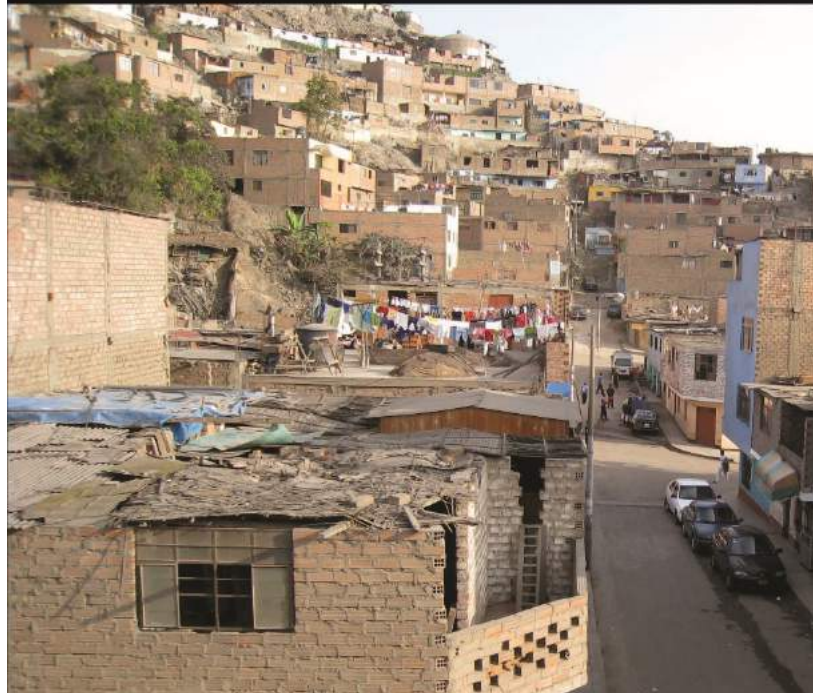
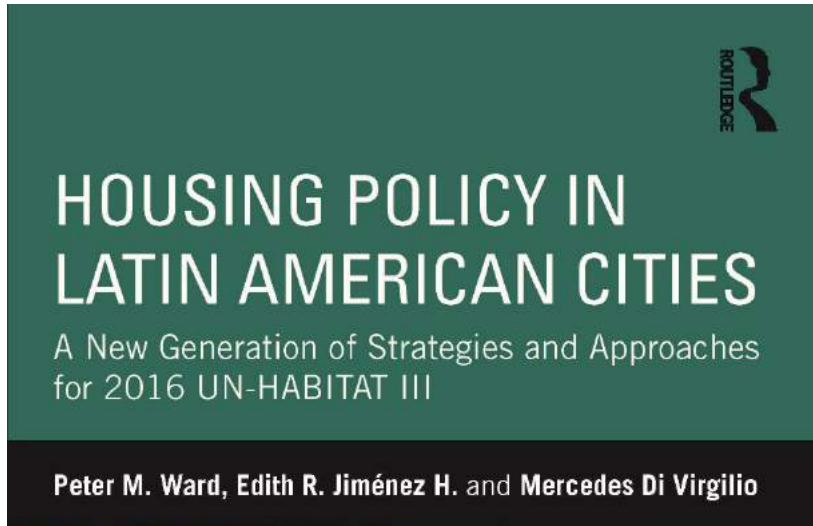



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## Políticas de vivienda en ciudades latinoamericanas. Una nueva generación de estrategias y enfoques para 2016 ONU-Hábitat III

*Peter M Ward , Edith R Jiménez , Mercedes Di Virgilio ,  
Angélica Camargo*

POLÍTICAS DE VIVIENDA EN  
CIUDADES LATINOAMERICANAS  
Una nueva generación de estrategias y enfoques para 2016  
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Hacia la década de 1960, la rápida urbanización en las regiones en desarrollo en América Latina, África y Asia, fue marcada por la expansión de asentamientos con población de bajos ingresos y que se desarrollaron informalmente. Para los años 2000 estos asentamientos constituyen usualmente entre el 20 y el 60 por ciento del área ocupada de las áreas metropolitanas y grandes ciudades. Además de las actividades de la red Latin American Housing Network (LAHN [www.lahn.utexas.org](http://www.lahn.utexas.org)), ha habido mínima atención directa a la enorme extensión de asentamientos informales formados hace 20 y hasta 40 años que hoy forman parte del anillo intermedio de las ciudades. En el marco de un proyecto coordinado y colaborativo de investigación, los autores y colaboradores ofrecen una perspectiva original en cuanto a los retos de densificación y rehabilitación que encaran actualmente los asentamientos irregulares en las ciudades latinoamericanas.

Investigadores, profesionales y expertos en temas de vivienda, política habitacional, investigadores en temas sociales, estudios comparados, desarrollo urbano, encontrarán este texto altamente significativo.

***This PDF contains the pre-publication version of the individual city chapter for this particular folder. See the Folder “Introductory Chapter and Bibliography” for background orientation and bibliography relating to this and other chapters.***

***For a published overview and summary of the spectrum of policies, see Peter M. Ward. 2015 "Housing rehab for consolidated informal settlements: A new policy agenda for 2016 UN-Habitat III", Habitat International, 50, 373-384 (Publications Section of this website)***

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## **Chapter 4.**

### **The Challenge for Housing Rehab in Mexico City and Monterrey**

**Peter M. Ward**

#### **WHY A TALE OF TWO CASES, AND NOT ONE?**

Unlike the other countries in this study that all comprise a single city case, in Mexico we worked in three cities, two of which (Guadalajara and Monterrey) were formally included in the LAHN project and colonia surveys that were conducted in 2009. The third case, Mexico City, had been partly included in the summer of 2007 as part of a preliminary pilot survey that sought to answer questions relating to the character of the consolidated settlements in the innerburbs. In examining these innerburbs we expected to find high densities, internal subdivision of lots between first and second generation households, relative immobility of the original owners, and valorization the housing asset. Indeed the 2007 survey was a restudy undertaken in both Bogotá, Colombia and Mexico City, Mexico. The study was unique in that it involved a return to the very same settlements and the precise lots in which the author and a colleague had conducted surveys almost thirty years earlier (Gilbert and Ward, 1985 [2009]). Finding, as the study did, that almost 80 percent of the lots were still the family home of the original settlers, it offered an early and unique cross-sectional view of household and dwelling evolution over the period (see Ward, 2012).

