city that broke ground in 2001 and developed gradually during the decade; Residencial del Bosque, a development to the east of Tijuana that broke ground in 2003 and was completed in 2005, and which borders the informal settlement Valle Imperial;[84] and Hacienda los Venados, a small locality developed in the late 2000s to the south of the city (Figures 5.28-5.29). In 2010, these areas had a combined population of 23,335 and a vacancy rate of 48.6 percent. In 2016, I visited/counted 11,630 housing units, of which 13.2 percent were visibly vacant or abandoned. The area with the highest vacancy/abandonment rate was Residencial del Bosque with 17.2 percent, and Santa Fe had the lowest with 12.2 percent. Hacienda los Venados had a 15.8 percent vacancy rate. Figures in Tijuana are clearly lower than in Huehuetoca, although they were also lower to start with in 2010. It is worth noting that in both cases my metric was about a third of the official vacancy rate in 2010, and as previously mentioned, the discussion below will help clarify the housing vacancy and abandonment typologies that I measured.

[84] Both of these developments seem to have developed jointly

2004 **2006**

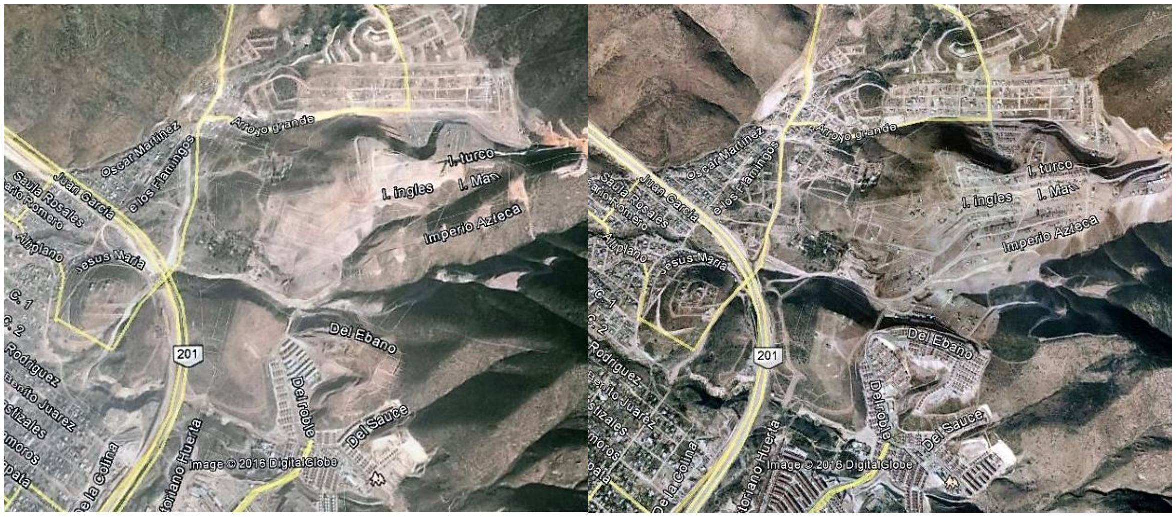

Figure 5.28: Valle Imperial and Residencial del Bosque, Tijuana.

Source: Google Earth.

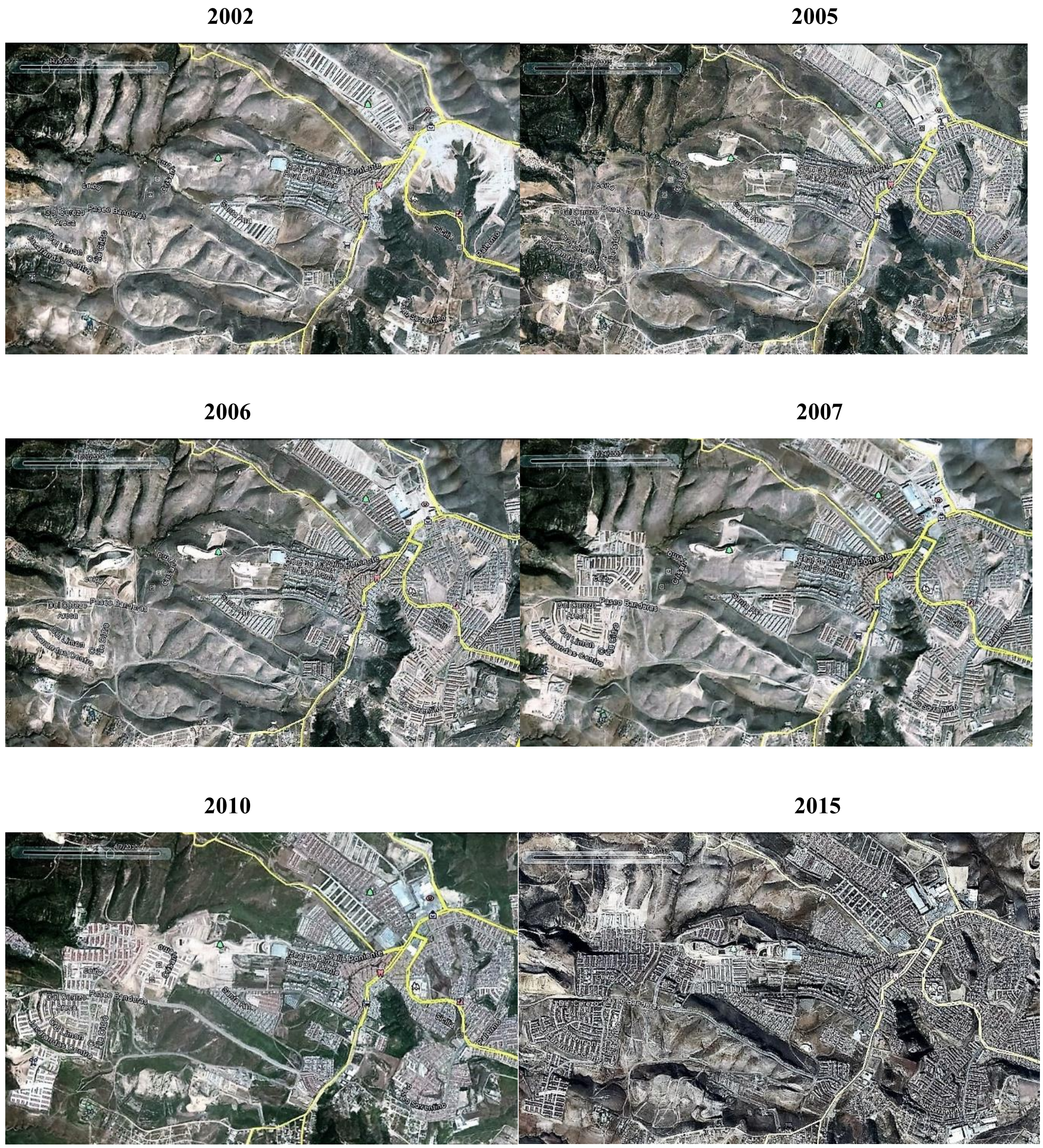

Figure 5.29: Housing Development in Villa Santa Fe, Tijuana.

Source: Google Earth.

In Tijuana I was also able to access data from the water commission. Again, these data are not comparable to census data, since they rely on collection methodologies and data definitions that reflect their own purposes. Furthermore, the water commission does not include figures on un-serviced areas. Yet, these data allowed me to see a downward trend in the number and percentage of what the water commission considers vacant housing. In 2010, Tijuana’s vacancy rate was 20.3 percent according to the census and between 12.6 (in March) and 10.5 (in September) according to the water commission. The water commission’s estimates remained somewhat stable until late 2014, when it fell to 9.3 percent in June and 8.3 percent in December. In 2015 and 2016, it continued to drop about 1 percentage point per year, cutting the rate in half over those 6 years. Yet, the 2015 Census population count provides a much more conservative estimate of the fall in vacancy in Baja California. The only estimated vacancy data for 2015 placed temporary and vacant housing in the same category and only provided information at the state level. Baja California’s percentage of these types of housing was 22.2 percent, compared to 23.8 percent in 2010, which may indicate only a very slight relative decrease (and absolute increase), although this is a very coarse approximation.

5.2.2 Typologies and Degrees of Abandonment and Deterioration

Housing vacancy is an increasingly contentious topic in Mexico, and there is much disagreement as to how to define and address this issue. Institutions like INFONAVIT argue that the only or most significant issue is with abandoned units, but this too is a term that is difficult to define and measure. Evidently, INFONAVIT’s major concern is with its portfolio, particularly its delinquent mortgages, which grew steadily from 2005 to 2015 (from 70 to 200 thousand). Around 2013, INFONAVIT estimated that about half of these mortgages were attachede to vacant housing. Since then, INFONAVIT has started recovering and auctioning these housing units to contain its growth. According to INFONAVIT, when households default on their mortgage they often abandon their homes so they have often conflated these two issues. Yet, other actors challenge this claim.[85]

In 2017, the Ciudad Juárez government claimed that in that city alone there were around 100 thousand abandoned units, and that a majority of these were recently reclaimed by INFONAVIT after evicting delinquent residents. Although it is difficult to track and quantify them, both processes have occurred: households have abandoned their dwellings and their mortgage payments, and have been evicted from their foreclosed housing, leading to the deterioration of such property. In 2015, a reform was passed to strengthen and shorten mortgage collection practices, particularly for INFONAVIT, by defining abandoned housing as that which is vacant and whose owner cannot be located, or where conditions pose risks to its habitability or appraisal (SHF 2014; Martínez 2017; Villalpando 2017).[86]

Beyond this definition, during field research, I documented a wide variety of vacant housing with different degrees of deterioration, differences that are important to highlight to address through different policies or strategies. The first several images correspond to housing that was built in Santa Teresa, Huehuetoca for low-income households that qualified for an INFONAVIT mortgage but had very limited or no savings and very low wages (Figures 5.30-5.32). These units are very small one-bedroom houses of around 30 square meters in size. Nonetheless, they often house families, leading to issues of

[85] El Barzón Popular, organization that has provided legal assistance to workers facing the possibility of foreclosure or eviction, last year assured that there are more than 250,000 abandoned INFONAVIT financed dwellings in the country.
[86] Previously the process took almost a year with the assistance of local governments or more if a judicial process had to take place.

overcrowding. These conditions and the difficulty of sustaining a mortgage for these income groups seem to have promoted their widespread abandonment. Broken windows, no doors, graffiti, tall grass and weeds often characterize the streets in which these homes were built. Yet, one often also finds doors and windows covered with brick and mortar or steel bars, which probably indicates that owners are still paying their mortgage, and are seeking to avoid the occupation of their homes by squatters.

Figure 5.30: Interior of Abandoned House in Santa Teresa, Huehuetoca.

Source: Picture taken by the author in 2016.

Figure 5.31: Abandoned Low-Income Housing in Santa Teresa, Huehuetoca.

Source: Pictures taken by the author in 2016.

Figure 5.32: Low-Income Vacant Housing in Santa Teresa, Huehuetoca.

Source: Google Earth (Imagery date: 2013).

In some instances, housing units are better kept (e.g. painted, have windows and doors) but clearly vacant (e.g. have no curtains and no furniture). Yet, another common occurrence is to see inhabited dwellings with no water or electricity meter, which may indicate squatting or informal occupation. When this happens in a whole development tract, however, it may indicate service-provision issues (Figure 5.33). Figures 5.34-5.35, again from Santa Teresa, likely correspond to households with slightly higher incomes, due to the size and appearance of the housing units, but they also exhibit very distinct degrees of deterioration. The first appears to be unoccupied but it is not evident that units have been abandoned (e.g. covered windows and up kept paint and grass), while the latter have clearly been abandoned (e.g. long grass, no windows or doors, graffiti).

Figure 5.33: Multi-family Housing with No Electricity Meters in Santa Teresa, Huehuetoca. Source: Google Earth (Imagery date: 2013).

Figure 5.34: Vacant Lower-middle Income Housing in Santa Teresa, Huehuetoca. Source: Google Earth (Imagery date: 2013).

Urbi Villa del Rey, on the other hand, while close to Santa Teresa, show less internal diversity in housing size and type. Yet, although several units were sold and are now inhabited, it is clear that the developer left rows of housing unfinished or unsold, likely due to its financial troubles earlier this decade (Figures 5.37-5.38). Finally, El Dorado (Figure 5.36), located on the northern fringe of Huehuetoca, and perhaps the most isolated section of the municipality, has a mix of apartment buildings and single-family units. This area, both in 2010 and 2016, had among the highest vacancy rates in the municipality, along with Urbi Villa del Rey. Furthermore, a completely new section of this development, built in 2015, had very few electricity meters, but appeared to be widely occupied, most likely through the occupation by a large group or organization.[87] Although I did not visit Conjunto Huehuetoca del Maurel (Figure 5.39), it is worth mentioning because it is in a locality with less than 2,500 inhabitants and not incorporated as an urban census tract but it is a largely vacant housing development (only 29 of its 150 units were inhabited in 2010).

[87] This assumption is based on my interaction with residents who were fairly guarded and did not respond well to the support letter that I showed them, granted by the city government to conduct field research.

Figure 5.35: Abandoned Lower-middle Income Housing in Santa Teresa, Huehuetoca.

Source: Pictures taken by the author in 2016.

Figure 5.36: Abandoned House in El Dorado, Huehuetoca.

Source: Pictures taken by the author in 2016.

Figure 5.37: Abandoned Lower-middle Income Housing in Urbi Villa del Rey, Huehuetoca.

Source: Pictures taken by the author in 2016.

Figure 5.38: Vacant Lower-middle Income Housing in Urbi Villa del Rey, Huehuetoca.

Source: Google Earth (Imagery date: 2013).

Figure 5.39: Conjunto Huehuetoca del Maurel, a Largely Vacant Locality with less than 2,500 Inhabitants.

Source: Google Earth (Imagery date: 2013).

In some sections of Santa Fe, to the west of Tijuana, similar patterns were found to those of Santa Teresa in Huehuetoca – rows of houses without windows and doors, graffiti, signs indicating foreclosure or home invasion (as it is officially defined by government authorities), and other signs of housing abandonment and deterioration (Figures 5.40 & 5.41). Yet, as in Santa Teresa, this very large development has a mixture of housing types. Urbi Quinta del Cedro, exhibited patterns similar to Urbi Villa del Rey in Huehuetoca (both were developed by the company Urbi), rows of streets with unfinished or unsold housing units, likely for middle-income households (Figures 5.42 & 5.43). While many of these homes had for sale signs, many were fairly deteriorated (e.g. peeled paint, broken windows, no doors, un-kept yard). Residencial del Bosque and Villa del Campo, to the east of the city (Figure 5.44 & 5.45), and south of a very large informal settlement, is a low-income housing development with very small housing units and several vacant or abandoned homes (no doors and windows, graffiti, etc.).

Figure 5.40: Santa Fe Housing Development to the West of Tijuana.

Source: Pictures taken by the author in 2016.

Figure 5.41: Invaded and Foreclosed Property Signs on House in Santa Fe.

Figure 5.42: Interior of Abandoned House in Urbi Quinta del Cedro to the West of Tijuana.

Source: Picture taken by the author in 2016.

Figure 5.43: Abandoned Middle-Income Housing in Urbi Quinta del Cedro.

Source: Pictures taken by the author in 2016.

Figure 5.44: Residencial del Bosque Housing Development to the East of Tijuana.

Source: Pictures taken by the author in 2016.

Figure 5.45: Villa del Campo Housing Development to the East of Tijuana.

Source: Google Earth (Imagery date: 2013).

Housing vacancy and abandonment in Mexico has brought consequences at multiple levels. Abandoned housing, particularly in areas with very high vacancy rates, has deteriorated quickly and experienced recurrent vandalism and been stripped of parts (e.g. doors, windows, pipelines, bathroom appliances, etc.), leading their value to depreciate considerably. For INFONAVIT and other financial institutions recovering depreciated, abandoned, defaulted or invaded units has been financially draining. These vacant units, moreover, continue to accumulate property tax and on occasion even debt service charges. Although INFONAVIT's share of delinquent and past due mortgages decreased in the early 2000s, it has increased since the latter part of that decade.[88] In recent years, the institute has become increasingly aggressive in collecting payments. Local governments have also struggled to provide adequate services in remote and dislocated areas, which are not generating promised revenue through property taxes (Hernández 2016, Martínez 2017, Muñoz Ríos 2017).

The issue of housing vacancy and abandonment has evidently also hit residents all around the country, although some cases are particularly illustrative. In the State of Mexico, a prominent real estate company, DeMet, developed a housing complex in the mid-2000s called Rancho la Capilla. Due to financial troubles, however, DeMet left the development unfinished and sold only 120 of the 1,500 built units. In 2011, 600 unsold units were invaded and current residents live without access to potable water, street lighting, schools, and other urban infrastructure. The local government is not obligated to provide public services because the developer did not complete and hand the development to the municipality. Households at one point sought the aid of INFONAVIT but the financial institution argued that it was a matter outside their jurisdiction. As many other

[88] INFONAVIT defines delinquent loans as those that have delayed payments for over 150 days.

developments with high vacancy rates, Rancho la Capilla has also experienced significantly high crime rates, prompting many original residents to leave their homes. Residents sharing a street only with one or two other families live in constant fear of leaving their homes for work to return to a robbed or vandalized house (Marina 2013; Reyes and Cabrera 2013; Villalpando 2017).

Squatting in areas with high vacancy rates has become fairly common. This has been particularly problematic in cases in which units are invaded by criminal groups. This and other issues, such as the dispersed layout of housing developments, has put distance, both physical and social, between residents and affected the social fabric and cohesion of these communities. Although there have been notable exceptions, civic engagement and trust is relatively weak in these areas. Squatting households, for instance, are said to be a lot less prone to participate in neighborhood meetings or contribute with communal fees to facilitate infrastructure maintenance or service provision, which are things that residents often have to do in these developments. A certified mortgage adviser in Tijuana (2016) claims that

> "In the city, housing vacancy has created spaces of social anarchy. Residents survive in many cases surrounded by severe insecurity. They also often live without the construction of planned and promised infrastructure. That marginalizes them and strips them of access to employment and education centers, either by private or public transportation, which is often inadequate and expensive".

Residents who decide to abandon their homes, on the other hand, are likely to face financial instability, either for defaulting on their mortgage or for continuing to pay it in addition to other living accommodations. An alternative may be to set living arrangements with their extended families. Yet, this may also lead to issues of overcrowding or occupation of informal or low-quality housing.