Although the Mexico City survey instrument was not the same as that used subsequently in the other LAHN cities, a number of the questions were identical. Because the author already had an extensive knowledge of the settlements in a city where he had conducted surveys over almost 40 years, it was decided to skip application of yet another full survey protocol in Mexico City, with the idea that we might come back to it later with some intensive household analyses of interesting cases identified from the 2007 study as part of Phase III of the project (described in Chapter 1). This allowed LAHN-affiliated researchers at UT-Austin to select an entirely new city for study and its relative proximity to Austin made Monterrey an obvious choice.<sup>1</sup> The

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<sup>1</sup> Fieldwork for this work was undertaken jointly with students and colleagues from UT-Austin and the ITESM. The large survey was conducted in January 2009, with follow up intensive “interesting” case

Guadalajara study is presented in the preceding chapter, and we benefited greatly from Dr. Jiménez and her team's extensive collaboration in the data collection in Monterrey, which allowed us to jointly test and refine the instrument and survey protocols.<sup>2</sup>

As one might expect from the second and third largest metropolitan areas in Mexico, Guadalajara and Monterrey are quite similar in terms of the physical structure and organization of the consolidated *colonias populares*. The housing dynamics that we found, were also quite similar, although the process of land development was somewhat different in Guadalajara where informal settlement on *ejidos* featured more strongly. While these two cities are quite similar to each other, Mexico City is rather different in several respects that will be discussed comparatively in this chapter. The most notable difference, of course, is in its absolute size (almost 20 million in 2010 compared with just over 4 million for Monterrey), and the slightly earlier period of initial expansion of informal settlements into the State of Mexico *municipios* in the mid- to late 1960s when then Mayor (*Regente*) Uruchurtu sought to clamp down on informal subdivisions within the Federal District (in effect displacing their development outside of then city limits). Important, also, are the much higher densities found in Mexico City, these being an outcome of different land market dynamics, densification policies and the greater attraction of inner-city and innerburb residential locations given that the current periphery and self-help land acquisition opportunities are much further removed (by 20 kilometers or more) than they are in provincial cities – even large ones like Guadalajara and Monterrey. In Mexico City, renters and second and third generation adults born in the innerburbs are more likely to look askance at moving to the peripheral suburbs. In turn, this leads to a much greater internal subdivision of lots among kin-related households in the capital; to higher levels of renting within consolidated settlements; and to significantly higher property values. Contrasting Mexico City and Monterrey (and by extension Guadalajara) in this chapter, therefore, allows us to evaluate how policy

---

studies in July and August of the same year. While we worked closely with team members and students at ITESM in the Fall of that year, the outbreak of violence early in 2010 meant a suspension by UT of all fieldwork and site visits, which unfortunately continues to this day (2013). However, we were able to conclude both rounds of fieldwork before the suspension was imposed, and these are the materials presented in this chapter and on the LAHN website.

<sup>2</sup> Guadalajara and Monterrey were the first two LAHN cities to field the survey and we did so more or less simultaneously. The two teams also collaborated in Monterrey for the elaboration of the intensive case study methodology and its application in Monterrey, as did Dr. Mercedes di Virgilio who later led the intensive case studies in Buenos Aires after spending two months on research leave in Austin.

challenges differ in scale and in design in the Capital compared with other large metropolitan areas in Mexico.

## **OVERVIEW OF THE TWO METROPOLITAN AREAS: CITY GROWTH AND DEFINITIONS OF THE INNERBURBS IN MEXICO CITY AND MONTERREY**

Both Mexico City and Monterrey had their most rapid population growth and city expansion between 1950 and 1980 with growth rates of between 5%-7% per annum during these decades. The metropolitan area of Monterrey grew from a relatively small city of just under 400,000 inhabitants in 1950, to an incipient metropolis of almost 2 million inhabitants in 1980. In the first decade much of this growth was industrial working class around the central historic core of the city forming a series of inner suburban colonias such as Independencia, Nuevo Repueblo and Obrera, along with several informal settlements such as El Pozo, Garza Nieto and Loma Larga, some of which had begun even earlier. The second phase from 1960 to 1980 consisted of more dramatic and heterogeneous growth of settlements, many of which were informal, and were concentrated in the central municipalities of Monterrey and Guadalupe, with some more mixed and middle-income areas in the municipalities of San Pedro, Santa Catarina and San Nicolás. From the late 1970s to early 1980s working class informal neighborhoods were complemented by significant formal state-produced housing through INFONAVIT, and through FOMERREY sponsored site-and-service subdivisions in the adjacent northwest. These were especially significant in the 1980s and had an important impact in the expansion of the supply side of low-income lots for self-building. As a result overall densities in Monterrey fell quite significantly from 73 to 59 persons per hectare over a 25-year period (1980-2005).

With the exception of important new workers' housing estates built by INFONAVIT, Mexico City never saw such a large increase in state sponsored land market lot offerings, but instead was fuelled by informal subdivision of land in the State of Mexico (Nezahualcoyótl, Ecatepec and Naucaplan) and the informal sale of *ejidal* land in the south and west of the Federal District leading to the dramatic growth of a large swathe of largely irregular settlement at the then rapidly expanding periphery. These settlements would later constitute the intermediate ring of the metropolitan area. During the period 1950-1970 the population of the metropolitan area grew from 3.14 million to 9.2 million with the population living in the "first ring" of suburbanization

growing from 800,000 to almost 5 million. While some of these neighborhoods were middle and upper income, many were informal self-help settlements. Continuing growth in the 1980s and subsequent decades led to the creation of “second” and “third rings” of settlement in an ever expanding periphery that was 20 or more kilometers from that of the third ring. Unlike Monterrey, Mexico City had only limited opportunities for new informal settlement close to the first ring of what, by the 1990s, were the consolidated *colonias populares* of the “innerburbs.”

As we outlined in Chapter 1, the areas defined as innerburbs or first suburbs are normally construed as those established between 1950 and 1980, although in Mexico we have narrowed the definition to 1960-80, differentiating between the earlier settlements (1960-70 and sometimes earlier as in Mexico City) with those areas that formed in the 1970-80. Both sets of maps (Figures 4.1 and 4.2) show the disaggregation of the core; the definition of the “inner-urban areas” or “inurbas” (in blue); the innerburbs by decade (in green); and the post 1980 suburbanization (some of which is off the bounds of the map in the case of Mexico City).