5.3 Conclusions

Throughout this chapter, I have discussed and juxtaposed the main problems generated by the new housing model: inaccessibility and housing vacancy. As worrisome as the elevated official housing shortage continues to be, this metric does not convey important dimensions of current housing needs, such as access to infrastructure and services and financial access and stability. Furthermore, the official definition of poor quality housing – that built with precarious or non-durable materials – leaves out newly constructed housing units with important structural and livability issues. The massive scale and fast pace of affordable housing production, touted as a means to increase housing access, often led to the construction of significantly deficient units. Meanwhile, many of the households with the most severe and pressing housing needs were unable to access housing finance because of their very low-incomes, participation in the informal economy, or due to the urban bias promoted by Mexico's housing finance policy. In other words, the constitutional right to adequate housing has been predicated on having a well-paid formal job. As a result, policy has made housing a commodity or investment rather than a right – even for those included in the INFONAVIT system. This is a fundamental critique of recent housing strategies – that they are not serving the needs and housing demands of the Mexican population but instead the requirements of private-market lenders and investors.

Although the official housing shortage has been contained or has decreased in relative terms in some states and cities, this reflects the dramatic growth in new housing rather than an absolute decrease in adequate housing. This begs the question of whether financing new housing construction has been the most efficient way to effectively reduce the housing shortage, or if other strategies, such as rehabilitation, should be pursued.

Furthermore, one outcome of this approach has been to exacerbate one aspect of the current housing shortage: overcrowding. In order to make housing accessible to an additional income group, 25 to 30 square-meter houses were built at the peri-urban fringe across the country. These one-bedroom units often house entire families. Given the lax development regulations and oversight of construction during the 2000s, new construction has brought additional housing quality problems. Structural issues, floods, landslides, decaying or inexistent infrastructure, and even collapsed houses have been documented in these new housing. In other words, production is reproducing inadequate living conditions.

Beyond problems with housing quality, the location of these developments has contributed to the socioeconomic segregation of cities, imposed severe fiscal burdens on local governments that must provide adequate infrastructure and services, and limited the access of residents to economic opportunities and urban amenities. Peri-urban municipalities and census tracts in Mexico absorbed much of the housing produced in the 2000s. These development patterns have significantly raised infrastructure and service costs, for both governments and users. Transportation costs have risen, particularly in large metropolitan regions where commuting times and distances have grown considerably. Furthermore, despite their elevated costs, infrastructure and services are often inadequate, insufficient, and take considerable time to establish, particularly in distant and low-populated areas. This has been especially true of health and educational services. Other municipal services, such as policing, trash collection, public lighting and public space maintenance are often altogether absent. But even basic services, such as water, electricity and drainage, have been deficient or absent in many of these new developments. Besides limited local resources, a major reason for this has been the prevalence of unfinished developments throughout the country that were not incorporated into existing municipalities and thus stand in limbo.

The model extended access to credit for some yet was oddly detached from attention to financial stability and housing adequacy for buyers. Although a very significant segment of the Mexican population still has no access to housing finance, mortgage access was indeed expanded in the 2000s to incorporate lower income populations in the formal economy. Longer-term loans with minimal down payments were provided to promote the construction of lower-income housing. Deregulation and mortgage securitization led to the growth of the financial and construction sectors, although arguably also contributed to their precipitous decline in later years. The World Bank, Inter-American Development bank and other US-based companies helped fuel much of the mortgage and housing construction growth in Mexico. Yet, another important source of capital was the 5 percent compulsory contribution of formal workers to institutions like INFONAVIT and FOVISSSTE. Furthermore, mortgage conditions were rarely fully understood by homebuyers. Mortgages in UDIs or minimum salaries indexed to inflation were granted to people who previously were not credit worthy and have grown over five times since the late 1990s when they were introduced, making many of them unpayable. Again, given the absence of regulation or oversight, realtors, interested in selling as many units as possible, routinely misinformed buyers and minimized financial perils. This has put residents in a very precarious and vulnerable financial situation. As the debt of lower-income households has increased, their property values have stagnated or depreciated. Ultimately, this has led to a recent increase in mortgage default, foreclosures and evictions, particularly in some regions.

While housing construction grew exponentially, particularly in metropolitan regions, these sites did not necessarily correspond to population demands or housing pressures. This also contributed to the elevated vacancy rates described in this chapter. Such imbalances were also related to other access issues previously discussed, such to urban infrastructure, services, economic opportunities, and even quality housing. Arguably, the supply of housing produced, when all its aspects were considered was altogether inadequate, and promoted housing abandonment. Vacancy clusters or concentrations have been particularly problematic in peri-urban areas of large metropolitan regions.

In Tijuana, one can see a type of belt surrounding the city with areas of high vacancy rates. In the case of Huehuetoca, the municipality itself is part of a larger and similar belt that surrounds Mexico City. Particularly in the case of Tijuana, it was also interesting to note the adjacency of peripheral formal developments and informal settlements, both of which exhibit high vacancy rates. Similarly, although perhaps the lowest-income housing developments have experienced higher levels of abandonment and vacancy, this has also occurred in middle-income areas. Housing vacancy and abandonment has had implications at multiple scales. Although they have sought different ways to address the issue, mortgage institutions have seen their finances shaken by an increase in their delinquent portfolios. On the other side of the spectrum, homebuyers have also been significantly affected, both those that have stayed and those that have left. The former has endured heightened issues of insecurity and crime, while the latter is likely struggling with financial and shelter instability.

Chapter 6: Financial versus Civic Responses to the Housing Paradox

"To solve the housing issues that we currently face, Mexico's housing policy would need to change and recognize the social value of housing rather than the returns it can provide to the oligopoly of housing developers through the Stock Exchange, this in no way helps solve the housing problem" (Humbertus Pérez 2018).

The problems emerging from Mexico's new housing model have prompted contrasting responses from residents of this new housing, from INFONAVIT and partnering institutions, and from the federal government. These contrasts highlight the tensions between the use and exchange value of housing. Although there is some regional variation, residents have developed different coping strategies at the neighborhood level aimed primarily at 1) accessing residential services, often through private companies; 2) creating economic and commercial opportunities, often through informal means; and 3) preventing home occupations or the incursion of criminal activity into a neighborhood. At a larger level, social organizations have also started to provide legal services to people facing the possibility of foreclosure or eviction and organized protests against government policies or inaction. In contrast, the priority of INFONAVIT and other financing institutions has been to ensure their own financial stability. An important INFONAVIT strategy to do so has been to auction a portion of its delinquent and foreclosed portfolio to the private sector to rehabilitate and resell. In addition, the new federal administration has shifted its urban and housing policy to promote the densification of Mexican cities, thru, among other strategies, the creation of urban growth boundaries. Yet, these efforts continue to allow the transfer of land and housing subsidies to landowners and speculators. This has in turn led to the production of more expensive housing, inaccessible to much of the population.

The degree of civic organization in Mexico varies greatly across regions. There are, for instance, significant differences between Tijuana, Baja California, and Huehuetoca and other municipalities in State of Mexico. Arguably, organizing in Tijuana has been weaker and, when successful, has mostly consisted of neighbors organizing to finance the hiring of private and more expensive services to serve their neighborhoods, such as garbage collection and security, among others. Conversely, in some areas of the State of Mexico, particularly those that are more urban and form part of the metropolitan area of Mexico City, there is a stronger history of social organizing. In extreme, yet relatively common instances, vigilante type groups have formed to confront crime. Furthermore, in recent years, civic groups have formed to protest the poor quality of their new homes and developments, as well as their unpayable mortgages.

At the other side of the spectrum, repossessions by INFONAVIT more than doubled in 2012, reaching almost 44 thousand (Eulich 2013). INFONAVIT then began reselling its vacant units in 2013.[89] The first year, it could only sell about 18 percent of the 39 thousand it intended to sell. Many of its 'vacant' units were invaded, making the recovery process very cumbersome (SHF 2014). Currently its auction program consists of selling housing packages of 10 to 200 units, some in more than one state, to Mexican companies with experience in promoting and developing housing.[90] In 2016, INFONAVIT recovered around 60 thousand units of its delinquent portfolio. By auctioning it to the private sector, it obtained close to 2.2 billion MxP and 1.8 billion MxP in 2015. Social organizations like el Barzón, however, have pointed out that these houses are auctioned at discounted prices that could be offered to their

[89] In parallel, and conscious of the issue of housing vacancy, INFONAVIT has undertaken a number of measures, such as courses and certifications to guide affiliates into taking more informed decisions when buying a house.
[90] INFONAVIT remains responsible for any accumulated debt on the properties, such as utility or tax debt, as well as any tax associated with the sale.

residents instead (Hernández 2016; Martínez 2017; Muñoz Ríos 2017; Rosas 2017; INFONAVIT 2017).

In parallel, INFONAVIT and the federal government have announced a policy shift towards densification. To contain urban sprawl, in 2012 the CONAVI (National Housing Commission) created the concept of urban growth boundaries, where U_1 refers to the intraurban areas that have services and infrastructure and concentrate economic activities. U_2 refers to zones where at least 75 percent of housing units have water and drainage access among other services and infrastructure, and U_3 surrounds U_1 and U_2 as a virtual border to contain urban expansion. CONAVI and INFONAVIT only grant housing subsidies and credits within these growth boundaries in accordance with the 2013-2018 National Development Plan. This plan was drafted by SEDATU, the federal Urban and Regional Development Ministry, to promote sustainable urban development, compact cities, mobility, sustainable housing, inter-institutional and intergovernmental coordination, and a national unification of land use policy. Densification would arguably also ensure that infrastructure investments and service costs remain financially viable for the public sector and – of particular relevance here – that housing investment remains profitable.

Yet, although urban growth boundaries mean to prevent the continuous sprawl of Mexican cities, critics have noted that construction has continued in peri-urban areas and that such boundaries have been hollowly drawn and modified in constant negotiation with developers, particularly those that have good political relationships. Furthermore, densification in the first perimeter, U_1, has proven difficult given the high land prices in these areas and the low purchasing power of the average Mexican household. It seems, therefore, that new financing schemes will only be able to promote the production of more expensive housing at the urban core (SHF 2013, 2014; Del Castillo 2016).

The main purpose of the following sections is to highlight the very different, and arguably contrasting, reactions to the issues brought on by rampant and sprawling housing development in the 2000s. Discursively, housing and urban development policies in Mexico have continued to evolve over the last decade. Yet, financial and private interests continue to heavily influence them. Openly promoting suburban housing development in areas with poor accessibility and high vacancy rates is evidently untenable but local political regime issues and the intent of stimulating housing investment continue to overshadow housing rights and needs. The roadblocks encountered by neighborhood and civic organizations in the pursuit of better living conditions, as well as INFONAVIT's repossession efforts are clear proof of this. Effectively a financing agency, INFONAVIT is arguably no longer guided by the mandate upon which it was founded in 1972 to ensure the constitutional right to adequate housing for Mexican workers. In turn, this very fact may help explain the coexistence of high housing vacancy rates and a shortage of adequate housing for lower-income households.

6.1 Coping Strategies at the Neighborhood Level

Although varying greatly from one context to another, neighborhood organizing has been a frequent response to the multitude of issues that some new communities face on a daily basis. Given the remote locations and high vacancy rates in some neighborhoods, which provide them with limited access to services, neighbors have had to organize to hire private security, garbage collection, among other services when they are able to afford them. They also often have to buy potable water or rely on diesel generators for electricity (Figure 6.1). Similarly, they fence their dead end streets due to security concerns, or seal the doors and windows of vacant houses with brick and mortar to avoid home occupations or squatting (Figure 6.2).

"Such do-it-yourself efforts have become commonplace in abandoned developments. Residents say it's their only option" (Marosi 2017).

Figure 6.1: Santa Teresa Housing Development in Huehuetoca.[91]

Source: Los Angeles Times 2017.

Figure 6.2: Santa Fe Housing Development in Tijuana, Baja California.

Source: Picture taken by the author in 2016.

[91] This development was built by HOMEX.

These strategies may be regarded as relatively passive or reactive, and have been more common in places with a weaker history of civic organizing, such as Tijuana, Baja California. In the state of Mexico, on the other hand, residents have arguably reacted more forcefully to cope with their living conditions. The formation of vigilante type neighborhood watches to confront crime, for instance, has been common in this state, where you frequently see posters such as the one shown below hanging from windows and fences with the caption: "Thief, if we catch you, we'll lynch you" signed by "united neighbors" (Figure 6.3). Furthermore, in the absence of adequate commercial services and employment opportunities in these peripheral developments, informal mixed uses and small business are often established in some housing units, particularly along the main or access streets of these housing developments (Figure 6.4).

Figure 6.3: Neighborhood Poster in El Dorado, Huehuetoca.

Source: Picture taken by the author in 2016.

Figure 6.4: Informal Commercial Establishments in Monterrey, Nuevo Leon.

Source: Alejandro Cartagena 2016.

Particularly in the state of Mexico, residents of blighted developments have also held larger, and at times antagonistic, demonstrations to protest the poor construction of their homes or unfinished infrastructure. “Once, in 2014, they handcuffed HOMEX employees to a light post” (Marosi 2017). However, demonstrators have been unable to hold major government or industry figures accountable for the various and common development problems that have arisen. In fact, homeowners’ efforts to get problems fixed have been blocked all around the country. At least half a dozen neighborhood leaders have been arrested or bribed after leading protests. Attorneys have also claimed to receive offers of bribes to stop representing homeowners demanding developers to finish pending infrastructure projects (Marosi 2017).

Despite the difficulties of achieving results, a couple of notable organizing efforts have emerged over the years in the state of Mexico. The financial troubles of some development companies left multiple housing developments around Mexico unfinished, leading residents to live in areas without completed infrastructure projects or access to basic services. Perhaps the strongest case of civic organizing around these recent housing concerns originated in Tecámac, State of Mexico. In this municipality, residents of multiple developments experienced very significant hardships that led them to organize at higher levels to push developers to finish infrastructure projects and the local government to rehabilitate public infrastructure, among some other demands. Around the late 2000s, neighbors from Racho La Capilla in Tecámac, state of Mexico, started to organize to discuss the lack of public lighting, police presence, green spaces, schools, and even electricity and drainage in their neighborhoods. Eventually, they were able to enter into negotiations with the local government and the private developer to ask for public lighting and the rehabilitation of nearby schools. They also signed agreements with transportation unions to ensure the provision of safe and adequate mass transit and organized to hire private security (Conjunto Urbano Rancho la Capilla 2017).

Tecámac has become fertile ground for neighborhood organizing. Residents in Villa del Real also struggled with continuous water shortages. URBI, the developer, had provided too few wells and pumping stations to serve all residents; the overburdened system caused pipes to burst and pumping stations to malfunction. Such infrastructure problems have appeared in developments across the country but neighbors in Villa del Real decided to organize and take legal action. They also had a determined leader, Humbertus Pérez. A professor at the National Polytechnic Institute, Pérez reviewed government archives and

> found evidence of collusion between builders and the government officials who approved developments despite inadequate water supplies. Of million-dollar infrastructure bonds disappearing. Of government officials ignoring reports warning of large-scale mortgage fraud… crony capitalism run amok: Mexico's biggest builders constructed flimsy homes with faulty public infrastructure, then sold the homes at inflated prices. Government officials, instead of acting on the problems, approved even more projects. Foreign investors and bondholders reaped enormous returns (Marosi 2017).

In 2007, the neighbors of Villa del Real brought a lawsuit against the then minister of urban development at the state level, Marcela Velasco González, aunt of the then governor and now president of the country, Enrique Peña Nieto. The lawsuit accused her of protecting the real estate development company URBI after it had failed to deliver purchased housing units in Tecámac, comply with building codes and construction standards, and complete required infrastructure projects. In 2009, they also asked the federal attorney general's office to conduct a criminal investigation of housing industry figures and government agencies that had been complicit in the construction of faulty infrastructure and houses that were systematically sold at inflated prices. While the investigations remained stalled, water shortages and electricity outages frustrated an increasing number of residents at other developments in the state of Mexico. Thus, a grassroots movement was born, the *Frente Mexiquense en Defensa para una Vivienda Digna* (Mexican Front in Defense of a Dignified Home), which would then expand across the country.[92]

Residents held marches, occupied government and developers' offices, blocked roads, and started to block evictions and collect dues from members to defray legal costs. This movement, based initially in the State of Mexico, subsequently spurred protests and eviction blockages in other states, such as Querétaro and Chihuahua. Pérez eventually managed to get two housing industry figures indicted for building defect-riddled

[92] This organization was formed on November 18, 2008.

infrastructure and systematically overvaluing substandard homes, although his lawsuit against the then State Minister of Urban development, Marcela Velasco González, did not have the same success (Villamil 2010; Marosi 2017).

Along with other social organizations, Pérez also started to help residents avoid foreclosure and restructure their debt with private banks. A very important finding from Pérez was that the State of Mexico had no law that allowed the foreclosure of homes: "lenders seeking evictions had been citing a law typically used to repossess cars and furniture, Pérez objected to the tactic and judges sided with him" (Marosi 2017). This saved thousands of homeowners from foreclosure and revolutionized housing law defense in the state. Poorer residents, however, often could not afford legal representation. Yet, they sometimes organized in protest outside government buildings. Two URBI executives were charged with fraud on August 2015 but did not spend time in prison due to a settlement agreement requiring URBI to complete the water system at Villa del Real, but the system was not completed. Pérez and some other organizations have also aided families who have had their houses invaded. At the same time, some social organizations also mobilize precisely to foster home occupations for which they typically charge squatter households (Villamil 2010; Núñez López 2016; El Barzón BC 2016).

Members of the *Frente Mexiquense*, however, were arrested in August 2015 for blocking an eviction in Cuautitlán Izcalli. In November 2015 Pérez was also arrested after accusing the mayor and police chief of Tecámac of conspiring to destroy his movement at a news conference.

> Authorities charged him with robbing two neighbors at gunpoint of a cellphone, a laptop and paint buckets because they owed membership dues to his Mexican Front. Three sets of judges threw out the charges and ordered Pérez's immediate release, saying the witnesses' testimony seemed scripted and contradictory. But the Mexico

> state attorney general's office persuaded other judges to keep Pérez behind bars without bail (Marosi 2017).

Pérez has spent over two years in prison without a trial for allegedly breaking into three homes to take several items from residents and for threatening and pointing a gun at a women's chest. Although he could afford bail, prosecutors argued against it, saying he was dangerous. Yet, "several judges who reviewed the case expressed serious doubts" (Marosi 2017), saying there was no evidence that Pérez had a gun. One judge even suggested the claim was fabricated. The attorney general's office, however, has continued filing appeals, even after another federal judge in January ordered his immediate release.

Figure 6.5: Supporters of Housing Activist, Humbertus Pérez, Demanding his Release.

Source: Los Angeles Times 2017.

6.2 Social Organizations and Legal Aid to Prevent Evictions

The *Frente Mexiquense* usually starts by analyzing individual mortgage contracts and the clauses they should contain, such as housing appraisals and construction risk insurance, among others, since lack of insurance and overvalued mortgages have been among the most common irregularities. Pérez claims, based on appraisals, that housing developers overvalued housing units up to 40 percent above of their real value. Any irregularity arguably protects homeowners against foreclosure, which is when this organization typically provides legal defense to residents (Humbertus Pérez 2018)

The *Frente Mexiquense* has not been the only organization to help residents avoid foreclosures. Organizations like *El Barzón*, which began offering legal aid to indebted farmers several decades ago, have started to provide legal support to some residents who have fallen behind on their mortgage payments and face the possibility of eviction. A number of organizations have helped homeowners restructure their debt with private banks and mortgage lenders. Many of them claim that INFONAVIT has been the toughest negotiator. “Every worker has the right to housing, which is granted through the monster that INFONAVIT represents, a real monster, abusive, profiteer, the worst there is, there are better [private] mortgage lenders and banks, and with greater sensitivity, incredible” (El Barzón BC 2016: personal interview). They have also taken up the strategy of lengthening foreclosure trials to halt evictions and allow people to come up with the resources to repay their debt in the meantime (El Barzón BC 2016). It is important to note, however, that these organizations are generally only able to aid lower-middle income and middle-income homeowners, who have the resources to pay membership fees, legal representation, and eventually their restructured debt.

Pérez and the *Frente Mexiquense* have also charged INFONAVIT and other mortgage companies, with steering borrowers to problem developments, and some banks of charging fees for insurance policies they never provided to borrowers. One of their biggest discoveries, however, was to find that the state of Mexico had no law on the books allowing the foreclosure of homes. Although several members were allegedly bribed to disband their organization, the *Frente Mexiquense* continued to portray the housing boom as a criminal enterprise that meant to enrich government and industry players at the expense of first-time homeowners. They also accused Enrique Peña Nieto of mismanaging the building spree as governor of the state of Mexico. In a radio interview, Pérez said, "the story of Mexico is the story of a criminal economy because in Mexico the rule of law was never established. What was established was a criminal economy that works only for whoever has power" (Marosi 2017). Mortgage companies came to regard Pérez and his movement as a latent risk to the enforcement of defaulted loans across the country.

Yet, they had another important win in 2013, when the federal judge Carlos Martínez Hernández ordered a fraud case to be resolved. Two years earlier, two prosecutors in the state of Mexico attorney general's office had been fired for failing to pursue cases filed by Pérez. He had made public a government report showing evidence of mortgage fraud dating to 2008. In spring 2014, investigators showed up at Villa del Real to visit the pump station and

> …see ruptured pipes and listened as a local water district official confirmed that the builder had never turned over the infrastructure to the agency. Loeza [lead investigator] likened the system's defects to an embolism in a human body, which causes blood pressure to build. In the development of 6,000 homes, the failure to finish the water flow network was putting too much stress on the existing system, causing the pipes to burst and pumps to break down. In his report, Loeza confirmed what Pérez had said all along: URBI had failed to complete a well, pipes and a water treatment system, yet city officials gave $2 million of the construction bond back to the developer. Prosecutors returned a 320-page indictment charging two URBI executives with a type of fraud specific to developers who sell houses that fail to meet the terms of the contract. On Aug. 15, 2015, one of the men, Rene Jaime Mungarro, was detained by U.S. customs agents as he tried to cross the border into Texas (Marosi 2017).

Another battle taken up by the *Frente Mexiquense* has been that of aiding families who have had their houses occupied by squatters. In 2015, members began posting signs in Villa del Real indicating that units had been seized under a court order and gave notices to people believed to have illegally inhabited over 300 homes. This has undoubtedly spurred conflict between neighbors, as other organizations have mobilized precisely to foster home occupations (Núñez López 2016). Squatting in developments with high vacancy rates has become a widely common practice, but it has taken different forms and spurred many different reactions. Individual occupations by families are usually not regarded as negatively as those performed by large groups. Nonetheless, neighboring homeowners do sometimes complain that squatters tend to not be as involved in neighborhood matters including upkeep. They are also often concerned about the occupation of units by organized crime, which is also common in the most isolated areas. Furthermore, conflict does evidently also arise if the owners of the squatted units are still paying their mortgages and realize their homes have been invaded.

6.3 Cutting its Losses: INFONAVIT's Housing Auctions & Recycling Efforts

In contrast to the concerns of residents, INFONAVIT's focus has been on ensuring its own financial stability in the face of rising vacancy and abandonment. While some of its strategies are aimed at helping residents be more informed buyers, or to respond to conditions in declining communities, the primary emphasis has been on developing and implementing strategies to remove delinquent properties from its portfolio.[93]

In 2012, INFONAVIT began to strengthen its efforts to repossess delinquent properties, increasing repossessions more than twofold that year to 44,000. Since many of its foreclosed units were occupied by squatters, this process was often protracted. INFONAVIT started reselling these units in 2013. The first year the institute sold only slightly more than

[93] In 2012, for instance, INFONAVIT created an accreditation for realtors, sales promotors and collection advisors to foster the provision of more information and guidance to affiliates when they are buying a house (SHF 2014).

7,000 housing units, less than 18 percent of the 39,000 it had intended. Nonetheless, in later years INFONAVIT was able to improve its selling tactics by auctioning homes. In 2016 INFONAVIT repossessed around 60,000 housing units and auctioned most of them to the private sector, for which it obtained close to 2.2 billion MxP; the previous year the institute had obtained 1.8 billion MxP from its housing auctions. Social organizations, however, have called noted that houses are auctioned at discounted prices which, they claim, could be offered to residents instead (Eulich 2013; SHF 2014; Hernández 2016; Martínez 2017; Muñoz Ríos 2017; Rosas 2017).[94]

The focus on the institute's balance sheet is also seen in its approach to sales. In particular, the terms and process used to re-sell repossessed properties makes clear that the intended market is investors rather than owner-occupants. INFONAVIT auctions housing packages of 10 to 200 units, some of which may be in more than one state, to Mexican companies with experience in promoting and developing housing. The auction process unfolds over seven business days. INFONAVIT starts by announcing the general conditions of the upcoming housing auction for which eligible participants must register, specifying which packages they are interested in. Subsequently, participants are encouraged to visit the properties and submit questions or concerns before day seven, when participants must submit their offers. On that day, a contract is signed and the winner pays 10 percent of the final price, and then pays in full within the next 90 days. That same day, the new owner is free to start the rehabilitation or sale of its units (INFONAVIT 2017).[95]

[94] In 2015, houses were sold on average at 128 thousand MxP, and in 2016 at an average of 208 thousand MxP.

[95] The INFONAVIT reserves the right to refuse all of the offers on any of the auctions if they are deemed unfavorable to the institution. The INFONAVIT, however, is responsible for any accumulated debt of the properties, such as service or tax debt, and for any tax inherent to the sale.

At the same time, some states and companies are indeed shifting their business models away from construction and toward investment in existing communities. Baja California is a good example of this. Although the state's housing market continues to struggle, of the 18,434 housing units sold in 2016, almost 55 percent were existing homes/units. Because used housing units are sometimes fairly deteriorated, the most successful companies have arguably been those that specialize in this market and who have bought houses in somewhat consolidated areas (SHF 2015; Hernández 2017).[96]

> In the private sector, we are looking to buy houses in developments that are not as isolated, where there are schools, public transportation, certain infrastructure and urban amenities that allow families to live there. We are also profiling families a lot better, so I think that this vacancy is going to be absorbed through private sector efforts (Paladin 2016: personal interview).

In parallel, in 2010 INFONAVIT also provided modest seed funding for the formation of *Fundación Hogares*, an organization created to promote community rehabilitation, self-management and social cohesion, and avoid recurrent abandonment on areas with very high concentrations of vacant housing. *Fundación Hogares* recognized that

> these housing developments do not promote social cohesion, people work and allocate a lot of time in their day to commuting, this makes it hard for them to know their neighbors and complicates the formation of a social fabric and community participation (Fundación Hogares 2016: personal interview).

INFONAVIT identified 36 priority areas in the country and selected eight to implement community rehabilitation pilot projects. Some areas were not considered due to severe issues of insecurity, such as the presence of drug cartels and safe houses, situations that need to be addressed through other crime prevention initiatives. Furthermore, only areas with vacancy

[96] Vacant homes are often stripped of doors, windows, toilets, electrical wiring, copper plumbing and other items.

rates below 30 percent were considered to provide viable grounds for community participation.

The three lines of action for these pilot projects have been community development, physical rehabilitation and program evaluation. Community development strategies have been designed to train communities to diagnose issues, form collaborations with the public and private sectors, and propose solutions and projects to address their problems. The practice has been to form advisory tables by theme (e.g. health, education, recreation, public space, youth, etc.) or locational cluster (if the layout of the development is too dispersed). *Fundación Hogares* remains involved with each community for only around two years, and its ultimate goal has been to form an official neighborhood council, association or cooperative that can continue to draft and execute projects and community action plans with clear priorities, objectives, team leaders and timelines.

The largest pilot project to date has taken place in Tijuana, Baja California, in partnership with the private sector. In 2011, PROVIVE, a company that rehabilitates and resells housing began purchasing housing in the neighborhood Cañadas del Florido, which had 1,200 abandoned housing units (Figure 6.6). PROVIVE created a very similar NGO of its own, *Fundación Tú+Yo*, with the aim of having a greater presence in the community. Because PROVIVE directly funds its NGO, it has the added benefit of having its contributions be tax deductible and of promoting a more positive image for the company. Yet, *Fundación Tú+Yo* claims that its purpose is to promote non-partisan community leaders that have the ability to draft and execute their own community projects and modify and improve their relationships with government institutions. This symbiotic relationship has allowed PROVIVE to rehabilitate and sell around 2,500 housing units in Tijuana alone. In Cañadas del Florido, PROVIVE has conducted surveys which estimate that the vacancy rate has gone down from 22 percent in 2010, to 16 percent in 2014 and 5 percent in 2016, although they estimate that around 3 percent of the housing units are occupied by squatters.[97] In 2013 a neighborhood associations was formed in Cañadas del Florido and in 2015 INFONAVIT helped finance a rehabilitation project which included the construction of a community center (PROVIVE 2016: personal interview).

Figure 6.6: Abandoned House in Cañadas del Florido, Tijuana, Baja California.

Source: Los Angeles Times 2017.

[97] Similarly, in another area in which PROVIVE intervened, Hacienda las Delicias, their surveys estimate that the vacancy rate went down from 35 percent in 2010, to 26 percent in 2014 and 5 percent in 2016, also with an approximated 3 percent of what they call home invasions.

Fundación Hogares has also promoted smaller scale efforts, lasting around 5 months, to identify a major issue in a community, rehabilitate a particular space, and encourage neighbors to continue longer-term community initiatives and projects, such as the painting of murals, cleaning days, and similar activities that require few resources and little coordination. Between 2015 and 2016, a new initiative was also implemented in the development Manuel M. Ponce in Fresnillo, Zacatecas. This initiative was thought of as a preventative measure to avoid future abandonment through a small rehabilitation project. Neighbors participated in the rehabilitation of a parking lot in which they planted trees, painted murals and built sitting spaces (Zepeda 2016). In addition, *Fundación Hogares* uses a series of indicators to evaluate its efforts, such as amount of rehabilitated space, number of urban amenities built, coverage of painted walls, number of neighbors involved, time invested by residents in community projects, donated and collected resources, among other indicators. They have also constructed a social cohesion indicator measuring aspects such as community trust and sense of belonging.

Figure 6.7: Unidad Manuel M. Ponce in Fresnillo, Zacatecas.

While these efforts seem to be pointed in the right direction, they remain at a pilot stage and it is not yet clear if they will have the scale and resources to aid all of the troubled communities around the country. If repossessions and resales are not accompanied by community projects, and better infrastructure and service provision, residents will continue to struggle and to abandon their dwellings. Furthermore, given the poor initial construction standards of many of these housing units, community projects will be insufficient if they are not accompanied by adequate housing rehabilitation.

6.4 Federal Densification Policies and their Implementation

Federal urban policy has also shifted in reaction to the problems generated by past policies. Given some of the issues that previous development patterns had contributed to, such as high infrastructure costs and limited service access for residents, among others, the National

Housing Commission, CONAVI, created the concept of urban growth boundaries in 2012. The first ring or U_1 refers to the intra-urban areas that have services and infrastructure and that concentrate economic activities. U_2 encompasses the zones where at least 75 percent of housing units have water and drainage access, among other essential services and infrastructure. Lastly, U_3 acts as a virtual border to contain urban expansion. In parallel, as part of its 2013-2018 National Development Plan, the federal Urban and Regional Development Ministry, SEDATU, was created. The new agency was intended to establish the importance of promoting compact cities, mobility, sustainable housing, a unification of land use policy, and inter-institutional and intergovernmental coordination (SHF 2013 & 2014).

INFONAVIT no longer finances housing outside the U_3 boundaries, arguably to contain the continuous sprawl of Mexican cities and to promote housing production in more accessible locations that promote better living conditions. Yet, critics have noted that INFONAVIT-financed construction continues in peri-urban areas because such boundaries have been drawn and modified in constant negotiation with developers, particularly those that have good political relationships. Even *Fundación Hogares*, an organization created with INFONAVIT seed funds, recognizes that

> there are places where there is abandoned housing and [housing] development is still going on, policies are falling short, regulations are not that clear, strong or efficient; while densification is being promoted, construction is still permitted in problematic areas (Fundación Hogares 2016: personal interview).

Furthermore, densification in the first perimeter, U_1, has been largely unsuccessful given the high land prices and the limited reach of land and housing subsidies to promote homeownership at the urban core, issues which also threaten to promote gentrification (Del Castillo 2016). As can be seen in Figure 6.8, at the national level an increasing share of housing production is in fact occurring along the fringes of Mexican cities. The chart below shows that most housing development is occurring on U_3, which are peripheral areas that started to be developed about a decade ago.

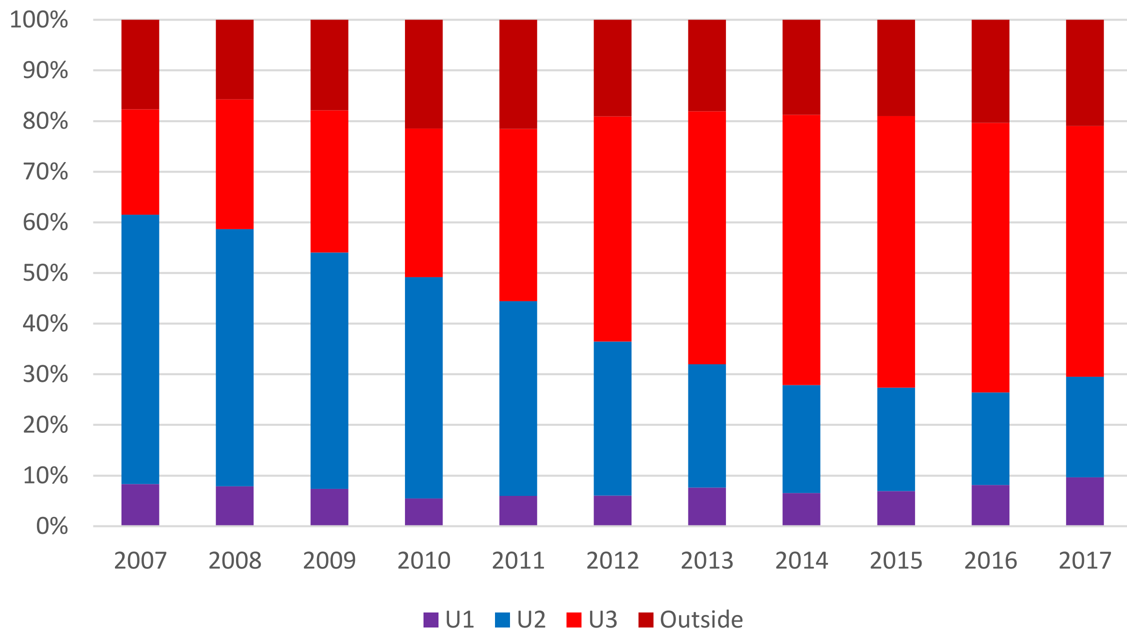

Figure 6.8: Percentage of Housing Units Built by Growth Boundary in Mexico. Graphic by the author. Source: SNIIV/CONAVI.

In 2013, when SEDATU was created, partly to support densification and urban revitalization strategies, INFONAVIT also opened a research institute to promote sustainable housing development. Urban growth boundaries have undoubtedly been the most tangible strategy that was drafted based on these broad revitalization goals. INFONAVIT now only grants credits and SEDATU only grants small housing and land subsidies within these growth boundaries. To qualify for a subsidy, SEDATU also scores housing on other metrics, such as access to infrastructure and services (e.g. transportation, schools, clinics, parks, commerce), size, layout and density (multi-family vs. single-family), and use of eco-technologies.

Yet, these subsidies are generally insufficient to promote low-income housing production in most inner-city areas, where land is most expensive. While some developers have adapted to these new policy shifts, it seems that their production has also shifted to middle and higher-income housing, and that landowners and speculators are absorbing the subsidies. Furthermore, some states and development companies have shown resistance to densification strategies and argued that there is no market demand for multi-family housing, that regulations are affecting housing production, and that they have already purchased land outside of the urban growth boundaries (CONAVI 2016; SEDATU 2016; Fundación Hogares 2016; Habitat International Coalition-AL 2016: personal interviews).

Tijuana, Baja California provides an illustrative example. Un-serviced peripheral land is on average around 25 USD per square meter, whereas in the city land costs include basic services and range from 120 to 1,000 USD. This makes housing in the city unaffordable for most residents. Thus, many private developers have complained about the local alignment to federal development policies, which has recently led to the limiting of licensing and construction permits in the periphery, and also to regulations such as the increase of minimum lot sizes to 120 square meters (1,300 square feet), arguably to avoid issues of overcrowding. The private sector has argued that this has led to a deceleration in the construction industry given the limited credit capacity of most households.