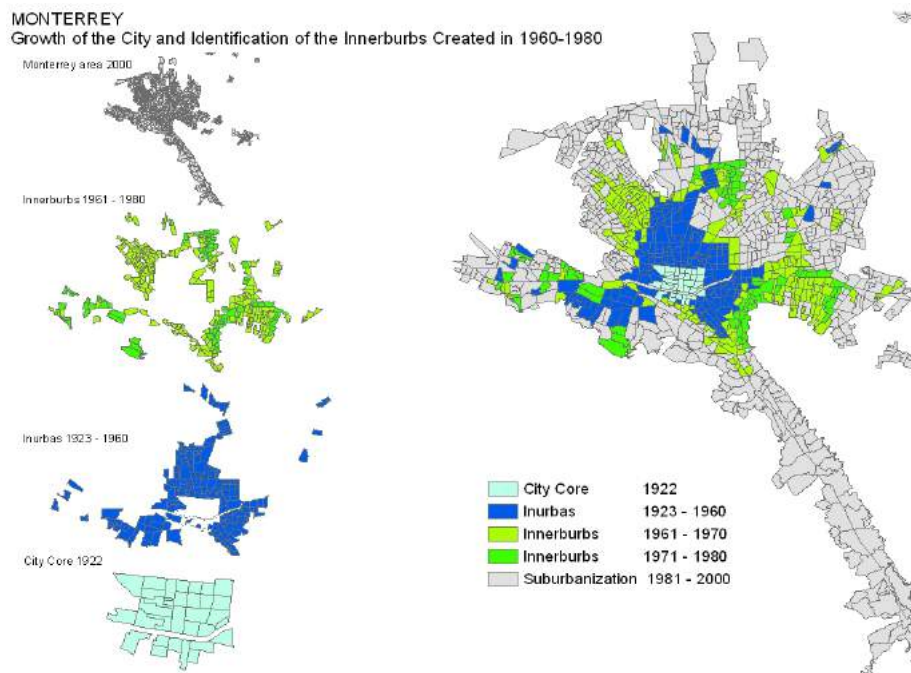
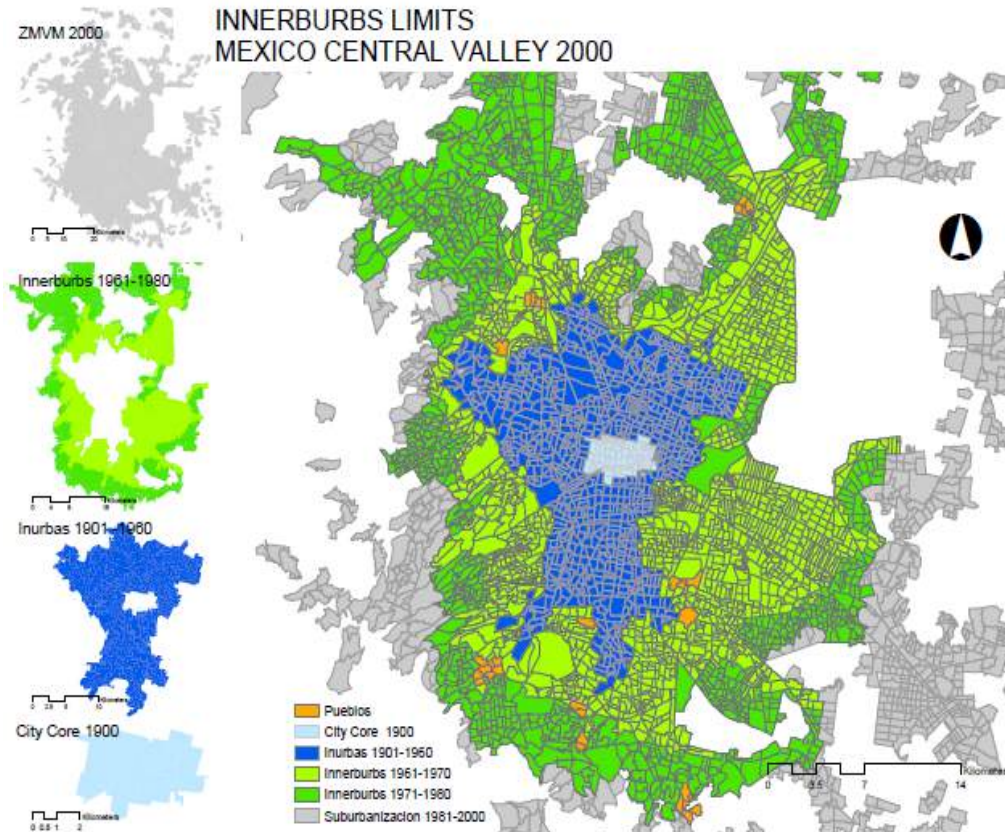


Figure 4.1. Delimitation of the “First Suburbs” or “Innerburbs” of Monterrey Metropolitan Area



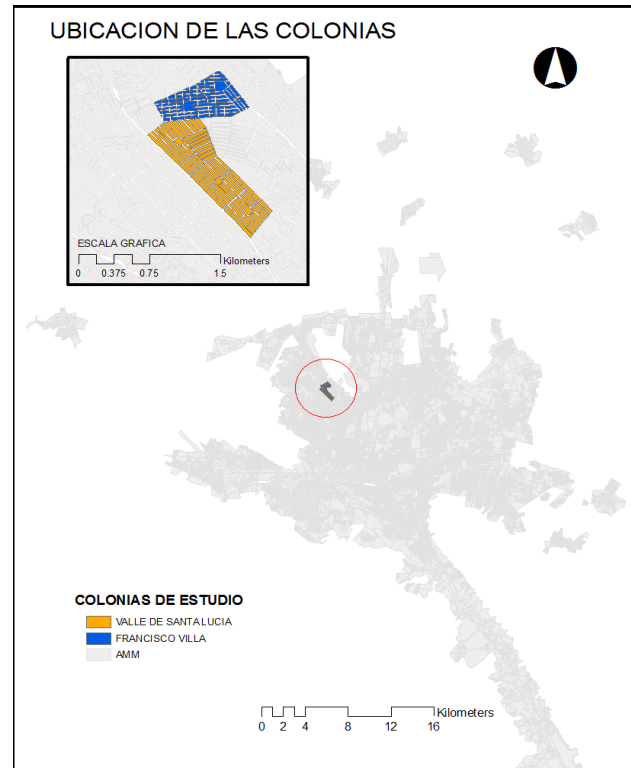
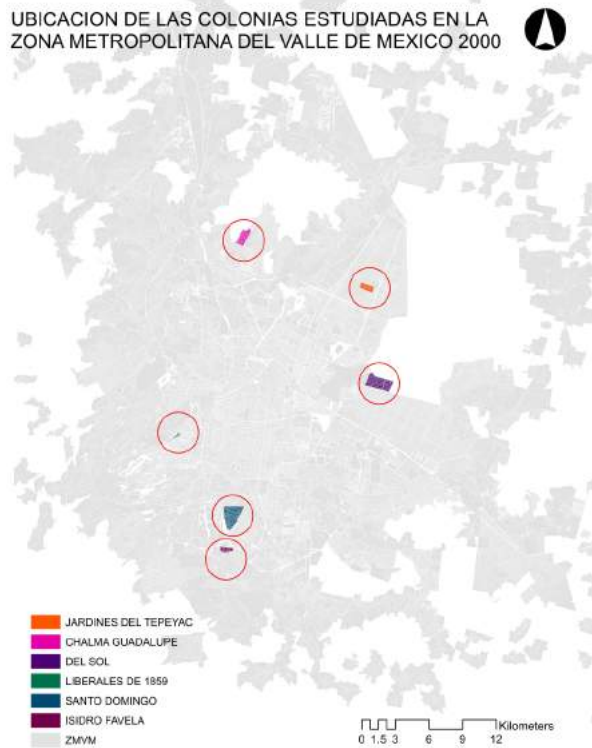
*Figure 4.2. Delimitation of the “First Suburbs” or “Innerburbs” of Mexico City Metropolitan Area*

The difference in the scale of the two cities is apparent in the following table (Table 4.1). In 2000 (the data shown here) Mexico City was between four to six times larger than Monterrey across the dimensions of built-up area, population, and number of housing units. Population densities per hectare are considerably higher in Mexico City than in Monterrey. In both cities’ densities are higher in the earlier settled suburbs (1960-70) than in the innerburbs that formed in 1970-80. Densities in this intermediate ring area are also much higher than the metropolitan average.

	<b>Metropolitan Area</b>	<b>Innerburbs formed between 1960 -70</b>	<b>Innerburbs formed between 1970-80</b>	<b>Innerburbs Total</b>
<i>Mexico City</i>				
<b>Number of AGEBS</b>	4,711	1,619	1,230	2,849
<b>Area (hectare)</b>	190,550	50,873	47,425	98,298
<b>Population</b>	17,577,069	6,839,969	4,712,752	11,552,721
<b>Density</b>	92.24	134.5	99.3	117.52
<b>Number of occupied dwellings (density – pop./dwellings)</b>	4,049,234 (4.3)	1,589,091 (4.3)	1,038,351 (4.53)	2,627,442 (4.396)
<i>Monterrey</i>				
<b>Number of AGEBS</b>	1,116	207	79	286
<b>Area (hectare)</b>	43,254	8,769	3,848	12,617
<b>Population</b>	3,198,448	790,387	301,641	1,092,028
<b>Density</b>	73.94	90.13	78.4	86.55
<b>Number of occupied dwellings (density – pop./dwellings)</b>	722,278 (4.4)	171,944 (4.6)	67,221 (4.45)	239,165 (4.566)

*Table 4.1. Built Up Area, Population Densities for Monterrey and Mexico City*

The data show that a very large population today resides in the denominated innerburbs many of which are consolidated *colonias populares* (over half – 11.5 million – in Mexico City and over one third – 1.09 million – in Monterrey). While most of these neighborhoods received tenure and infrastructure regularization two decades or more ago, these population numbers lend weight to our purpose in this chapter, namely, to explore the largely neglected housing policy needs in these long established and often highly physically distressed neighborhoods,



*Figures 4.3 (left) and 4.4 (right) Location of survey settlements Mexico City (left); Monterrey (right)*

As mentioned earlier, the settlements selected for analysis in Mexico City had been the subject of multiple surveys undertaken first in the 1970s (Ward 1976; Gilbert and Ward 1985), and then in a restudy (with Bogotá) undertaken in 2007 (Ward 2012); whereas the two settlements selected for survey analysis in Monterrey formed part of the extended LAHN surveys applied across the nine countries between 2009-12. As in the case of the other LAHN case study cities, maps were generated showing the growth of the built up area. Tying the 2000 census data to the local geographical base units (AGEBS) we were able to generate overlay maps of social and economic characteristics for Monterrey. This allowed us to depict and better understand the characteristics of neighborhoods within the innerburbs, and to provide contextual data for the selection of colonias for detailed household surveys. In both Mexico City and Monterrey we later purposively selected a small number of individual households and dwellings for intensive analysis, which included multiple interviews, dwelling measurements, build-out history, life course trajectories of household members, construction of the family genealogy, and

identification of specific construction and building issues that existed on the lot. The aim was to reach beyond the survey in order to provide more profound insights into some of the specific housing challenges that households face today.

<b>Mexico City Colonia</b>	<b>Area (hectares)</b>	<b>Population (Owner-occupied settlement densities)</b>	<b>Type of land subdivision</b>
El Sol (Netzahualcóyotl) 1960s and early 1970s	227.99	58,488 (256.5)	Informal subdivision – company driven
Chalma Guadalupe (DF Gustavo Madero) mid-1970s	99.53	21,912 (220.15)	Ejido land sale
Santo Domingo los Reyes (Coyoacán) 1971	248.44	77,730 (312.9)	Invasion community land
Isidro Fabela (DF Tlalpan) mid-to late 1960s	48.64	12,128 (249.3)	Invasion of private property under litigation
Liberales de 1849 (DF Alvaro Obregon) 1975-6	11.17	5,205 (466.0)	Private sale /copperative purchase

Table 4.2. Settlements selected for Mexico City survey in 2007 (see Figure 4.3 for location)

The colonias selected in Mexico City had first formed part of a major housing study in the late 1970s (Gilbert and Ward 1985) the purpose of which was to better understand the nature of low-income land markets, self-help consolidation, community development practices, and the rationale for public housing policy interventions at that time. Thus the Mexico City cases offer a spectrum of settlement sizes and types of informal land development ranging from classic illegal company-led subdivisions (El Sol); invasions and sale of communal and *ejidal* land (Santo Domingo and Chalma respectively); cooperative purchase of private land (Liberales de 1849); and invasion of contested private property (Isidro Fabela). All of these modes of informal land capture were common in Mexico City although the period varied in which each was at the forefront of market activity. Company sales were rife in the late 1960s; invasions late 1960s/early 1970s; incursions on *ejidos* middle and late 1970s through the 1980s; and private deals later 1970s and 1980s as governments sought to limit new informal land grabs (Table 4.2).

One can readily observe that settlement densities are especially high in Mexico City and vary according to the primary method of land development and the modal lot sizes that were offered in each colonia. The higher unit costs of the collective purchase in Liberales, and its prime

location in the west of the city, led to relatively small lot sizes of 120m<sup>2</sup>, while elsewhere lots were usually between 200 to 250m<sup>2</sup>. Sometimes lots are smaller in invasion settlements where there was intense competition between would-be residents, and some churn caused by leaders' arbitrary allocation procedures (as was the case in Santo Domingo los Reyes). Generally speaking, however, smaller modal lot sizes result in higher densities and, as we argue below, this presents greater challenges for housing rehab. Larger lot sizes are more amenable to subsequent lot subdivision, such that the average lot size today is sometimes less than the original modal lot size. It is extremely rare for a lot to increase in size due to adjacent buyouts.

In Monterrey for pragmatic reasons we selected two adjacent settlements that had different but quite characteristic origins for the city. Settlement in the 1970s was often quite conflictive especially in nearby invasion settlements such as the various sections of Tierra y Libertad, which had a radical and revolutionary leadership (Montaño, 1976). Francisco Villa settlement was similar, albeit not quite as conflictive and less radical. Valle Santa Lucía was much larger and also had its bloodier moments and was a mixture of illegal purchase and private cooperative development. Densities are quite high in both settlements. Interestingly the radical and conflictive origins of Francisco Villa appear to have ongoing repercussions today, both in the number of *pandillas* (youth gangs) that exist within the neighborhood, as well as the intransigence of many residents to pay their property taxes.

<b>Monterrey Colonia</b>	<b>Area (hectares)</b>	<b>Population (Owner occupied settlement densities)</b>	<b>Type of land subdivision</b>
Valle Santa Lucía	61.25	14083 (223.0)	Mixed (ejido / private and unions)
Francisco Villa	32.30	8576 (265.5)	Private landfill and invasion. Invasion by FPTyL [Frente Popular Tierra y Libertad]

*Table 4.3. Settlements selected for Monterrey survey in 2009 (see Figure 4.4 for location)*

In the mid-1980s the state responded and sought to head off and subvert these conflictive informal land developments by creating a large land trust (FOMERREY), which made serviced or partially-serviced lots available to low- and lower-middle-income households. Located quite

close to the two survey settlements, the FOMERREY developments provided something of a safety valve by opening up new lot acquisition opportunities at a time when, in most other cities, access to land was increasingly constrained by planning interventions designed to more closely regulate the formation of new informal settlements.

Since the 1980s and 1990s both Monterrey settlements have enjoyed most services, and property titles of most lots have been regularized. The lower sections of both communities are prone to flooding when the road (a former arroyo), which has no storm-water drainage, effectively becomes a river.