The state of Mexico is also trying to adapt to federal guidelines through state laws that foster mixed land uses, as opposed to previous zoning schemes that separated them. This will allow residents to establish small businesses in their homes, as they had done informally in the past, as long as they are compatible with the existing infrastructure and service capacity (e.g. convenience stores, barber shops and beauty salons). In parallel, the state government plans to promote densification through higher floor to area ratios, multi-family housing and an environmental restitution guideline for developments with over 60 housing units that would provide amenities such as schools, and libraries. There seems to be less tension between the public and private sectors in this context, perhaps because housing construction did not come to so much of a complete halt as had occurred in Baja California. Furthermore, political alignment between the state and federal governments may also be helping in the drafting and implementation of development policies in this state.

As we can see on the figures below (6.9 - 6.12), which provide the distribution of housing production at the state and municipal levels in our two cases, development patterns have shifted across regions. In comparison to the notable national increase in the share of housing production in zone U_3, we can see that this has not occurred as sharply in Baja California nor in Tijuana, likely due to the limiting of licensing and construction permits in peripheral areas as indicated above. The state of Mexico, on the other hand, does exhibit a more similar distribution to that of the national level, despite their alleged efforts to adapt to federal densification strategies. This is even more notable in Huehuetoca, a peripheral municipality itself where housing construction is still taking place.

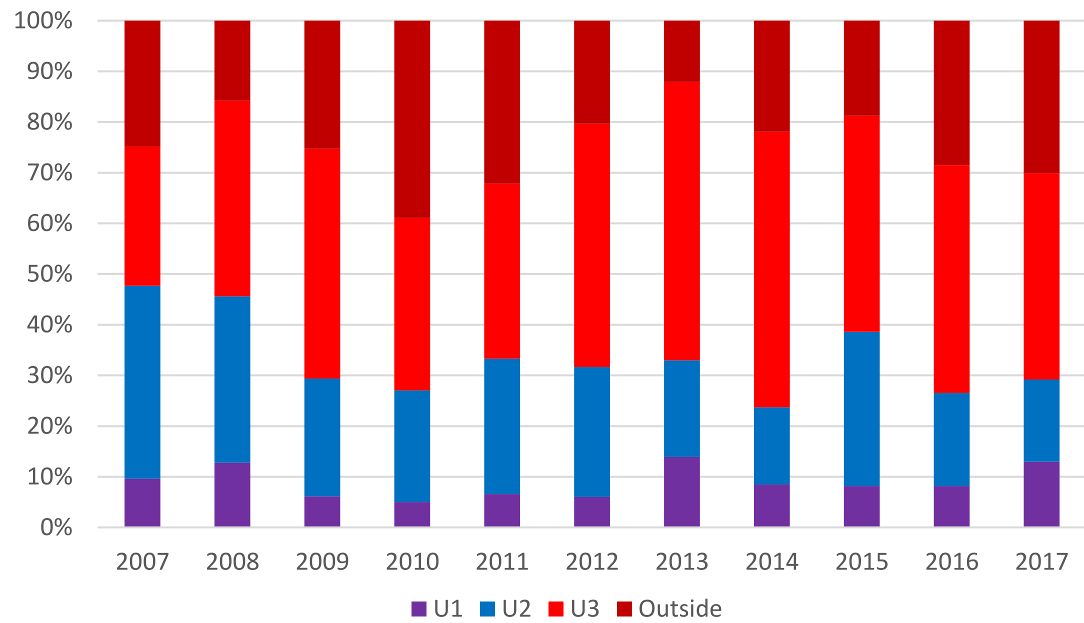

Figure 6.9: Percentage of Housing Built by Growth Boundary in Baja California.

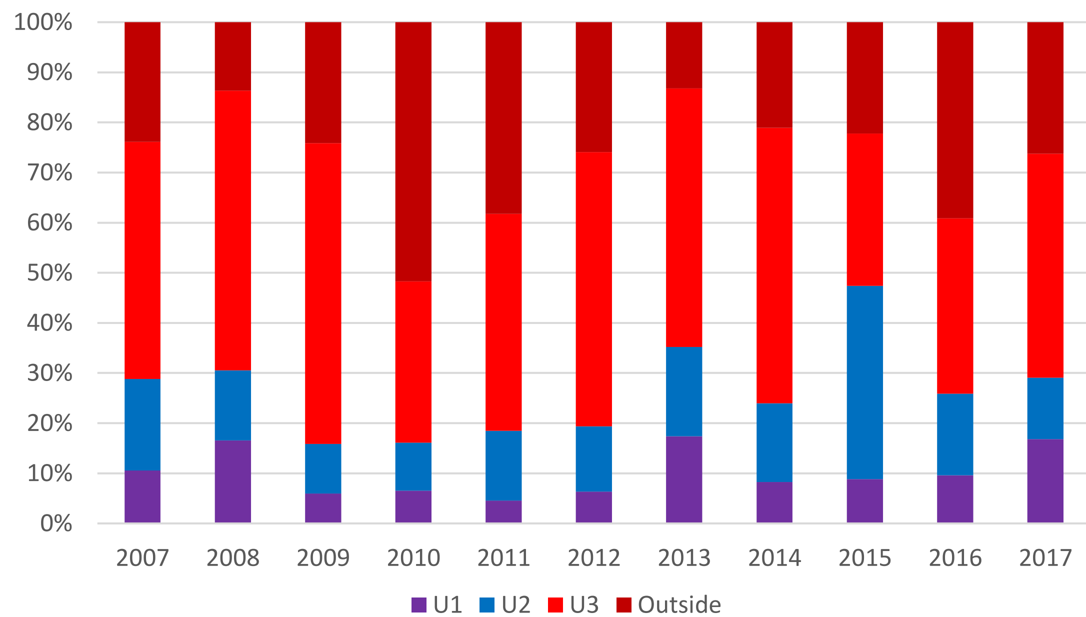

Figure 6.10: Percentage of Housing Built by Growth Boundary in Tijuana, Baja California.

Graphics by the author. Source: SNIIV.

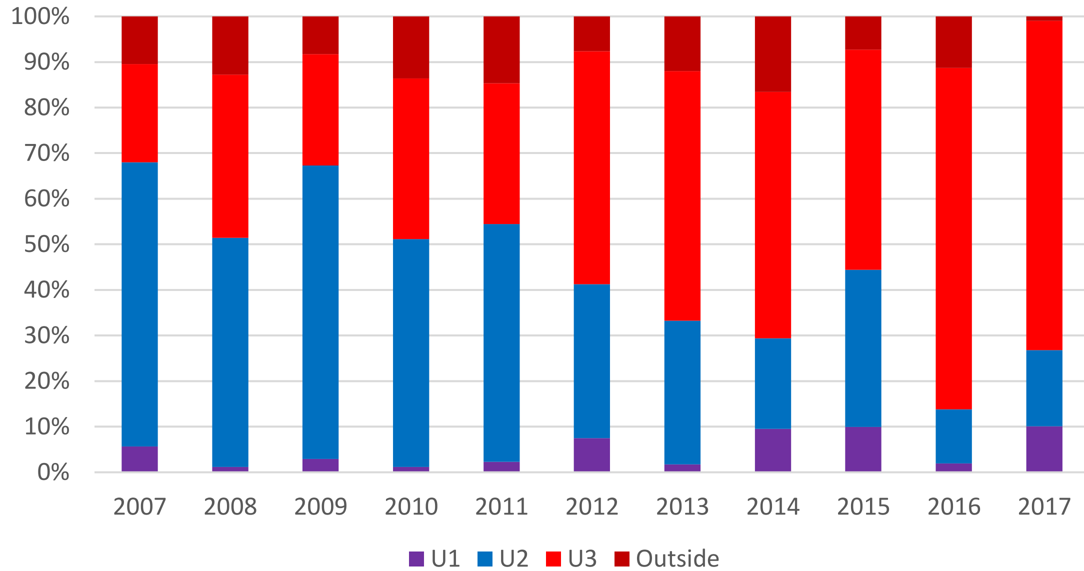

Figure 6.11: Percentage of Housing Built by Growth Boundary in the State of Mexico.

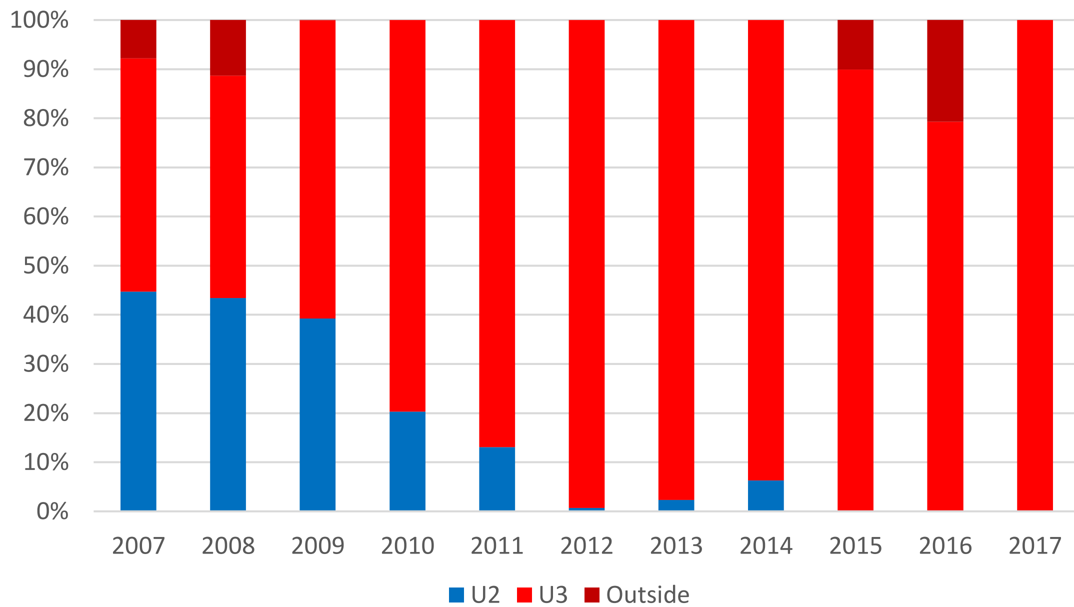

Figure 6.12: Percentage of Housing Built by Growth Boundary in Huehuetoca.

Graphics by the author. Source: SNIIV.

There is a general recognition that in most contexts planning programs and regulations are insufficient to successfully promote affordable housing in urban centers.

> There are no normative, legal and urban planning conditions to apply the guidelines outlined on the National Development Plan… The necessary conditions do not exist for a low-income housing development model to be successful… Land use, local and state policies are generally not aligned with the National Development Plan and, therefore, in the state of Mexico it is very complicated to build well-located and adequate housing accessible to low-income households (INFONAVIT delegate 2016: personal interview).

Similarly, the SEDATU acknowledges that

> in metropolitan regions such as Monterrey and Guadalajara, not even the highest allowable subsidies can compete with the exorbitant land prices, not even those that are granted to build in urban centers or historical areas in the first urban growth boundary… Middle-income housing production can be feasible in some contexts, and so in some cities we are in fact seeing densification processes and housing construction because buyers are willing to pay a higher cost and understand the value of inhabiting an apartment instead of a house… But in the north, for instance, there is more resistance to multi-family housing. They think that there is enough land but cities in the north are also growing in a haphazard and sprawling manner, imitating perhaps North American cities, but neither the municipalities nor the people have the resources or infrastructure to sustain that development and commuting model (SEDATU official 2016: personal interview).

Planning experts also conclude that the National Development Plan

> has no 'teeth' nor clear incentives to achieve its implementation. The urban growth boundaries have not really incentivized developers to build in inner cities, and you can see that in CONAVI's statistics, which show that only 7 or 8 percent of housing is being built inside the U1 growth boundaries… These strategies are not really changing the ways in which our cities grow, the same is true of the new Law of Human Settlements, is non-binding, and so they remain as discourses of good intentions and concepts that do not turn into actual legislation… Another issue is the budget, next year SEDATU will experience a 38 percent cut in its budget, planning and housing resources have cuts of over 40 percent, and so if we really want to open the possibility to a new development model, we are falling short in legal, management and fiscal mechanisms. We also should not forget that while municipalities should have all the capabilities to guide their development, the law overrides them. They do not have the resources, the capacity, who really guides

housing policy and development are INFONAVIT and CONAVI, because they have the money… So while urban policy has moved forward in the last four years, it has also been very limited by the change every year and a half of SEDATU's head, who generally also does not have the adequate professional experience, in INFONAVIT something very similar happens (WRI 2016: personal interview).

In addition, while recently there has been a discursive emphasis at the federal level in the promotion of densification, both INFONAVIT and SEDATU have continued to heavily promote new housing construction. The federal government, for instance, has continued to increase access to bridge loans for housing construction (CONAVI 2016). In some parts of the country, some housing investment has gone to the purchase and resale of existing housing. Yet, housing rehabilitation and expansion, which tend to be important strategies to promote better living conditions for lower-income households, continue to receive very limited funding. Although the federal government has launched programs for housing rehabilitation and rent, the resources allocated to these are still marginal in comparison to those for new housing construction (Figure 6.13).

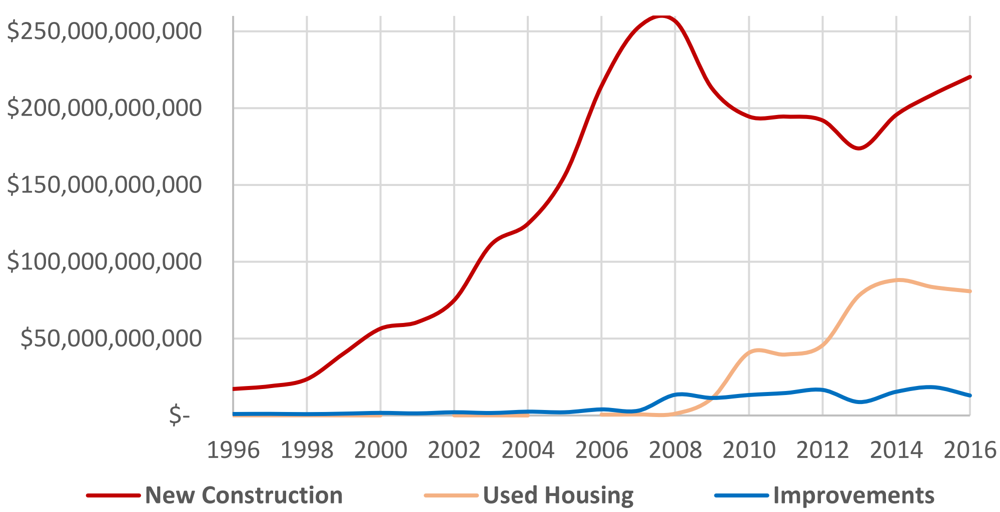

Figure 6.13: Distribution of National Housing Finance (MxP).

Graphic by the author. Source: SNIIV.

Here again, we see important variations among the case studies (Figures 6.14 – 6.17). The state of Mexico shares yet again a very similar housing finance distribution to that of the entire country, although notably, the municipality of Huehuetoca has experienced a much more modest increase in housing finance to purchase existing home units, and even more so, for home improvements. Tijuana and Baja California in general, have experienced a much more significant increase in the housing finance that has been used to purchase used housing, which may be related to the Cañadas del Florido pilot project carried out by PROVIVE (private) and *Fundación Hogares* (INFONAVIT) and described in the previous section. Nonetheless, that trend may not continue if similar projects are not continuously implemented.

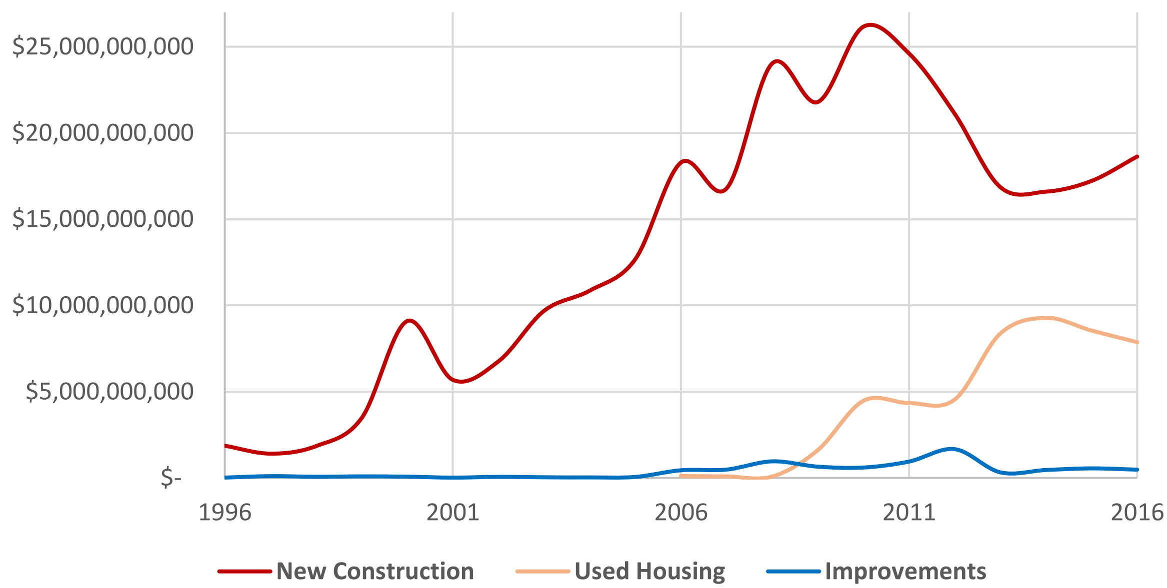

Figure 6.14: Distribution of Housing Finance in the State of Mexico (MxP).

Graphic by the author. Source: SNIIV.