### **HOUSING, HOUSEHOLDS AND FAMILY CHARACTERISTICS IN CONSOLIDATED COLONIAS POPULARES IN MEXICO CITY AND MONTERREY**

In both cities many of the pioneer families were migrants, although the majority already had lived in the city for a number of years prior to moving onto their lots – usually as a young family. In the 1970s, many householders (males in particular) had formal employment in the newer industries established as part of the Import Substitution Industrialization (ISI) strategy, and in the case of Monterrey in heavy industrial development which was an especially important part of the state's internal production and employment at that time. As one observe in Tables 4.4 and 4.5 (below), most owners whom we interviewed had lived in their homes for many years, often dating back to the settlement's formation. This long-term stability of the original household, and the contemporary aging of those first generation parents, is a primary feature of owner households living in the innerburbs today.

#### *Monterrey*

As one can observe in Table 4.4 (and in the extended Table 4.6 in the appendix to this chapter), in 2009 owner household heads had lived an average of 28 years in the two Monterrey survey settlements and were entering the latter years of their life (being 60 years of age on average). Although some were younger households who had bought out the original owners in the 1990s or even more recently, these were the exception. Most family heads have lived in the settlement since the 1970s. To the limited extent that renters fell into our sample it was usually in rented

homes rather than rooming houses, and they were typically much younger – in their 20s or early 30s.<sup>3</sup>

An average of five people reside on each lot, and one-third live in extended households – usually with adult children and grandchildren sharing with the first generation parent(s). One-fifth of the lots had two or more dwelling units on an average lot size of 134m<sup>2</sup> (lots were larger in Valle Santa Lucía than in Francisco Villa). Where an adult second generation son or daughter was found to be living on the lot then the expectation was that he or she would eventually inherit the lot, although given that few owners have a will, under intestacy laws in Mexico all children (or their descendants) inherit an equal share, unless the other siblings waive their rights.

Over the years most owner families have constructed a substantial dwelling, with an average of almost five rooms (excluding bathrooms and kitchen). One of the features of self-help home expansion is that of increasing the number of bedrooms as the family grows and as separate sleeping space is required for pubescent children. Today, however, one of the interesting features in the Monterrey case is the notable downsizing in the number of household members relative to bedrooms, as adult children leave home and set-up their own households (usually in neighboring colonias) either through renting or the a buy-out of another owner.<sup>4</sup> Some owners have begun to rent out these vacated rooms, or allow an adult child and family to take over an upstairs floor. Another outcome of this downsizing is that levels of overcrowding (measured as persons per bedroom), is quite low (1.7).

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<sup>3</sup> Of a total 129 households that fell within our lot selection, nine were renters – too few to conduct serious analysis. The average age of household heads that were renting the dwelling/lot was 37 – quite similar to that found in Guadalajara. However, this is almost certainly older than the age of most renters who live in rooms or small apartments and who, due to the survey sample framework, were unlikely to be included in our analysis.

<sup>4</sup> Relative to Mexico City and Guadalajara the relatively low house prices shown in Table 4.4 make buy-outs more feasible. Moreover, many of the second generation children who were raised in these settlements gained a solid education, relative to their parents, and have experienced upward socio-economic mobility through formal and higher paying jobs. However, despite the lower property values there is no effective market for most of these homes due to a lack of financing mechanisms for buy-outs (*traspasos*). As elsewhere in Mexico, for many adult children the parental home in which they continue to live offers the sole chance of their eventually becoming owners.

Around three quarters of the dwellings in the two Monterrey settlements were single story, showing far less upward expansion than is common in Mexico City, which – as we will observe below – has far higher levels of household sharing and on-lot densities. Relatively few households are wildly satisfied with their dwelling environment (less than one-fifth), and hardly anyone extols the virtues of the colonia (Appendix Table 4.6). Almost half of all households reported experiencing at least one serious physical problem with the dwelling – most often problems with the construction, and to a lesser extent issues with installations and design. A relatively high number of homes (21%) have at least one room with no natural lighting (Appendix Table 4.6). When it comes to turning to outside actors for assistance in making home improvements, households overwhelmingly seek no other help than themselves, although for community level improvements and interventions almost one-third look to local (municipal) or regional government agencies. Unlike Guadalajara where residents associations appear to be more active, this was not the case in either colonia in Monterrey.

Dwelling values across the two settlements were substantially lower than in the other two Mexican cities, and the average of US \$24,000 was about half that in Guadalajara and one quarter the median in Mexico City (see Table 4.4 below). While a substantial asset, the lower house prices suggest that the market in Monterrey may facilitate greater outward mobility of second generation adults who can afford to buy a property of their own, especially those who have benefitted from an education and from a relatively dynamic local labor market.<sup>5</sup>

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<sup>5</sup> During fieldwork we did observe a significant number of houses for sale, but when we enquired about those properties they had invariably been on the market for a long time. In neither settlement did selling one's property appear to be easy.

Total number of households included in the survey (number of colonias included)	129 (2)
Average number of people in lot	5
Average lot size	133.7
Square meters per person on the lot	34.8
Percent of lots with 2 or more dwellings	21.4
Number of rooms in dwelling	4.8
Number of persons per bedroom (overcrowding)	1.7
Percent of extended families	32.8
Average age of lot/dwelling owner	59.7
Average number of years living in the settlement	28.4
Average self-estimated value of property	\$24,070

Table 4.4. Lot and Household Characteristics, Monterrey 2009. Source: LAHN Survey [www.lahn.utexas.org](http://www.lahn.utexas.org)

Given these lower densities and downsizing, together with shared inheritance under intestacy laws, policymaking (discussed below) should focus on the creation of financing mechanisms for buy-outs (*traspasos*), especially given that for some adult children the parental home is already their place of residence, and offers them the best chance of becoming owners when their parents die. As they inherit the parental home there will be a need to reorganize the dwelling(s) to contemporary household structure(s); rehabilitate the rooms and utilities such as the infrastructure and wiring; ensure adequate privacy and better ventilation; and expand the second and upper floors.



Photos 4.1 and 4.2. Dilapidation of homes in Monterrey.

As one observes in Photos 4.1 and 4.2, many of these dwellings have rooms or second and third floors that are quite precarious and dilapidated, or which remain unfinished even after intensive use over many years. They are often in urgent need of repair or rehab. Other dwellings are already undergoing modifications and expansion (Photos 4.3 and 4.4): living rooms or front patios are being converted to a garage (Photo 4.3) and in the lower reaches of Francisco Villa, anti-flood measures are adopted to prevent inundation (Photo 4.4).



*Photo 4.3 (left) “Pregnant” garage doors provide room for vehicles; Photo 4.4. (right) Front of house barrier to reduce inundation after flooding*

Most colonias in Mexico were originally laid out in blocks of 20-30 lots, with residential blocks separated by wider main access streets and narrower side streets. Today the public space of sidewalks and street (what we refer to as the meso space) is being invaded by multiple uses such as vehicle parking (Photo 4.5), storage, evening food stalls (Photo 4.6), and daytime extensions of a workshop (*taller*). The sidewalk can also be obstructed by a staircase or by a house or gate extrusions, each of which is in large part the unanticipated consequences of a growth in private car ownership; of unplanned accretive home construction itself; or of increased informal sector employment and income earning activities of household members. Inevitably, therefore, few people use sidewalks in these settlements but are relegated to walk on the street.



*Photos 4.5 (left) and 4.6 (right). Eating into the public space of the sidewalk and street – parking (left) and vending (right)*

Consolidated housing improvement is undertaken through self-help and mutual-aid. The 3D image below (Figure 4.5a) shows an initial dwelling unit of a particular home in Valle Santa Lucía that was erected quite quickly in 1976, with further extensions in 1978 and 2002. In this case much of the construction was undertaken using *remesas* from a daughter living in the USA (now the current owner). It also shows some of the frequent problems of house design as extensions are undertaken gradually and without a plan. These problems include “dead” (unused) and windowless space between the two additional rooms and the underutilized space under the staircase. The same is also true in the pink house staircase to the upstairs floor rental apartment (photo in Figure 4.5b). This elderly couple rent out the second floor rooms originally occupied by their son and his family.



*Figure 4.5a-b. Gradual build-out of one home in Valle Santa Lucía and how it can lead to poor or non-existent natural lighting in some rooms, and to “dead” (unusable spaces) below stairs (photo)*

Three of the seven intensive case studies that we undertook in Monterrey in July 2009 were selected because they comprised an unusual and unexpected housing trajectory. Instead of the inevitable succession of the family home to one or more of the adult children, we discovered cases where the would-be inheritors had little or no interest in moving into the home when their parents died, but intended to sell the property instead. This appeared to pain the parents who held a strong emotional attachment to the property that they had built with their own hands at considerable sacrifice and in which they had raised their children. This highlights an important dimension of emotional and sentimental value attributed to the home by parents, which may not be shared by the children.<sup>6</sup>

Another family – the Guzmans – had a different proposal for what to do with the family home. Although all daughters and sons were settled in their own homes, mostly nearby, someone always visited their widowed mother daily, and most weekends they convened in the family home for lunch, parties, and family celebrations. The mother was still active and engaged, and

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<sup>6</sup> Conversely, in another case in Mexico City, the matriarch was desperate to sell and retire to her pueblo but was prevented from doing so by her daughter and other siblings who lived in the family home and fully intended to remain there after she died – notwithstanding the inevitable disputes that would unfold over the inheritance and future ownership

planned to maintain the ground floor as the shared family home, while refurbishing the upstairs into three bedrooms, a shared bathroom, living area and kitchen, that would be rented to unmarried students. In this case the home continued to have emotive value for the second and third generations, but because they had no need of the house, they saw the possibilities of the home generating a modest income – both for their elderly mother, and downstream after her death for them as beneficiaries. The third case was an elderly couple that was unsure of what would eventually become of the property now that their son and his family had moved out of the upstairs floor. In the meantime they were renting out the upstairs part of the property.

Unlike the case of Mexico City, which we analyze below and which shows a high demand for continuing occupancy, and/or for the subdivision of space among second generation beneficiaries, Monterrey alerts us to the existence of “vestige” elderly households occupying dwellings that have in effect become too large for them, but with little opportunity to downsize or sell – findings that we did not anticipate and that require new policy approaches (discussed at the end of this chapter).

### *Mexico City*

Although the survey that we applied in Mexico City was much shorter than that in Monterrey and Guadalajara and was conducted two years earlier, it generated several dimensions of data that are quite comparable. The main purpose of the earlier survey was to test the hypothesis that de facto in Mexico City (and in Bogotá) “a home is forever” (Gilbert 1999), and that we would find minimal mobility among homeowners in consolidated colonias. Indeed, this was found to be the case, and over 80 percent of the resurveyed lots and families from the 1970s were occupied by the original family (even where one parent had passed away). Not surprisingly, many homeowners were now very elderly (39% were over 70), and the average age in 2007 was 68.

While this immobility among owners appears to be the rule in the LAHN study as other chapters also demonstrate, Table 4.5 (below) also alerts us to significant differences in housing market performance, and in the household and housing trajectories of owner households in Mexico City compared with either of the other two Mexican cities considered in this volume. Specifically, although the proportion of extended households is very similar to that of Monterrey (around one-

third), the proportion of lots with two or more households is more than three times greater (65%), and has increased since 1979 when the original surveys were undertaken. At that earlier time households were younger, and lot sharing with kin and adult children was less likely, but this has changed as the parents age, and as children remain living on the lot with their own families. More people are accommodated on the lot or in the dwelling as a result (9.16 persons per lot), and while it is not shown in Table 4.5, the second or third dwelling unit invariably showed higher levels of overcrowding since the spinoff families live in one or two rooms whereas the vestige owners often reside as a couple or singly (if widowed) in one of their bedrooms.<sup>7</sup>

Total number of owner households included in survey (number of settlements included) Source: 2007 Survey (see “Restudy” in <a href="http://www.lahn.utexas.org">www.lahn.utexas.org</a> or Ward 2012)	253 (5)
Original family still living on the lot after 30 + years	82%
Average number of people on lot	9.16
Weighted (by settlement) average of dwellings on lot (1979 value in parenthesis)	2.55 (1.58)
Median year of occupancy	1972
Average number of years living in the settlement	35.2
Percent of lots with 2 or more dwellings	65
Percent of extended families	35 (estimate)
Average age of owner	67.7
Percent of owners aged 60 years or older (70 years in brackets)	77 (39)
Trimmed average of self-estimated dwelling values	US \$101,800
Trimmed average cadastral value of property	US \$66, 670

*Table 4.5 Lot and Household Characteristics, Mexico City 2007*

We observed in the case of Mexico City, and in the cases throughout this volume, there are multiple ways in which a lot, and/or dwelling space can be subdivided, both formally where one part of the lot, or a upper floor is sold off; or more usually informally, where some adjustment of the living space is undertaken for other household(s), usually immediate family members.<sup>8</sup> Figure 4.6 is taken from a DESCO study in Lima and shows how upper floor apartments can be allocated to households with private access or a shared staircase. Alternatively, sections of the

<sup>7</sup> This was tested in the wider LAHN surveys where we calculated the level of overcrowding (people to bedrooms) in the primary dwelling and compared it to the secondary units, which consistently showed higher levels of overcrowding and fewer rooms.

<sup>8</sup> In Bogotá we find frequent allocation of part of the living space to non-family renters (Ward 2012, and Chapter 7 in this volume).

ground floor lot can be allocated to individual households, although here the trick is to ensure independent access from the street (longitudinal and corner lot subdivision). Transverse subdivision on the other hand can be quite inefficient and complicated at least if and when it comes to issuing separate title deeds.<sup>9</sup>



Figure 4.6 Different methods of lot or housing subdivision. (Photo by courtesy of Susannah Rojas Williams). “Vertical Additions” (left to right): External staircase; Stairway at the street entrance; Interior private stairway (unseen); Interior shared stairwell (unseen); “Subdivision of the Lot” (left to right): Subdivision of corner section\*; Subdivision perpendicular to the street; “Transversal Subdivision”\* (\*may create problems of no private access to rear sections). “Division of Dwellings” Separate dwelling units left and right.