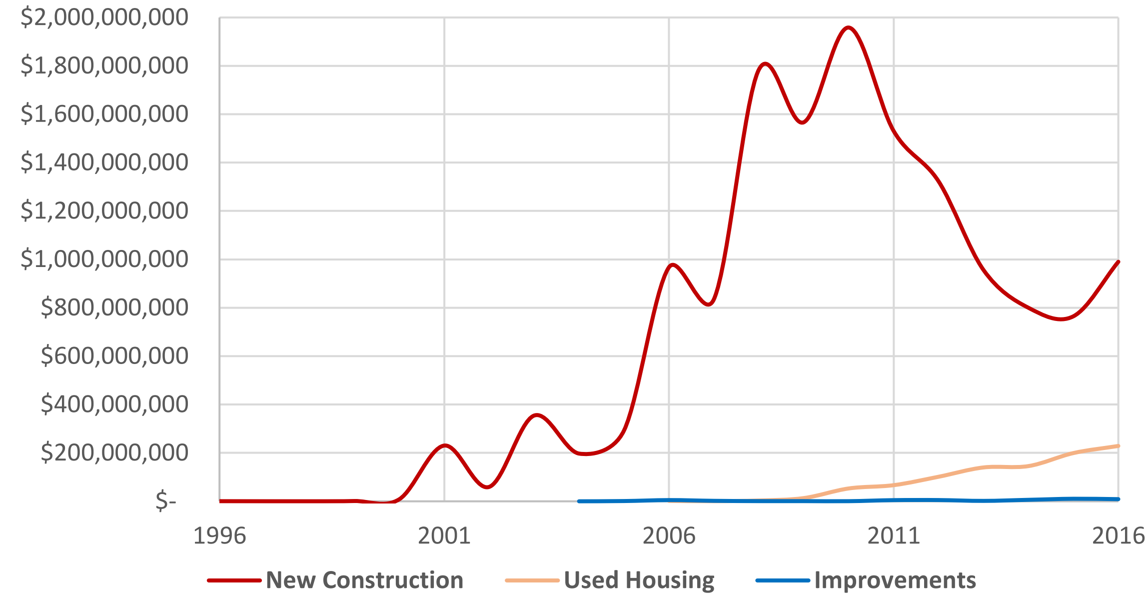

Figure 6.15: Distribution of Housing Finance in Huehuetoca, State of Mexico (MxP).

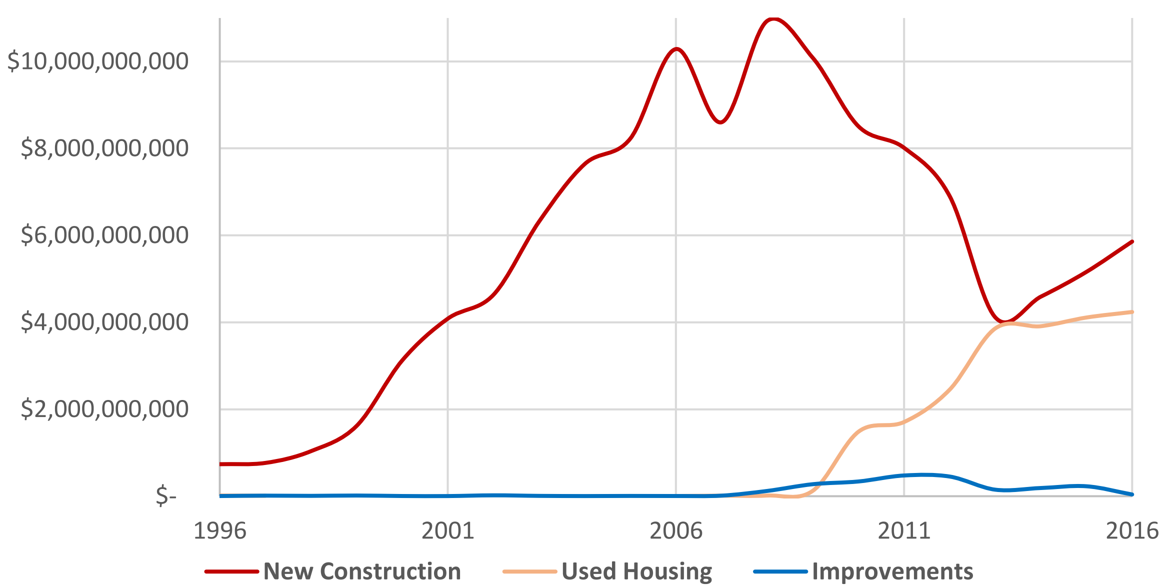

Figure 6.16: Distribution of Housing Finance in Baja California (MxP).

Graphics by the author. Source: SNIIV.

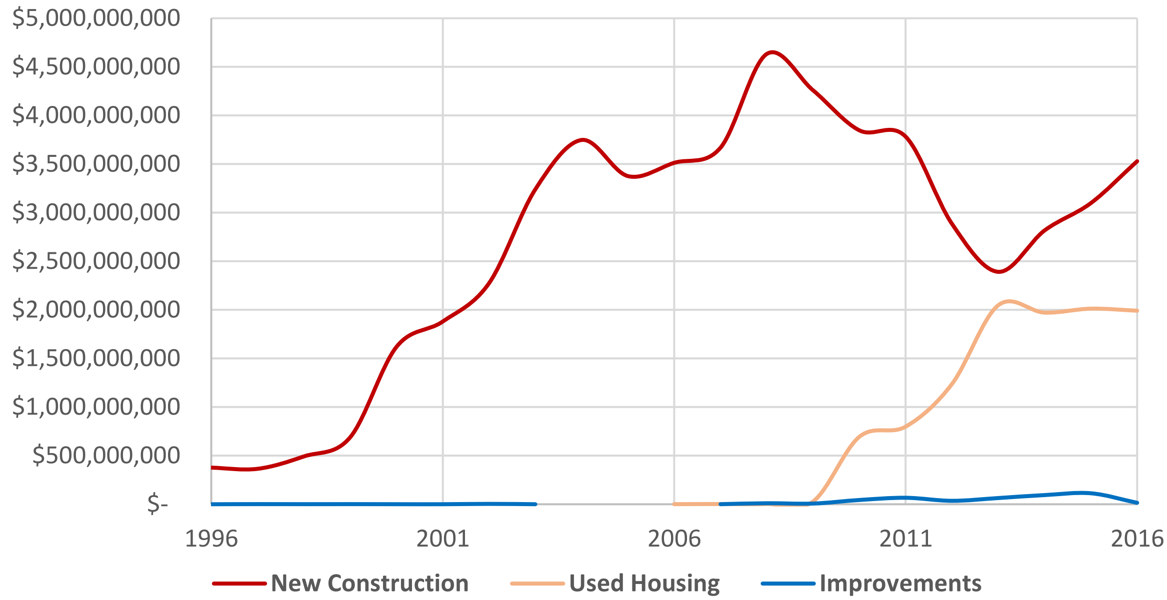

Figure 6.17: Distribution of Housing Finance in Tijuana, Baja California (MxP).

Graphic by the author. Source: SNIIV.

Lastly, a very important consideration is that, particularly in recent years, middle and upper income housing construction in Mexico has become an increasingly attractive investment for developers (Figure 6.18). The number of middle-income units built between 2015 and 2016 in the country grew by almost 20 percent and upper-income units by almost 8 percent. In some states, the growth has been particularly significant. Baja California, for instance, saw an increase in upper-income housing sales in this period by 75 percent (Gutierrez 2017), and similar trends are evident in the state of Mexico (Figure 6.19). INFONAVIT has followed this shift by increasing its credit cap from 900 thousand to 1.5 million MxP in 2017, a 68 percent increase. It also increased its interest rate to 12 percent. Furthermore, it is also now offering a second credit to affiliates who have finished paying their first one. Importantly enough, INFONAVIT’s director, David Penchyna Grub, declared that with these shifts the institute is sending a message of reassurance to the housing industry (Muñoz Ríos 2016b, Rosas 2016).

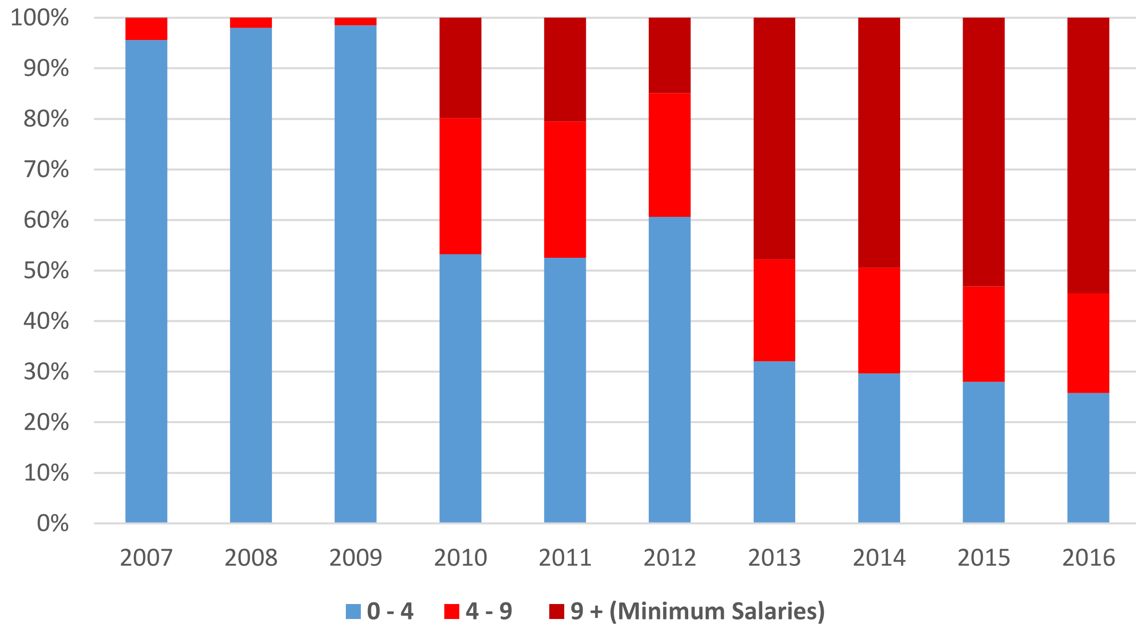

Figure 6.18: National Housing Finance per Income Bracket.

Graphic by the author. Source: SNIIV.

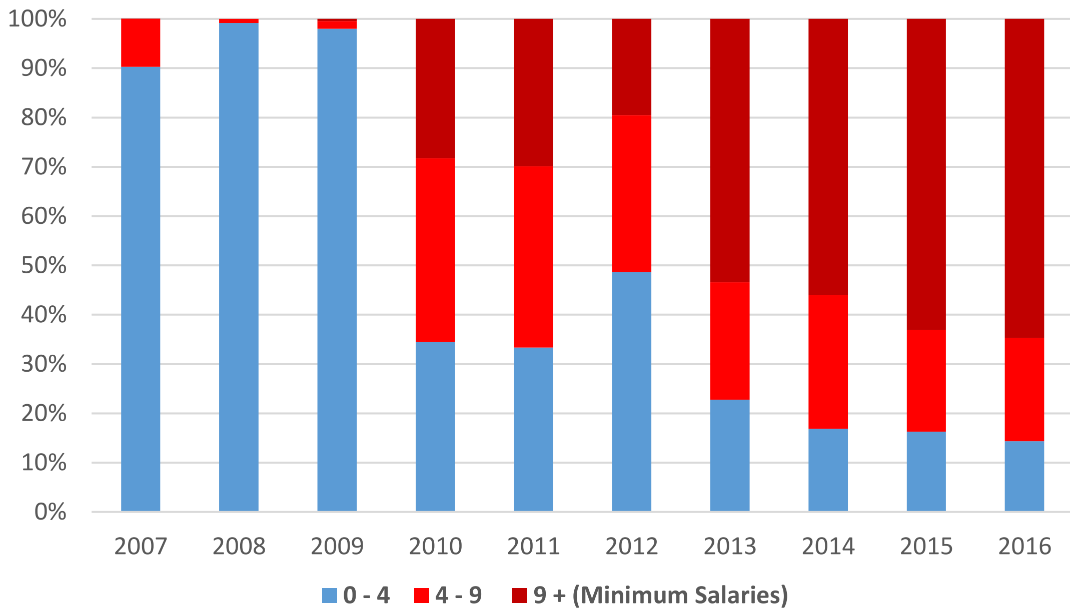

Figure 6.19: Housing Finance per Income Bracket in the State of Mexico.

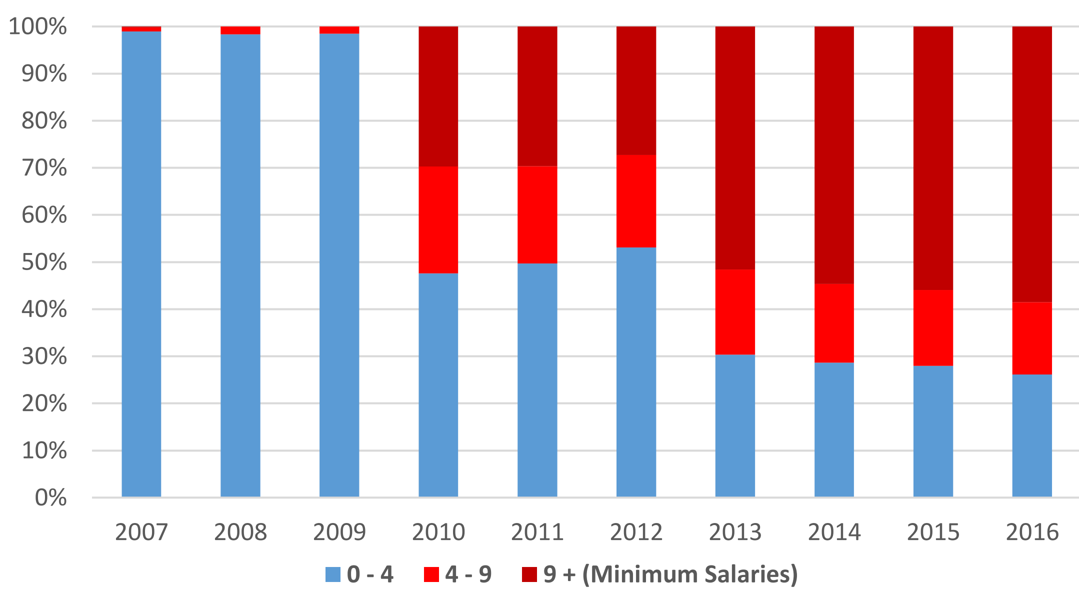

Figure 6.20: Housing Finance per Income Bracket in Baja California.

Graphics by the author. Source: SNIIV.

6.5 Conclusions

The housing development boom that took place during the 2000s and its problematic effects eventually prompted responses at different levels and from different sectors. Residents have managed their hardships, individually and collectively, in diverse ways. The most timid efforts have involved the hiring of private services and do-it-yourself fixes to their deficient home and infrastructure construction. When residents have been able to organize at a larger level their wins have been neither quick nor straightforward. Yet, particularly in the state of Mexico, some neighborhood groups have been able to improve their living situation through negotiations with both the public and private sectors to finish infrastructure projects and provide a higher level of services.

Notably, civic efforts also led to the formation of the *Frente Mexiquense*, which has undergone important legal battles against public and private figures responsible for the construction of deficient housing and development projects, as well as to prevent housing foreclosures and evictions. Alongside it, other social organizations have offered similar legal aid to residents. Another strategy has been to restructure the debt of homeowner groups with banks and mortgage lenders. While this has worked in some instances, some mortgage companies have seen these efforts as a risk to their economy, and arguably, INFONAVIT has been one of the toughest negotiators.

INFONAVIT seed funding for modest community development projects in high vacancy areas arguably remains a fairly timid strategy on a trial basis rather than one that truly seeks to address issues in all and the most problematic developments. In contrast, INFONAVIT has focused on ensuring its financial stability and implementing strategies to deal with its delinquent portfolio; its own director described its role as that of a hedge fund (Escobar González 2017: personal interview). Thus, since 2012, it has strengthened its repossession efforts, and more recently, has been auctioning off these repossessed housing units. Since these houses are sold at discounted prices to the private sector to rehabilitate and resell, social organizations have protested and questioned the fairness of these processes. This tension between residents and mortgage institutions seems to reflect a long-standing tension in Mexican housing policy between the use and exchange value of housing, and possibly be at the center of the paradoxical coexistence of a housing oversupply and a shortage.

New INFONAVIT and federal policies have arguably incentivized some companies and developers to shift their business models and to look at densification as an attractive investment that may limit the continuous sprawl of Mexican cities. A central strategy has been the creation of urban growth boundaries along Mexican metropolitan regions and cities, within which INFONAVIT grants housing credits and the federal government grants land and housing subsidies. Yet, critics have contested the drawing and effectiveness of such boundaries and highlighted the difficulty of producing affordable housing in most inner city areas were land is most expensive. Thus, recent policies seem to be promoting higher-income housing production and allowing private landowners and speculators to appropriate public subsidies. Furthermore, as in the past, at the local level there are only limited legal and fiscal planning mechanisms to follow and foster federal densification guidelines. The lack of fiscal commitment of federal institutions and of ‘teeth’ of most national regulations has thus severely limited recent objectives. Furthermore, financial institutions and federal policies continue to support new construction over rehabilitation and the shift towards densification and middle-income housing production are evidently not addressing the issues that peripheral communities currently confront.

Chapter 7: Discussion: *The Marketization of Housing Rights in Mexico*

> *"Housing institutes lost their social focus since the 1990s but Fox's administration propelled market production, and this has continued until this day with EPN, even after the disaster that represented the dismantling of regulation and urban planning, which started with Salinas', although this was a global phenomenon… The result of leaving all in the hands of the market has been the unprecedented sprawl of Mexican cities at a rate that has far surpassed population growth… Low-income households do not want to be tied to debt for 30 years and pay three times the value of their homes, poverty has many contingencies, they need a different finance alternative"* (Habitat International Coalition-América Latina 2016: personal interview).

This final chapter will synthesize and summarize the main takeaways of the dissertation and provide an assessment of current and future policy directions. Arguably, even within the recent recognition of past failures, Mexican housing policy continues to follow economic aims that are in direct conflict with the objective of securing the Constitutional right to adequate housing. Current densification efforts, for instance, continue to focus narrowly on new housing construction and have failed to incorporate the necessary fiscal and regulatory mechanisms that would more effectively promote affordable housing production. I will end by also discussing how strategies could be reframed at different levels, including federal, local and civic.

It has been argued before (Schwartz & Seabrooke 2008), and here again, that housing finance systems are not politically neutral. Rather, and given the macro-economic centrality of residential property to economic development and stability around the world, they rely on sophisticated systems of governance that often favor corporate capital. Through the housing sector, for instance, the real estate market has absorbed a great deal of surplus capital, particularly since neoliberalism achieved hegemonic status before the turn of the millennium and became naturalized as the proper mode of governance in a variety of geo-institutional contexts. Housing commodification has also had quite tangible spatial, socioeconomic and political implications, especially as redistribution came to be regarded as an impediment to international competitiveness and as government failures became the central justification for the rollback of state intervention. Furthermore, besides the lack of attention placed on power relations and institutional conditions, the notion of market failures has increasingly disappeared from policy dialogues (Peck and Theodore 2007, Hackworth 2007, Harvey 2008).