Informal subdivisions and transversal division of a lot is less problematic when it is a single family of parents and sibling households as appears to be the case in Photo 4.7, but it may become an issue later once the parents die, or if conflicts emerge between households. The home in Photo 4.8 (yellow garage door) is a formal sale in which one half (or less) of the lot was sold

<sup>9</sup> See the Buenos Aires case for an excellent example of the challenges facing transversal subdivisions.

off or acquired by another household who subsequently consolidated the home independently. One of our intensive case study households in colonia Santo Domingo los Reyes comprises three apartments each held by one of the siblings who, by agreement after their mother died intestate, are now in the process of titling each separate household. This is an interesting and seemingly successful example of consensus (Ward et al. 2011), however it is all the more remarkable since the subdivision and rehab have been achieved on a constrained lot size of 100m<sup>2</sup> since half of their parents original lot was usurped by another family with the connivance of one of the invasion leaders soon after the settlement formed.



*Photos 4.7 (left) and 4.8 (right). Separate household dwellings accessed from the central patio with new construction at the end (left); one lot shared by two families (left with two meters) while an adjacent lot has been divided formally with one third now housing a separate (if rather narrow) dwelling (right).*

#### *Case Study of Family and Housing Trajectories*

Here we offer a brief overview of the Toribio<sup>10</sup> family history in Colonia Isidro Fabela, Mexico City. The Toribio family's story illustrates several features of housing trajectories in the colonia: immobility of owners, family churn, lot sharing, housing development and build-out, and potential downstream issues of maintaining clean title. The documentation of this case involved

<sup>10</sup> Names for case study families and individuals are pseudonyms.

three separate visits and many hours of team fieldwork.<sup>11</sup> The original family comprised the original couple and their four children; they occupied the 250m<sup>2</sup> lot in 1964. They initially lived in one room with an external latrine (a hole in the ground – marked in red in Figure 4.8). Additional rooms were built over the next fifteen years as the ground floor was built-out, some rooms of which had a concrete roof that in the following decades would allow for second and third floors to be constructed. There are two staircases: one exterior leading to the second floor; and a second newer staircase at the rear of the lot that rises three stories to the rooms constructed on the third floor. This required that part of the roof of the second floor be opened up to provide access (Photo 4.9); with a second flight of stairs to the third floor (Photo 4.10) and ultimately another set of stairs (currently wooden and very provisional) will lead to the roof.

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<sup>11</sup> See LAHN website for a full discussion of the methodology:  
[http://www.lahn.utexas.org/Methodology/Interesting%20Case%20Template/Final\\_Casos%20a%20Profundidad\\_Methodology%20Text.pdf](http://www.lahn.utexas.org/Methodology/Interesting%20Case%20Template/Final_Casos%20a%20Profundidad_Methodology%20Text.pdf)

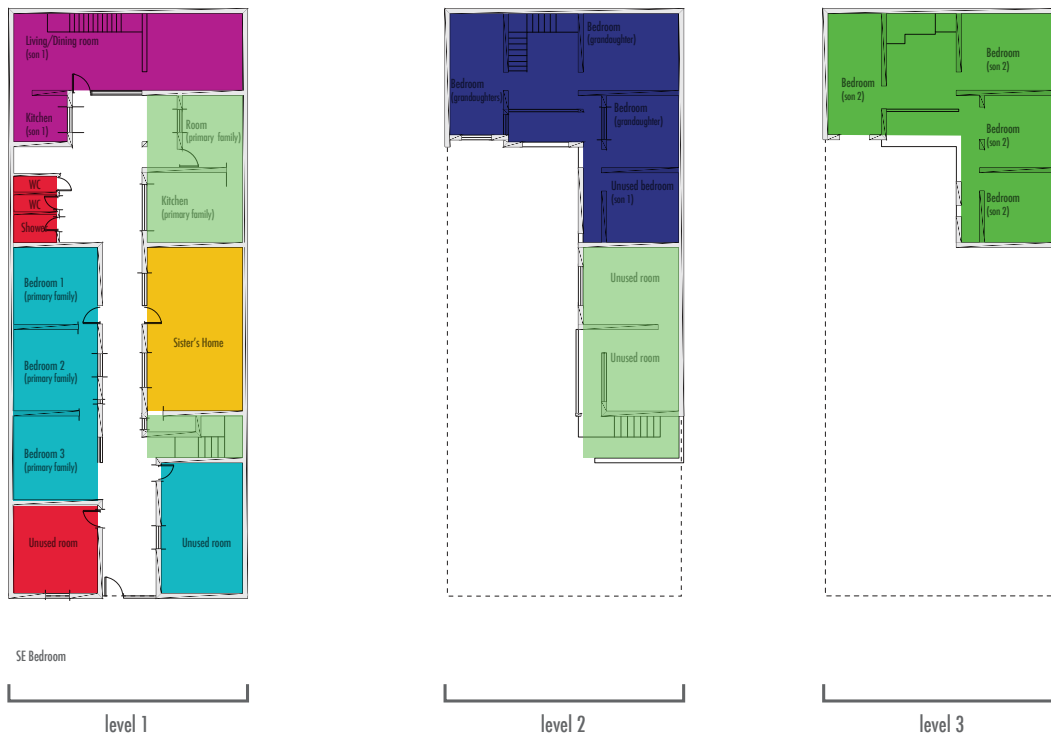
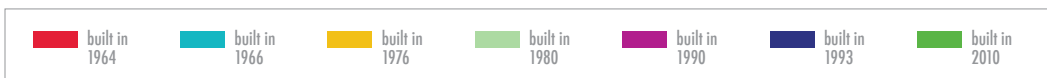
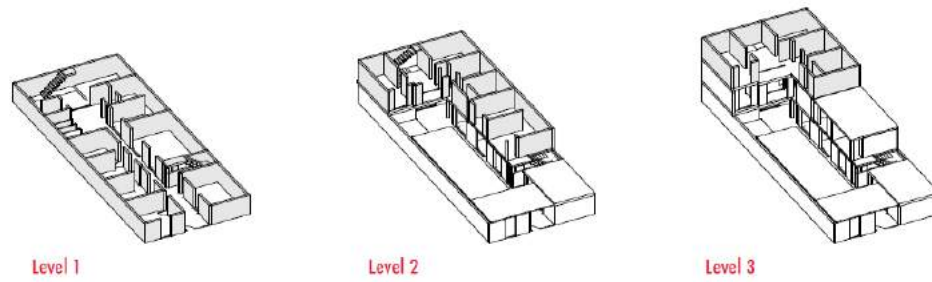


Figure 4.7 (above) Three dimensional build-out of Toribio home in Isidro Fabela, and Figure 4.8 (below) Plans of current uses of Toribio home



*Photos 4.9 and 4.10. New staircase in the Toribio Home*

Both parents are now deceased, as are two of the siblings, one of whom (Antonio) has a family living in Cancún. At the time of the survey the house accommodated two of the surviving siblings and their families. One – the sister, Trinidad – lived with her daughter and grandchildren in the room on the ground floor that is colored yellow in Figure 4.8 above. Toribio (Jr.) and his wife lived in the ground-floor rooms colored blue in Figure 4.8. Four sons (three of whom are married with children) live mainly on floors 2 and 3 – a total of 23 individuals in all.