Under this influence, Mexican housing policy has arguably imposed profoundly localized costs on neighborhoods and local communities. '*Social'* housing in Mexico has served to generate profits over the last couple of decades rather than to provide lower-income households with adequate living standards. "Developers have taken advantage of the aspiration of lower-income sectors to own a home" (Arq. Felipe Leal 2018, *El Universal* newspaper interview). As lower-middle income formal workers gained access to the property market, advocates of this approach (e.g. the World Bank) assumed that formal property ownership would allow people to see housing not only as a place of refuge, and thus a dead asset, but also as productive capital that would ultimately empower them. Yet, these new owners have faced limited access to employment opportunities, and urban infrastructure and services. Furthermore, they are now in debt and have poured much of their life savings into mortgages for houses that offer them a very poor quality of life. A key outcome of this expansion of credit has thus been the concentration of vacant properties; the parallel increase in housing credit-driven production and vacancy should seem less paradoxical by now.

In contrast to the US, the Mexican constitution establishes a right to housing and gives governments the power to impose limitations on private property if it is in the public interest. Yet, *de facto*, and particularly since the 1990s, land has been regarded as a market good, and housing development has occurred with little regard to the socioeconomic and environmental externalities it has imposed. Despite recent shifts in Mexico's federal housing policy, housing construction is still regarded as a pillar of the national economy that contributes a significant percentage to the country's GDP. According to the National Chamber of Housing Development and Production (CANADEVI for its acronym in Spanish), on average, for every housing unit built 11 jobs are created and the local government receives 27 thousand Mexican pesos for granting construction permits. Thus, institutions like INFONAVIT are largely concerned with delivering big numbers quickly, by increasing the number of credits granted every year in order to incentivize economic growth and accelerate the speed of el *tren de vivienda*.

In 2014 INFONAVIT, the largest residential lender in the country with around 60 percent of the mortgage market, entered a partnership to form a mortgage trust backed by the interests of its residential mortgage loans. Prominent Mexican entrepreneurs, and the founding partners of this trust, signed this agreement to acquire 55 percent of INFONAVIT's portfolio. This arrangement was particularly attractive because INFONAVIT remained responsible for credit management and able to deduct mortgage payments from workers' wages. Subsequently, various foreign investment banks, such as Credit Suisse and Morgan Stanley, entered this business venture as well. Economic analysts envisioned this as a great opportunity to expand middle-income housing finance and construction (Huerta 2015). Similarly, in early 2017 a housing accord (*El Pacto por la Vivienda*) was signed between the federal government, developers and financing institutions to strengthen the housing construction, which had been debilitated after the global financial crisis of 2008. One of the main stipulations was to establish a guarantee fund for housing construction. Previous agreements integrated the real estate sector in decision-making processes regarding housing subsidies, urban growth boundaries, urban development plans, and local and state regulations (SHF 2015, Rosas 2017a).

In other words, governance in Mexico has become synonymous with assisting private-sector housing development, rather than planning for or regulating it. With Mexico's liberalization of the economy and the decentralization of government functions, local governments and the private sector were supposed to take control of urban development and housing production. Yet, local governments have generally lacked strong and stable institutional elements to adequately respond to neoliberal and decentralization schemes. High levels of urban poverty, informality, and now vacancy, have created a vicious cycle by limiting municipal revenue generation and, in return, public investment and government responses. Moreover, a decline in real wages and the roll-back of state programs have hindered the possibilities for Mexicans to improve their living conditions, particularly for isolated households with limited access to economic opportunities and urban services. Thus, structural reforms and the shift in the government's role in housing matters – from being heavily involved in production to market facilitator – has not occurred without its hardships, such as increasing levels of inequality and segregation.

The emphasis on market returns produced a particular spatial pattern of development: in the 2000s Mexico had the third highest rate of urban sprawl among OECD countries (OECD 2015). Large population centers and metropolitan areas have become a particular matter of concern given the multitude of lower level – and often completely disconnected –governments that they contain. This fragmentation is also a challenge for urban management and planning, and socioeconomic differences between jurisdictions have fostered important disparities in service provision (Roberts and Wilson 2009; Ward et al. 2010; Wilson et al. 2012).

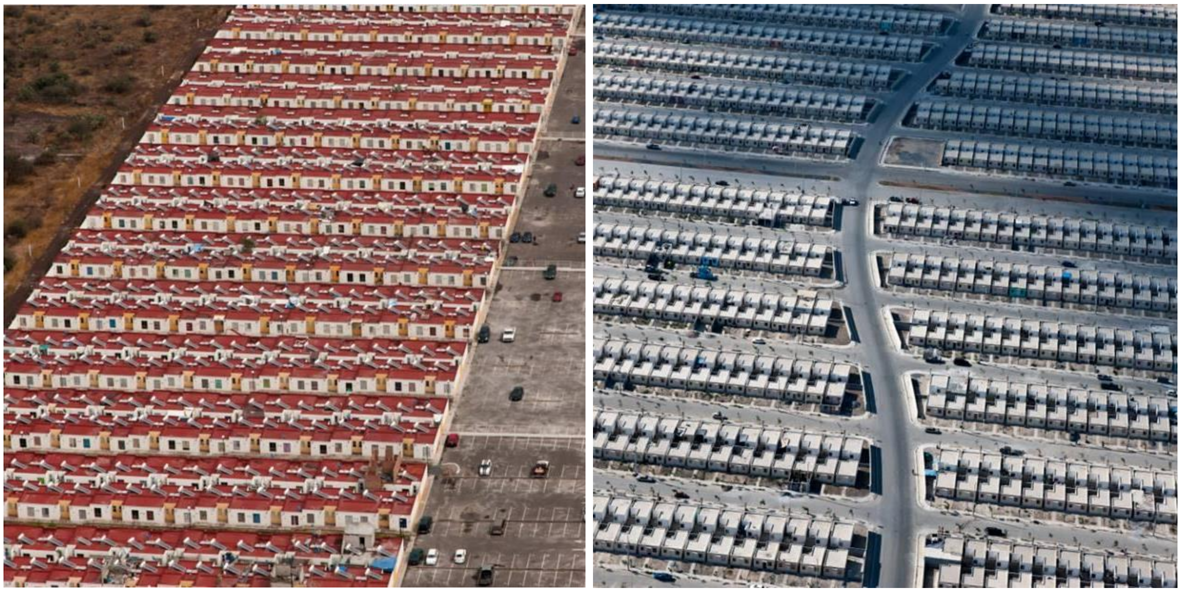

Figure 7.1: Housing Developments in Querétaro and Escobedo (Monterrey, N.L.).

Source: Arq. Jorge Taboada.

7.1 Mexico's Housing Paradox Revisited

Particularly around the turn of the millennium, Mexico's urban development began to be characterized by the construction of massive housing developments along the urban fringes of major cities. This was largely achieved by expanding mortgage access for formal workers (about forty percent of the working population in Mexico – ILO 2014) who contribute five percent of their earnings to a national housing fund – INFONAVIT (Figure 7.2).[98] Paradoxically, however, despite this expansion around a third of Mexicans live in overcrowded or poor housing conditions. Arguably, this has partially occurred because most of these housing issues would have been better addressed through rehabilitation

[98] A secondary market of mortgage-backed securities and a guarantee program operated by a second-tier development bank also gave the housing market a significant boost. By 2008, Mexico became the largest market for securitized mortgages in Latin America (BMI 2011).

strategies, which usually serve the most marginalized households, such as people that work in the informal economy, earn very-low incomes, or live in rural areas (Figure 7.3). Yet, during the 2000s, over 90 percent of government credits went to the construction and purchasing of new housing that can only be accessed by lower-middle income formal workers, most of whom live in urban areas that concentrate formal employment. In other words, housing production has not been fostered in the areas with the most pressing housing needs and housing finance remains inaccessible to a majority of the population (Connoly 2006, Eibenschutz and Goya Escobedo 2009, SHF 2010, IDB 2011, Ponce Sernicharo 2011, Soederberg 2015, Ward et al. 2015).

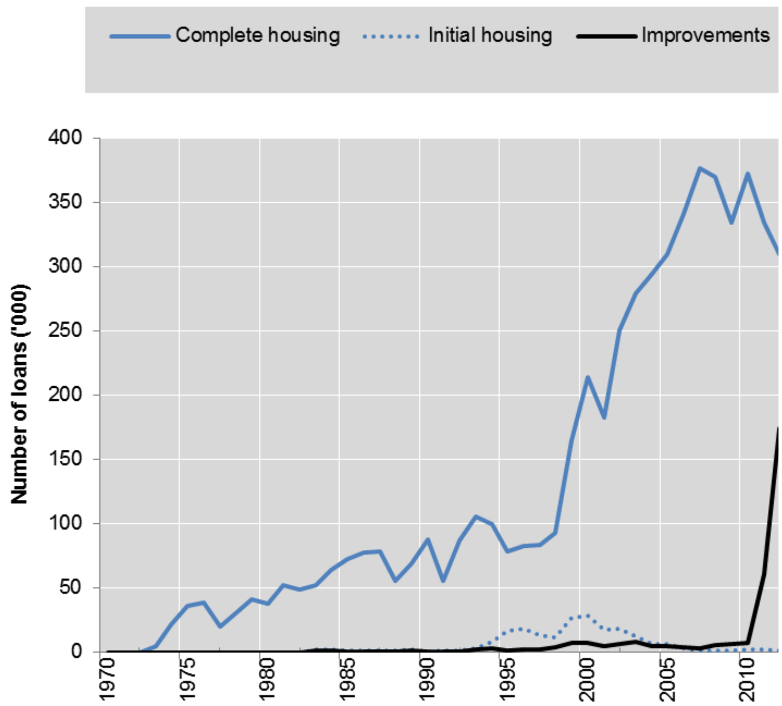

Figure 7.2: Number of Loans (in thousands) Financed by INFONAVIT from 1973 to 2011.

Source: CONAVI 2014.

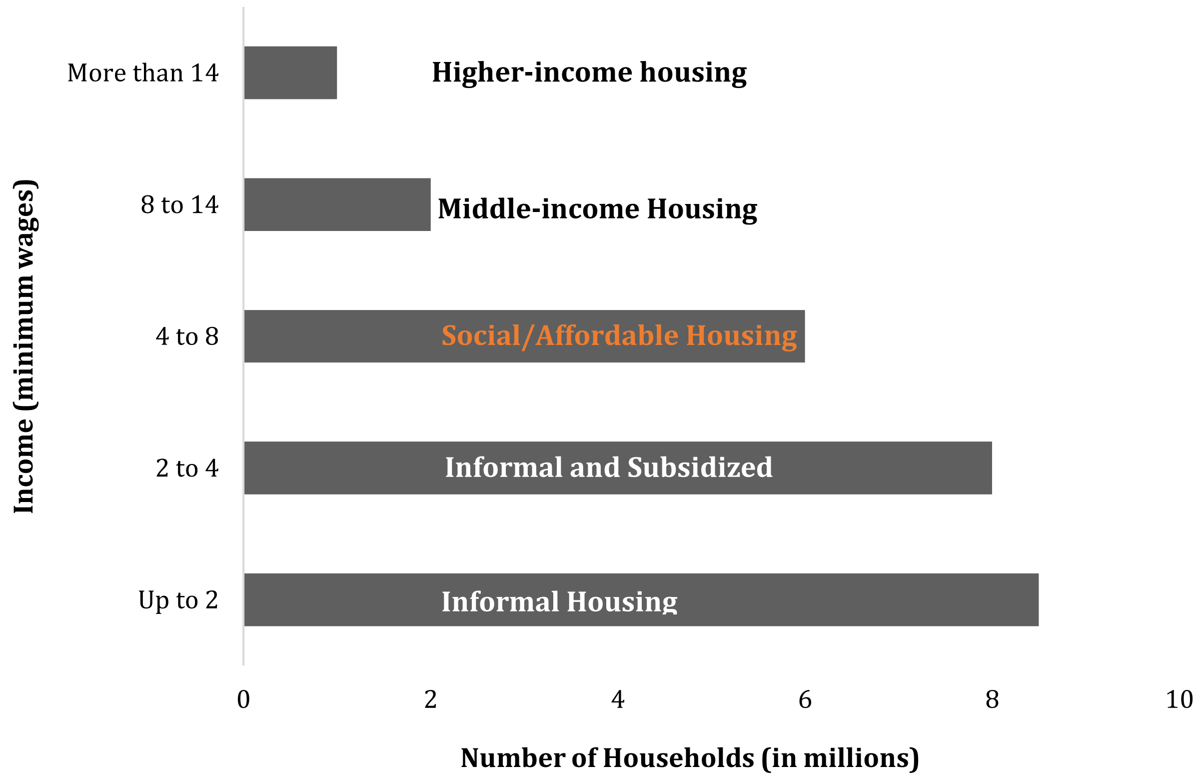

Figure 7.3: Population Distribution by Income Level and Housing Access in 2002.

Source: Connoly 2006.

Housing finance strategies were part of the country's structural and neoliberal reforms in the 1990s.[99] As such, they were promoted as technical and apolitical finance tools for the provision of affordable and low-income housing. It was also presumed that the market would be more efficient in providing decent housing for lower income households. Yet, housing finance systems are never politically neutral (Schwartz and Seabrooke 2008), and Mexico is no exception. The construction and finance sectors have flourished economically with state support through favorable policies, legal framing and subsidies that

[99] In 1992, el Programa para el Fomento y Desregulación de Vivienda was introduced to diminish the role of the Mexican state in housing production.

have permitted private companies to speculate through mortgages guaranteed by the state (Monkkonen 2011a). Furthermore, the private sector has had considerable influence on development matters. Meanwhile, under some estimates, only 32 percent of Mexicans are mortgage eligible (UN-Habitat 2011) and the extent to which Mexican households saw an improvement in their living conditions is up to much heated debate.

I argue, therefore, that housing inaccessibility is being recreated and normalized by the Mexican government and that neoliberal reforms have served as a *politically* guided intensification of market rule, rather than an apolitical and technocratic framework, as neoclassical advocates often argue (Peck and Theodore 2007). Contrary to the rhetoric of market-led efficiency, the Mexican government has played a key role in mitigating the risks for the construction and financial sectors, while not for Mexican households. The tight and dependent relationship between the Mexican government and private actors has thus yielded a significant concentration of market power and development influence while housing choices remain limited and inadequate (Soederberg 2015).

Besides the inability of the liberalization of credit to adequately respond to the actual housing needs of the Mexican population, speculative and unregulated development also characterized the country's housing boom, particularly in the 2000s. Most housing development has taken place in metropolitan areas and in large and medium urban centers despite relatively low population growth rates in many instances. Furthermore, it has occurred at urban peripheries were land is cheapest, frequently outside consolidated urban areas or even leapfrogging over vacant land. These mass housing estates have targeted working-class and lower middle-income families as an alternative to informal land occupations and self-building (Monkkonen 2011b). Yet, the dislocation from work, poor access to city facilities and services, relative isolation, among other diseconomies, have led some to suggest that these experiments may become planning disasters (Ward et al. 2015).

In parallel, Mexico has the highest vacancy rates among current OECD countries, even surpassing those that have recently emerged from a major housing bubble, such as Spain and the United States. The country's vacancy rate increased from 11.6 percent in 2000 to a bit over 14 percent in 2010 (OECD 2015). The nature and convergence of these issues is at the center of our discussion throughout this dissertation. In summary, however, the main problems of Mexico's new development model have perhaps been the location and quality of the newly built housing, and its financial unsustainability. An overdependence on housing sector debt, among other problematic practices, led the housing sector to encounter severe financial problems to the point that a number of developers faced bankruptcy at the beginning of this decade. Households have also faced significant hardships in meeting their mortgage responsibilities, primarily given their poor economic situations and the ballooning of their debt through the years. Furthermore, houses in these isolated low-income areas often represent an unattractive investment (Ward 2009) and households have, in many instances, experienced a depreciation in the value of their homes, for which there might not be an effective market.

7.2 Contrasting the Case Studies

Rather than presenting the experiences of each case studies independently, I have tried to incorporate them within the larger arguments presented throughout the dissertation. Nonetheless, it is important to summarize the main takeaways, similarities and differences from each context, including, when relevant, those of the pilot study. As has been stated earlier, these cases were selected because of their vacancy issues, both at the local and state levels, but in particular, the role that federal housing finance policy (and INFONAVIT) played in their housing development and production during the 2000s. Nonetheless, although the two main case studies received very significant amounts of INFONAVIT financing during the last decade, private-sector financing is now converging with INFONAVIT's, surpassing it in in the case of the State of Mexico (Figure 4.6).

Similarly, the largest housing developers in the country had a very strong presence in both states and cities, particularly in the State of Mexico, perhaps given its centrality. In Tijuana and Baja California, regional housing developers have also played an important role. In any case, the private sector was very influential in both contexts and state governments were a strong source of support for them. In Baja California, since 1989, when the party in power shifted, the right-wing party PAN has taken a strong pro-development and pro-private sector stance. In comparison, in the State of Mexico, which has always been governed by the PRI, the *Ciudades Bicentenario* initiative propelled housing development. Thus, despite their different political and institutional contexts, the private sector received a high level of state support in both cases. Even in the pilot case study of Zacatecas, where developers are generally much smaller local and regional companies, they have also received favorable treatment from different government administrations, again reinforcing the importance of public-private relations on the proliferation of the housing development patterns discussed throughout this research.

Nonetheless, local needs and resources do play a role. Given the low economic productivity and high poverty rates in Zacatecas, for instance, the state government has had to intervene much more in terms of housing production. The state government has had a strong incremental housing program throughout numerous municipalities. This housing assistance, however, has occurred also in peripheral areas of the state's capital and other major cities, most notably Fresnillo, leading also to high vacancy and abandonment, among other issues, such as severe insecurity and violence in these areas. Economic conditions – and political decisions – have also been influential in the other states.

With many impoverished and previously agricultural municipalities, the State of Mexico decided to promote housing development precisely in these regions; not state-financed, however, as in Zacatecas, but INFONAVIT-financed housing. Nonetheless, strong state-level intervention seems to have incentivized housing construction to continue well after 2012, when production had come to almost a complete halt in other parts of the country, including Baja California. Housing production is just starting to recover in Tijuana's urban core, but mostly through the production of higher income housing, suggesting perhaps a more truly free-market operation. State-level housing programs in this context – that in other Mexican regions aid the lowest-income households or those in the informal economy not covered by INFONAVIT – are virtually non-existent.

At the local level, it could be argued that Tijuana, particularly given its size, economic importance and low-level of fragmentation, has a relatively strong local government. Furthermore, Tijuana opened one of the first metropolitan agencies – IMPLANs – in the country. Yet, over the years, both local and metropolitan governance have proved to be relatively weak in this context, perhaps by choice and given the pro-development ideologies at both the local and state levels (although there has been some alternation between the PRI and PAN at the local level). In the State of Mexico, both local and metropolitan governance are particularly weak – and problematic. The capital of the state, Toluca, is only one municipality, but the real urban challenge for the state are the 59 municipalities that form part of Mexico City's metropolitan region. The strength of these local governments is somewhat contingent on their size and economic performance, but municipalities that form part of this large metropolitan region, particularly peripheral ones, are fairly small and weak. Metropolitan governance is highly fragmented and the regional plans drafted by the State of Mexico have not been coordinated with Mexico City's government, perhaps in part due to political differences (since gaining political and administrative autonomy in 1997, Mexico City has been governed by the left-wing PRD).

As discussed in previous chapters, mortgage defaults, in both Baja California and the State of Mexico are above the national average and on an upward trajectory. Similarly, in both cases, vacancy concentrations are found in peri-urban areas, where there are also high levels of housing abandonment and irregular home occupations. Yet, there seems to be more social control of housing developments in the State of Mexico, perhaps given higher historical levels of civic organizing. The same is true regarding home occupations, which have been both halted and promoted by different groups in the State of Mexico, leading some times to social conflict. Conversely, in Baja California squatting seems to be a widespread but more individualized practice. At a larger scale, in both contexts, social organizations (e.g. El Barzón and Movimiento Urbano Popular) have also emerged to provide legal aid to households seeking to refinance mortgages and avoid foreclosures and evictions.

Finally, regional developers in Baja California, and Tijuana in particular, have arguably adjusted better to new markets and housing needs by entering more forcefully into the rehabilitation market. In doing so, however, they have worked closely with INFONAVIT through its auctioning program and the large pilot project incentivizing community revitalization in Cañadas del Florido, Tijuana. Nonetheless, it is not yet clear that these initiatives will coalesce into a coherent strategy to address issues nation-wide.

7.3 The Perils of Densification

"If urban land continues to be inaccessible, we will continue to have marginalized populations living in peri-urban areas, and if real estate speculation is not controlled, no housing policy will ever work. The social function of land needs to be recognized, it is outrageous that we have idle land speculated over so that developers can profit while there are people without a place to live" (TECHO México 2016: personal interview).

"If compact development is truly the objective, you have to think about lower-income households who comprise more than half of the population… If you think of land as a commodity that can only be bought by those with enough resources, you will only promote the construction of semi-vacant high rises that no one can afford" (Habitat International Coalition-América Latina 2016: personal interview).

Federal housing policies continue to insist on and promote housing production, even within the new discourse of densification. Notably, such policies were put in effect already in Mexico City. Yet, within densification and urban infill policies, one of the main challenges is to produce or even maintain housing affordability. Furthermore, although much of the responsibility may fall on local governments to promote adequate zoning schemes, higher densities and land and fiscal controls, financing is likely to continue to play a very important role in affordable housing production (INFONAVIT delegate 2016: personal interview). Thus, the federal and state governments will probably have to diversify and strengthen their housing strategies as well.

In the case of Mexico City, as the local government gained political and administrative autonomy during the 1990s with the formation of a Legislative Assembly and the establishment of mayoral elections in 1997, a set of institutions, norms and programs were established to foster affordable housing programs and more sustainable development patterns.[100] With increasing resources, the second administration was able to ramp uup housing programs and densification strategies in the early 2000s. However, a sharp increase in land prices at the urban core, lack of collaboration with other levels of government, the deficient monitoring of programs and incentives, and the reduction in the allocation of resources to affordable housing programs by the subsequent administration in the late 2000s significantly hindered earlier efforts.

In the early 2000s, Mexico City's housing institute (INVI) accounted for almost 15 percent of the total housing investment in the city. This is by far the largest housing investment by a local or state institution in the country. In the State of Mexico, for instance, public housing investment peaked at 1.5 percent in 2004. These public housing investments are directed to the lowest income households that do not qualify for INFONAVIT mortgages. Notably, around 70 percent of INVI loans in Mexico City in the 2000s were used for rehabilitation. Furthermore, affordable housing projects were promoted in core areas with adequate services and urban infrastructure. On December 7, 2000, Andrés Manuel López Obrador, the then major of Mexico City, also implemented *Bando 2*, an urban growth boundary to address depopulation at the urban core, utilize existing infrastructure more efficiently, increase housing access, and restrict large real-estate development in the periphery and in conservation land. *Bando 2* promoted infill development in four core districts,[101] which were the destination of about half the trips made daily in Mexico City. It also restricted large-scale development in nine of the

[100] Among the most notable, in 1997, the Growth Management Norm 26 was implemented to incentivize affordable housing production, in 1998 the local housing institute (INVI) was created and in 2000 a local housing bill was passed.
[101] Benito Juárez, Cuauhtémoc, Miguel Hidalgo and Venustiano Carranza.

remaining twelve districts to the southwest of the city (GDF 2003; PAOT 2006; CONAVI 2012; INVI 2012).

The drastic cut in the availability of developable land, however, led to a rapid increase in land and housing prices.[102] In the four central districts, land prices grew by 205 percent just in the first half of the decade. Thus, even when considerable public financial investment was allocated to the production of low-income housing, the credits that the INVI could grant were eventually too low to cover land costs at the urban core. Thus, one of the main critiques of *Bando 2* was that it did not incorporate the necessary regulatory or fiscal mechanisms to prevent or respond to such a sharp increase in land prices. Furthermore, lack of coordination with the federal and other state governments led to the proliferation of housing developments adjacent to Mexico City's boundaries (Pradilla and Pino 2004; Lazcano 2005; Tamayo 2007). In part due to these issues, the next mayor, Marcelo Ebrard Casaubón, repealed *Bando 2* to promote densification along transit corridors, rather than only in the central districts, through property tax reductions and similar incentives. INVI's credit cap was also increased under this administration and land banking strategies were significantly reduced.[103] The expropriation of at-risk housing that had taken place during the former administration came to be regarded as a necessary first step toward addressing housing issues through rehabilitation and, when necessary, relocation (INVI 2012; Reyes 2013).

Another very significant issue related to local housing and densification efforts was the poor implementation and monitoring of local policies and laws. Perhaps the clearest

[102] *Bando 2* reduced suitable land for low income housing development from 20,324 to 6,478 hectares in the city.

[103] From 1997 to 2000, 119 properties were expropriated, 678 from 2001 to 2006, and 66 from 2007 to 2012. Similarly, 77 government properties were used from 2001 to 2006 to build affordable housing, compared to 4 from 2007 to 2012.

example of this was the *de facto* use of Growth Management Norm 26. This local law sought to incentivize low-income housing[104] production by allowing higher densities and building heights and reduced parking and open space requirements.[105] Yet, despite multiple reforms and suspensions, developers continuously misused the Norm and did not abide by its pricing caps. In 2005, Norm 26 was reformed to force developers to solicit a tax reduction to facilitate the verification of selling costs. On August 2010, the Norm was suspended and reformed once again to require developers to submit a financial analysis as proof of net capital flows and selling prices, yet on October 2012, it was suspended yet again because of its continuous misuse. Although these suspensions did not apply to projects financed by the INVI, they definitely represented a lost opportunity for affordable housing production (Ramírez 2005; Reyes 2013).

Some low-income residents were certainly able to access housing in the city's central districts through local housing programs. Yet, much of the densification of Mexico City's urban core ended up occuring through the production of higher income housing, particularly in districts like Benito Juárez and Miguel Hidalgo. Land and housing values have increased significantly in these areas and most low and middle-income residents are increasingly unable to access adequate housing in these locations. The INVI has provided significant but inconsistent support to low-income individuals and residents in the city. In contrast with INFONAVIT loans, the local government has provided zero-interest and subsidized housing alternatives that incorporated community input. Local actions, however, were clearly insufficient to counteract inequitable and unsustainable development patterns

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[104] The norm set an initial cap of 15 minimum annual wages for low-income housing and 25 for lower-middle income housing. In 2005 the cap was raised to 30.

[105] Norm 26 increased the allowed building heights for affordable housing production from 5 to 6 levels inside the first ring road (*Circuito Interior*), from 6 to 8 between the first ring and the beltway (*Anillo Periférico*), and from 4 to 5 beyond *Anillo Periférico*; the latter only applies to publicly financed projects.

at the larger metropolitan level, and private interests significantly overshadowed public ones. The Mexico City case illustrates that densification and affordable housing efforts require the coordination of different policies and institutions, land and fiscal regulations and rigorous monitoring mechanisms as minimum prerequisites for success (Reyes 2013).

7.4 RESPONSIBILITIES AT DIFFERENT LEVELS

Mexico's housing development model has yielded multiple problems, including a monopolistic construction sector and the multitude of negative externalities produced by housing developments around the country. Complacency towards real estate development has thus allowed private developers to capitalize, appropriate and internalize unmerited public resources. Furthermore, although many economists would not assign direct responsibility to the market, the clear inability of the private sector to generate adequate low-income housing arguably serves as a powerful social justification for a very different kind of state intervention in which private gains and social costs are more balanced. Such efforts would likely face many barriers and require an ideological shift. Unfortunately, market failures – and the need to address them – are very often eclipsed by the inefficiency and corruption of governments and their intervention (Hackworth 2007). Thus, it is paramount that the design and implementation of policies is done carefully and transparently to effectively improve housing and urban conditions moving forward. Such efforts should also recognize that multiple (public) interests have a legitimate right to be included in urban development considerations.

7.4.1 Federal and Financial

Some steps have already been taken in the right direction. In 2015, INFONAVIT stopped granting loans in minimum salaries and started a pilot project to offer some beneficiaries the possibility of restructuring their mortgages with a fixed interest rate of 12 percent. However, applicants must have a credit that is between 5 and 10 years old and with no defaults or extensions. Furthermore, federal agencies such as the National Housing Commission (CONAVI) are promoting a more diverse array of loans to buy used housing, rehabilitate or expand housing, and for individual production or self-help. Yet, the resources poured into these different housing strategies continues to be very limited. A notable restriction on self-help programs, for instance, is that loans require applicants to build their housing in less than 5 months (Muñoz Ríos 2015, CONAVI 2017).

Such efforts thus fail to recognize that low-income households require different strategies to improve their living conditions because they do not necessarily have the capacity to take out a mortgage. Increasing the scope and resources for technical assistance for self-construction, housing rehabilitation and community revitalization strategies and rental housing programs, could allow people to improve their living conditions in better-located areas. Similarly, informal workers, who constitute an important share of Mexican workers, must be incorporated into housing strategies. Even the former INFONAVIT director, José Antonio Revah Lacouture, has argued that at least semi-informal workers (e.g. waiters and taxi drivers), should be included in INFONAVIT's policies.

The appropriate use of public resources continues to be a very important and sensitive matter. In 2012, a reform allowed INFONAVIT to diversify its investment through less conservative financial mechanisms that provide higher yields but also higher risks. By 2015, over 10 percent of INFONAVIT's resources were invested in private companies, a percentage that is expected to continue to rise. Yet, concerns have been raised about the lack of transparency in the fund's management, which in 2015 reported significant losses. SEDATU's behavior, however, has been arguably more worrisome. In Baja California in 2013, at least 5 million MxP worth of subsidies coming from SEDATU went missing. Hundreds of housing vouchers were given to low-income residents of Tijuana to purchase construction materials but such vouchers were void, although the construction company in charge of delivering these materials allegedly received payment. Furthermore, at least 250 recipients failed to complete their housing with the given subsidy, which puts them in a sort of default. In addition, almost 35 million MxP were transferred to Baja California's SEDATU office without clear purpose or justification, besides that of holding public events to deliver such vouchers and subsidies.

In 2016, it was also reported that a number of federal agencies exceeded their assigned advertising expenditures by significant amounts. Among them, SEDATU was second, with an increase of 9,342 percent. Its assigned advertising budget was around 5 million MxP yet it spent over 405 million. Currently, SEDATU is also in the middle of a fraud scandal for diverting at least 653 million MxP[106] of its budget between 2014 and 2016 to eight shell companies with neither capital, employees or infrastructure to sustain their operations or provide any type of service. Much of this spending allegedly went to the promotion of and diffusion of government programs, but this outsourcing of services was made in a discretionary manner and the expenditure for subcontracted services surpassed the 49 percentage allowed by Mexican law (Mexicoelaks 2015; Montalvo 2017; Ureste and Roldán 2018).

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[106] Up to three times as much is estimated to have been diverted in conjunction with SEDESOL, Mexico's Social Development Ministry.

7.4.2 Local and Regulatory

Most experts agree that land use planning and local regulations, such as mixed uses and inclusionary zoning, are necessary to achieve a more sustainable and inclusive development. Yet, in very few instances have these mechanisms been used at the local level in Mexico. Tlajomulco de Zúñiga, a municipality in the metropolitan area of Guadalajara, Jalisco, has been one of the very few local governments that has actually imposed important regulatory measures to contain urban sprawl, poor housing conditions and housing abandonment, among other issues. In 2016, this local government stopped granting construction permits for new housing developments, prohibited the construction of housing units smaller than 60 square meters, and changed the land use of 800 hectares from residential to commercial and industrial. This followed around a decade of rampant housing construction in which previous administrations authorized up to 25,000 housing units a year (Romo 2017).

In general, however, it is clear that planning agencies and coordination between different government levels and institutions have been extremely weak and inefficient. To begin addressing this issue it will be necessary to improve local finances and revenue streams. Only then, will municipal governments be able to adequately guide and oversee their growth and development, and provide adequate infrastructure and services. Thus, efficient policy drafting, implementation and monitoring should be at the center of local capacity building. An important challenge will also be the discussion and design of land use policies, such as land capture mechanisms and other speculation controls, which have been very difficult to implement in Mexico and beyond since important development interests oppose them. Yet, accounting for negative and positive externalities is a chief condition of promoting socioeconomic and environmental sustainability. The positive externalities of boosting affordable housing production in well-located areas, for instance, can be supported through inclusionary zoning and land banking strategies. Similarly, stronger local governments would also be better equipped to promote some of the incipient community revitalization initiatives discussed in the previous chapter. Yet, as with the expansion and improvement to infrastructure and service provision, local governments will likely require state and federal financial support.

Policies that regulate land markets and speculation, as well as urban planning and development in general, will be paramount to improve development patterns and access to land and housing. Successful local governments have not been mere market facilitators, but rather, have set clear guidelines and been active participants (Jiménez Huerta 2014). Throughout Latin America, there is increasing recognition of the need to strengthen local government finances to confront to urban planning challenges – and promote greater social equity in cities. Land value capture mechanisms, for instance, that recover a part or all of the land price increases that are a product of public investment, have been implemented in different forms throughout the region. Recently, Brazil and Colombia (and Cordoba, Argentina and Cuenca, Ecuador) have approved concrete legislation to implement such strategies. Beyond an additional stream of resources, land value capture is a way to address land market imperfections and even improve development patterns.

Yet, powerful interest groups, such as property owners and real estate developers, have often hindered the adoption of these and similar strategies (as with Mexico City's recent failed attempt to pass land value capture legislation). Generally, there is a substantial gap between rhetoric and practice or a very limited understanding of the basic operational aspects behind these mechanisms. Yet these types of strategies could bring fiscal benefits to local governments, as well as the infrastructure and service investment that they could serve. Effective implementation also continues to be one of the main challenges, as well as public support. Nonetheless, an important finding has been that such strategies have not halted real estate development, as opponents often argue. However, implementation requires flexibility and there will always be a learning curve and a trial-and-error phase. Furthermore, it is paramount to have updated land registries and ensure administrative continuity (Smolka 2013). This is something that is very often lacking in Mexican municipalities.

A very notable exception in terms of implementation capacity is Mexicali, Baja California, which since 1989 has taxed land instead of property values. This has allowed it to have a particularly well updated cadaster. Arguably, one of the incentives to implement such strategy emerged from a government transition at the state level, from PRI to PAN. The same change did not occur at the local level, which may have forced the municipality to be more financially independent. The first year of tax was collection based on land values, collection increased 2.5 times in constant MxP compared to the previous year. This trend continued in the following two decades, during which time collection increased almost 6 times while the population and urban area of the city grew by only 1.5 times. Mexicali thus has the second highest collection rate per capita in the country, surpassed only by Hermosillo, Sonora. Besides what this has meant in terms of local fiscal capacity, Mexicali has one of the lowest rates of urban sprawl in north-central Mexico at 2 times the rate of population growth. This, at least in the Mexican context, is a moderate rate of urban expansion over the 1990s and 2000s (López and Gómez 2014).

There are a number of other promising policies that, albeit difficult, have been implemented in Mexico and abroad. Although land banking, for instance, requires significant resources, it could also be an important way to facilitate affordable housing production at the local level. This has been done with relative success in Mexico City and Aguascalientes in the past (Reyes 2013, Jiménez Huerta 2014). Well-located and serviced affordable land is the most important component to promote, in conjunction with state and the federal governments, which can provide different types of housing assistance, such as self-help, incremental construction and rehabilitation loans or rental housing.

7.4.3 Beyond Institutional Responses: Social and Neighborhood Organizing

Portes and Roberts (2006) argue that the weakening of the formal working class in Latin America, the fragmentation of class solidarity, and the avoidance of universalistic concessions, has led to social demobilization. In the best of circumstances, civic mobilizations are territorial and deal with the consequences (e.g. poor housing conditions) rather than the root causes of misdistribution and poverty, all due to a neoliberal ideology that preaches self-reliance to all but provides the necessary means to only a few. Furthermore, as Mexican housing policy continues to be used as an implicit construction and development policy, housing investment, that is to a large extent extracted from workers' earnings, and housing development decisions are generally taken by the private real estate sector seeking to maximize profits. This has given Mexicans very weak civic platforms from which to seek and demand better living conditions.

Yet, the need to access residential services and economic opportunities, as well as housing security, both to avoid evictions and prevent squatting or the incursion of criminal groups into their neighborhoods, has recently provided residents of new housing developments an impulse to organize in different ways and through different means. Their success to date has been limited but notable given the difficult circumstances that they face, such as low densities and weak social networks. While the degree of civic organization varies greatly across regions, it has spread from one state to the next with relative ease. Yet organizing to hire private services in low-density areas, such as garbage collection or private security, require a considerable amount of effort and resources. The more aggressive strategies, undertaken by State of Mexico residents in particular to confront organized crime have been notable, and perhaps even successful. The state has one of the worst crime rates in the country, but neighbors have coalesced to at least keep their own neighborhoods safe, through whatever means necessary. Similarly, residents have been able to consolidate informal commerce opportunities to both provide them with an income, and their neighbors with more services.

Negotiations and dealings with the public and private entities, however, have encountered significant roadblocks. High levels of corruption have been widely documented and even the residents' legal battles have been impeded by something as grave as the incarceration of a housing leader, rather than public figures or development industry titans. Here, it is important to note that although INFONAVIT has launched pilot projects for community revitalization that seem to be headed in the right direction, it is worrisome that other grassroots efforts and initiatives are not supported by different levels of government, but rather are criminalized. Past civic and housing movements that have been successful have generally confronted powerful political and economic forces at least partly responsible for their struggles. Mobilizations around detrimental housing conditions in the country have already provided support not only to low-income households, but have actually contributed to democratization processes. It is really only then, within more democratic institutions, that demands, housing and otherwise, can be sustainably consolidated and attained, and that civic power can be leveraged beyond the reach of *clientelistic* practices (Reyes 2018).

7.5 Implications for Theory and Practice

The present research has implications for theories regarding how governing regimes operate to facilitate growth and offers theoretical explanations for the failure of the Mexican housing model. These theoretical contributions also bring implications for practice. First, this dissertation has meticulously illustrated the roles and interactions between different levels of government and private actors and interests since the implementation of a new housing finance and development model in Mexico. Such relationships have been significant enough to create elaborate power structures and a *multi-level* regime and complex system of governance, distinct from that described by regime theorists whose focus has generally been on local governance (Stone 1989). Furthermore, this research also exemplifies the ways in which this *multi-level* regime has reproduced and intensified socioeconomic and political (decision-making) inequities, as well the ultimate fracture of the housing model itself.

Mexico's new housing finance and development model has been described by its own proponents as a *housing train* that ought to produce great quantities of housing at record speeds, arguably to address the country's significant housing deficit, but also a fitting exemplar of the ideal of efficiency, vehemently promoted throughout the years of restructuring into a neoliberal era. For such a production system to function, however, an elaborate institutional scaffolding was needed. INFONAVIT, at the federal level, led the way through mortgage expansion and its financial power, made possible largely by the five percent compulsory levy on workers' earnings (and high-interest loan repayment). Such a great financial engine – along with the important support and incentives provided by pro-development state governments – steered housing development through the peri-urban fringes of Mexico's urban and economic centers. A select handful of private housing developers were handed a front seat – an attractive risk-free business venture to develop cheap housing on cheap land that would allow them to maximize their profits and amass power while local governments took a back passenger seat. Their low fiscal and institutional capacity and short-term vision drove them to see construction permits as a great revenue stream, without foreseeing the great challenges future administrations would face in providing adequate services and infrastructure. This is yet another piece of evidence of the failure of the nation's decentralization experiment. Meanwhile, prospective homeowners almost missed the train. They were left to adapt to the developers' production systems, which were focused on producing more and more units to keep the engine running (while giving positive reports to their investors).

The second major contribution of this research is to explain the failure of Mexico's housing production model. I argue that this failure is rooted in the tension between the constitutional right to adequate housing and its increasing commodification. This tension underlies the paradoxical coexistence of high housing vacancy rates and shortages in various Mexican regions. The neoliberal argument was that the free market is better equipped than the government to produce affordable housing. The marketization of housing rights, however, produced numerous imbalances. Not only was the new housing finance and development model unable (or uninterested) in catering to the Mexicans with the greatest housing needs, but it also fostered a mismatch between housing demand and supply. The impulse to produce housing at great quantities and speed, and the lack of competition and risk at the outset, led to the production of a lot of very poor quality housing that did not properly address housing shortages. Rather, this development model reproduced overcrowding in minuscule units, structurally deficient dwellings and infrastructure, issues of access to services, and ultimately, concentrated vacancy and abandonment.

Besides explaining the model's failures, this research also analyzes its implications. Despite the scarce research on the financialization of housing, particularly in the global south, the implications of Mexico's Housing Paradox are becoming increasingly relevant at a global level. Thus, this research adds to the conversations that aim to answer what constitutes *adequate* housing. In the Mexican context, the official definition centers on metrics of overcrowding and the durability of construction materials. Yet, this research highlights that housing location is a paramount consideration to foster adequate living standards because it tends to promote or hinder *access* to services, infrastructure and opportunity. The conditions under which *access* to housing finance has been promoted are also underscored by this research, particularly given the hardships that low-income households have experienced after acquiring subprime mortgages in Mexico.

In parallel, this research expands and updates our understanding of housing vacancy and abandonment in the Mexican context. Vacancy and abandonment associated with the Mexican housing model is particularly problematic in peri-urban regions. Documenting these conditions also revealed other important characteristics of the conditions the model helped reproduced, including the blurring of formal and informal housing production, occurring, for instance, when 'formally' developed housing falls into informality given its lack of access to basic services, its irregular occupation or its non-residential use. These conditions and their relationship to the multi-level regime merit further exploration.

Finally, this research also documents the spatial and localized nature of the conditions and processes outlined above and their effects on regime actors, as well as residents and communities. Each has responded in different and often divergent ways. Such tensions run parallel to those between the use and exchange values of housing. One of the most telling and recent examples of this tension is the clash between residents and housing organizations that are aiming to prevent foreclosures and evictions and INFONAVIT. This clash is rooted in INFONAVIT's strategy for addressing housing vacancy – to foreclose and auction such housing in order to ensure ongoing fiscal stability for the agency. The civic organizing that has emerged in response to this and other issues discussed throughout this dissertation deserve much more careful analysis and consideration. This research has identified different and at times conflicting civic groups and goals. Some have merely reacted to the negative living conditions that they face, and tried to address them when possible. There are instances in which neighbors have organized to access private (and often more expensive) services, such as security, garbage collection, and water pipes. Others have organized to more actively demand public service provision, and accountability from government officials and private entities, most notably, developers.

These findings are extremely relevant to current policy discussions. Despite a more recent – and arguably discursive – policy shift to promote densification, for instance, housing policy and finance in Mexico continue to prioritize new housing construction (much of it still in peri-urban areas) above other housing strategies. Strategies such as providing smaller and more accessible loans for housing rehabilitation, such as those implemented in Mexico City in the 2000s, would aid lower-income residents improve their living situations without being displaced to newly developed peripheries. Yet, they continue to take a back seat, perhaps because they do not fuel the economic engine of the *housing train model*. The same may be said of land speculation controls, such as land value capture mechanisms, that would help halt the abrupt land and housing price increases that

Mexican cities are already experiencing. Precisely due to their absence, we are therefore seeing a shift towards upper-middle income housing finance. While financing higher-income housing might be more fiscally sustainable, it will not resolve the housing needs of a majority of Mexicans. It seems that this latter shift will keep the housing and economic trains going without increasing access to adequate housing.

At the local level, there is incipient and rare evidence of governments that are strengthening their land use policies and development regulations in response to the hardships generated by previous development patterns. These cases, such as Tlajomulco de Zúñiga in Jalisco, will be very useful and stimulating for further analysis. It will be even more advantageous to compare and contrast different cases. It is interesting, and counterintuitive, that Mexicali, in Baja California has had one of the greatest fiscal and collection capacities in the country for several decades now. Yet, it also faced similar development patterns and challenges as the ones outlined throughout this dissertation. This may indicate that federal and state government actions have outweighed the power of even well-funded local governments to respond to local housing problems.

Appendix A. Comparative Matrix of Case Studies

	BAJA CALIFORNIA	**STATE OF MEXICO**	**ZACATECAS (pilot)**
Strength of local governments	Relatively strong, particularly for Tijuana due to its size and economic importance	Weak, dependent on size and economic performance	Weak
Strength of private sector	High, pro-development state government	High	High but not as big, public sector has had to fill in
Developers' size	National and regional	National	Local/state
Current development patterns	Housing development came almost to a complete halt around 2010, starting to recover, particularly through the production of higher income housing at the urban core	Varies across municipalities depending on their economic development, but more housing development than in Baja California, particularly in Tecámac, which is more industrialized, Huehuetoca is poorer and farther away from Mexico City, but still some construction is occurring	
Economic conditions	Highly susceptible to economic booms (e.g. maquiladora/Nafta)	Many impoverished, previously agricultural,	Poor state in general, low economic

	and boosts (e.g. 2008 crisis)	municipalities, some industry developing	productivity, high migration levels
State housing programs	Very limited construction with state and federal resources on private land by private construction companies to serve middle and lower-middle income households	Very limited but individualized construction credits for people to build their own housing on their own land (similar to self-help strategies)	Given limited private sector participation, stronger incremental (pie de casa) housing programs, also in the periphery, also susceptible to high vacancy levels
Mortgage default	Above national average and increasing	Above national average and increasing	Below national average and stable
INFONAVIT's presence	High, converging with private sector	High, converging with private sector	High
Metropolitan governance	Tijuana opened one of the first IMPLANs in the country, yet, relatively weak	Fragmented, regional plans established by the state government but no coordination with Mexico City's plans	Incipient, weak
Vacancy concentrations	Tijuana's and Mexicali's (two largest cities) peripheral census tracts and DUIS	Peripheral municipalities from Mexico City's metropolitan region and Ciudades Bicentenario	Peripheral census tracts from the State's capital, and some rural municipalities
Perceived level of abandonment	Very high	High	Moderate

Perceived/relative issue of squatting (field + interviews)	Very high	High	Low
Important/distinctive housing issues	Water access, unaffordability	Overcrowding, distance/isolation	Water access, poverty levels/purchasing power
Social organization	Moderate	Relatively high, higher than other states, lower than Mexico City's	Low
Local responses	- Private sector/NGO organizations to develop social capital in high-vacancy areas where foreclosed and rehabilitated houses are being re-sold - Social organizations providing legal aid to refinance mortgages and avoid eviction	- Social organizations providing legal aid to refinance mortgages and avoid eviction	

Appendix B. Preliminary Interview Questions

(Spanish and English versions)

Funcionarios Públicos

1. Nombre, afiliación y título profesional:
2. ¿En comparación con otras problemáticas, qué tan importante considera que sean los altos niveles de desocupación habitacional en su entidad?
3. ¿Por cuánto tiempo se han experimentado altos niveles de desocupación habitacional en su entidad?
4. ¿Existen áreas en particular que sufren de altos niveles de desocupación?
    a. Si este es el caso, ¿por qué razón cree que esto sea?
5. ¿Cuáles cree que sean algunas de las causas de los altos niveles de desocupación en su municipio?
6. ¿Cuáles han sido las principales implicaciones de los altos niveles de desocupación (i.e. el debilitamiento de las finanzas públicas, problemas de seguridad, etc.)?
7. ¿Han tratado de resolver esta problemática?
    a. ¿De qué manera?
    b. ¿Han trabajado con otras instituciones públicas o privadas en este asunto?
8. ¿Han trabajado con otros niveles de gobierno, o recibido apoyo de niveles más altos de gobierno para solucionar esta problemática?
9. ¿Qué cree que se requiera, y quienes serían los principales actores que tendrían que colaborar, para comenzar a resolver esta problemática?

Public Officials

1. Name, affiliation and professional title:
2. In relation to other issues that your municipality may face, how important do you consider high housing vacancy rates to be?
3. For how long have housing vacancies been significant in your municipality?
4. Are some areas within your municipality particularly affected by high vacancy rates?
    a. If so, why do you think that is?
5. What do you see as some of the causes of high vacancy rates in this municipality?
6. What have been some of the main implications of relatively high vacancy rates (i.e. weakened public finances, public safety issues, etc.)?

7. Have you tried to address this issue?
    a. If so, how?
    b. Have you worked with other public or private entities on this matter?
8. Have you worked with other government levels or received support from higher levels of government to address high housing vacancy rates?
9. What do you think is required, and who are the stakeholders that should come together, to begin to address this issue?

Desarrolladores/Constructores

1. Nombre, afiliación y título profesional:
2. ¿Es un constructor local? ¿Dónde se encuentran la mayor parte de sus proyectos?
3. Si está familiarizado con el contexto local:
    a. ¿En comparación con otras problemáticas, qué tan importante considera que sean los altos niveles de desocupación habitacional en su entidad?
4. ¿Cuáles cree que sean algunas de las causas de los altos niveles de desocupación en este y otros municipios?
5. ¿Por qué cree que algunos desarrollos habitacionales o áreas de este municipio han experimentado particularmente altos niveles de desocupación?
6. ¿Cómo describiría el proceso de construcción? ¿Cuáles fueron las restricciones e incentivos durante el desarrollo del proyecto?
7. ¿Cuáles han sido las principales implicaciones de los altos niveles de desocupación (i.e. el debilitamiento de la industria de la construcción, la reducción de la producción habitacional, etc.)?
8. ¿Ha trabajado con el sector público para hacer frente a algunas de estas problemáticas?
9. ¿Cuál cree que es y debiera ser el papel del sector privado para hacer frente a estas problemáticas?

Housing Developers/Construction Agents

1. Name, affiliation and professional title:
2. Are you a local housing developer? Where are most of your projects located?
3. If familiar with the local context:
    a. In relation to other issues that this municipality may face, how important do you consider high housing vacancy rates to be?
4. What do you see as some of the causes of high vacancy rates in this and/or other municipalities?

5. Why do you think certain housing developments and/or areas of the city/town have experienced particularly high vacancy rates?
6. What was the development process like? What were the restrictions and requirements, as well as the incentives for you to build housing?
7. What have been some of the main implications of relatively high vacancy rates at different levels (i.e. weakened the construction industry, slowed down housing production, etc.)?
8. Have you worked with the public sector to address some of the implications of this issue?
9. What do you think is and should be the role of the private sector in addressing this issue?

Final Interview Questions (Spanish version)

Cuestionario para Funcionarios Públicos

Nombre, afiliación y título profesional:

1. ¿Qué medidas se han tomado desde su institución para abatir el rezago habitacional?
    a. ¿Qué rol considera ha tenido la política de vivienda y su financiamiento a nivel federal en el desarrollo de vivienda a nivel local en las últimas décadas?
    b. ¿Cuál ha sido la colaboración entre distintos niveles de gobierno para abatir el rezago habitacional y promover el desarrollo de vivienda?
    c. ¿Cómo ha evolucionado en las últimas décadas el rol, la influencia y las prácticas del sector privado en los procesos de desarrollo y financiamiento de vivienda?
2. ¿Considera que los patrones de desarrollo de las últimas décadas han contribuido en el incremento de la desocupación habitacional?
    a. ¿Cuáles considera su institución como las causas principales de los altos niveles de desocupación en algunas regiones del país?
    b. ¿Qué áreas han sido las más afectadas?
    c. ¿En comparación con otras problemáticas de vivienda, qué tan importante considera que sea el tema de desocupación habitacional?
    d. ¿Cuáles han sido las principales problemáticas surgidas a partir del incremento en los niveles de desocupación? ¿Y cómo han afectado a la población y el sector público y privado?
3. ¿De qué manera se ha intentado resolver esta problemática?
    a. ¿Se ha trabajado con otras instituciones públicas o privadas en este asunto?
4. ¿Qué cree que se requiera, y quienes serían los principales actores que tendrían que colaborar, para comenzar a resolver estas problemáticas?

Cuestionario para Desarrolladores/Constructores

Nombre, afiliación y título profesional:

1. ¿Es un constructor/desarrollador local, regional o nacional? ¿Dónde se encuentran la mayor parte de sus proyectos?

2. ¿Qué rol considera que ha tenido la política de vivienda y su financiamiento (federal y estatal) en el desarrollo de vivienda a nivel local en las últimas décadas?

a. ¿Cuál ha sido el papel, influencia y prácticas del sector privado en los procesos de desarrollo y financiamiento de vivienda?

b. ¿Cómo describiría los procesos de desarrollo inmobiliario (ej. restricciones e incentivos)? ¿Y su relación con el sector público?

3. ¿Considera que los patrones de desarrollo de las últimas décadas han contribuido en el incremento de la desocupación habitacional?

4. ¿Cuáles cree que sean algunas de las causas principales de los altos niveles de desocupación en diversas regiones del país?

5. ¿Por qué cree que algunos desarrollos habitacionales o áreas de este estado y municipios han experimentado particularmente altos niveles de desocupación?

6. ¿En comparación con otras problemáticas, qué tan importante considera que sean los altos niveles de desocupación habitacional?

7. ¿Cuáles han sido las principales problemáticas surgidas a partir de los altos niveles de desocupación (ej. el debilitamiento de la industria de la construcción, la reducción de la producción habitacional, etc.)?

8. ¿Ha trabajado con el sector público para hacer frente a algunas de estas problemáticas?

9. ¿Cuál cree que es y debiera ser el papel del sector privado para hacer frente a estas problemáticas?

Cuestionario para Organizaciones Civiles

Nombre de Organización y posición dentro de la organización:

1. ¿Hace cuánto y con qué propósito se formó su organización?
    a. ¿Hace cuánto es usted miembro de esta organización y cuál fue su motivación para formar parte de ella?
    b. ¿Cómo puede afiliarse un individuo o familia a su organización?
2. ¿Cuál es su opinión acerca de los programas de vivienda de distintos niveles de gobierno para combatir el rezago habitacional en las últimas décadas?
3. ¿Cuál es su opinión acerca del papel e influencia del sector privado en procesos de producción y financiamiento de vivienda?
4. ¿Qué tanto cree que las políticas gubernamentales y el desarrollo de vivienda de las últimas décadas han contribuido al incremento en los niveles de desocupación?

5. ¿Cuáles cree que sean algunas de las causas principales de los altos niveles de desocupación en diversas regiones del país?
6. ¿Por qué cree que algunos desarrollos habitacionales o áreas de este estado y municipio han experimentado particularmente altos niveles de desocupación?
7. ¿En comparación con otras problemáticas, qué tan importante considera que sean los altos niveles de desocupación habitacional?
8. ¿Cuáles han sido las principales problemáticas surgidas a partir del incremento en los niveles de desocupación? ¿Y cómo han afectado a la población?
9. ¿Ha trabajado con el sector público para hacer frente a algunas de estas problemáticas?
10. ¿Qué cree que se requiera, y quienes serían los principales actores que tendrían que colaborar, para comenzar a resolver esta problemática?

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