Determining title to the home is problematic since the parents died intestate and therefore the siblings (or their descendants) stand to inherit. This includes the son of the deceased brother who is now claiming ownership. He does indeed have a one-third claim, which will need to be settled before clean title can be restored. In 2012 Trinidad also passed away leaving Toribio Jr. as the sole surviving child of the original couple. He believes that he will inherit the whole property, and does not understand (or refuses to) that both Trinidad’s daughter and Antonio’s daughter are legitimate co-heirs. Thus he will need to buy them out or subdivide the property. Without access to financing, a buy-out may also be difficult since as we saw earlier (Table 4.5), property values in the city, and in this colonia in particular, average close to US \$100,000.

Although space does not allow us to provide much detail here, our case study reconstructions of home build-outs and family and household dynamics reveal much about the nature and flexibility of self-help. Adult children marry and move out; while a failed marriage or union or family expansion will bring some back to the family nest. Nephews and nieces are housed for several years as they go to secondary school or *preparatoria*, and grandchildren abound. This “churn” of family members, and the capacity to accommodate one or more children and their families is a key feature of consolidated *colonias populares*, especially in Mexico City where new self-help communities are located at the currently distant periphery, and where property values and the employment climate reduce the likelihood that second and third generations can make it on their own – at least as owners. Therefore many rent, often in the same or in a neighboring colonia, and ultimately their best shot at home ownership is for them to inherit the family home or a part share when their parents die.

While many homes have attained a reasonable level of consolidation, in those cases where there has been no attempt to substantially rehab the existing structure then, as in Monterrey, dwellings are likely to be in urgent need of repair and rehabilitation. Rental housing is especially poor quality in Mexico City with some families living in a single room sharing services on the patio (shower, toilet, sinks for washing clothes). The building shown in Photo 4.11 houses at least four families, while that on the right (Photo 4.12) has four rental households living in single rooms and sharing facilities, together with the landlord’s household (the absentee owner’s son). Bathrooms and toilets are especially likely to be distressed and inadequate to contemporary needs and the total number of lot occupants. Toilets and bathrooms are often “vestige” structures tucked away in a corner where the original latrine was sited; they were rarely designed as an integral part of dwelling. Only those homes that have already undertaken some structural rehab are likely to have interior bathrooms and toilets, and even here the bathrooms are often narrow and cramped.



*Photo 4.11. (left) Evidence of renting (4 electric meters). Photo 4.12 (right) Renting between four households plus owner (13 people in total) and precarious stairs to second and third floors*

Hazards abound: exposed electric wires and sockets hang loose; second and third floor levels are unsafe with inadequate safety railings; ceilings are damp, and are in danger of collapse given the inadequate loadings of the floors above (Photos 4.13 and 4.14 below).



*Photos 4.13 (left) and 4.14 (right). Hazardous conditions of leaking and collapsing roofs (left) and exposed wiring and evidence of fires caused by short circuits (right)*

## THE 2013 NEW FEDERAL HOUSING POLICY — A SEGUE TO COMMUNITY AND HOUSING REHAB?

As in most countries housing and urban development policies have evolved over time. Here we cannot review those policy shifts and paradigms in detail, except to state briefly the four main phases that apply in Mexico. First, was the creation of housing funds, social interest housing programs and ad hoc housing agencies in the 1960s, which morphed into major housing fund institutions for salaried workers (INFONAVIT), for white-collar state employees (FOVISSTE), and a decade later for unsalaried workers (FONHAPO). Second, was the continuation of these institutional programs but with major commitments to self-help supports and interventions after HABITAT I (1976) that included policies such as upgrading, sites-and-services, tenure regularization, etc., all part of the “urban projects” approach promoted by the World Bank. The third phase in the late 1980s and through the 1990s comprised a withdrawal from direct project intervention and a concomitant shift to a more market and less subsidized approach tied to decentralization of urban management that gave greater responsibility to states and cities (Jones and Ward, 1995). The fourth phase, 1998-2012, comprised massive housing urbanization projects by the private sector (guaranteed and supported by the federal governments of President Fox and Calderón respectively), led to the creation of CONAVI and unleashed the dramatic development of over five million “cookie-cutter” homes nationwide in peri-urban locations (UNHABITAT 2013). Increasingly criticized for their remote locations, contradictory and unsustainable transportation costs, lack of social integration and neighboring (*convivencia*) and poor design, some 20 percent of these new homes are estimated to be unoccupied or abandoned (Ziccardi, 2013). In 2013 the incoming government of President Enrique Peña Nieto (2012-18) disassociated itself from these mass housing developments, launching a new sustainable housing law that seeks to bring the focus back to the existing built-up areas, and to promote densification of the metropolitan areas and of the innerburbs.

Still in its early days, the New Federal Housing Policy has four principal lines: 1) coordination of housing and urban development institutions under a new Ministry the SEDATU (the *Secretaría de Desarrollo Agrario, Territorial y Urbano*) with much closer control over CONAVI and the principal executive (spending) agencies; 2) more “smart” growth (read: back-to-the-city) and

sustainable urban development; 3) “responsible” reduction of the housing deficit with an increased emphasis upon rehab and improvement of the existing housing stock; and 4), the promotion of access to adequate housing for everyone (*vivienda digna*).

These 2013 changes herald two important programmatic changes that may have positive implications for the LAHN research findings for Mexico. First, is the shift in focus back to the existing urban areas, densification of vacant land, and attention redirected toward improving the existing housing-stock. Second, is the recognition that housing and urban rehab need to become major instruments in achieving more equitable housing access for all. Even if the existing housing stock of the consolidated low-income colonias is not yet center-stage, there seems little doubt that it will become an important part of the supply equation in the future.

Against this backdrop, both Mexico City and Monterrey share many of the same policy challenges at the **micro (dwelling) level**: most notably, 1) the resolution of titling issues among second and third generation beneficiaries; 2) financing to facilitate property sales and buy outs from sibling beneficiaries; 3) financing and technical assistance for housing rehab and conversions to rental or to garaging; 4) repairs to outmoded and dangerous wiring and appliances, with greater compliance to minimum safety standards. At the **meso level of the street** there is an urgent need for policies that will modestly regulate the public space, ensuring that sidewalks do not become encumbered with parked cars, *puestos*, or by commercial or workshop activities spilling out onto the street. I say “modestly” since the meso space is a live and important area conducive to neighboring, social interaction and social solidarity. The problem is that incursions and inconvenient or unacceptable uses of the public space work in the opposite direct and cause tension and potential conflict. The broken and interrupted nature of sidewalks makes the street the primary area of circulation for pedestrians. Policy approaches here should be to engage the communities – probably at the individual street and block levels – in decisions about: one way traffic directions on the narrower streets; single side parking; and community-regulation of commercial uses of public space.

At the **community** level there is an urgent need for new and renovated *equipamiento urbano* such as schools, markets and plazas. Roads often require repaving and stormwater drainage

cleared to ensure that it works. Socially, too, gang activity needs to be controlled especially where it is linked to drug use and sales, aggravated assault, and damage to dwellings and vehicles. Block and community or neighborhood associations and watches can be important here, especially if they have the support of the local authorities to address insecurity issues. But the more these decisions and organization can be left to households and residents at the street and neighborhood levels, the better.

Specific policy highlights arising from the aforementioned discussion are offered in bullet-format below.

*Monterrey:*

- Policies to reduce incursions into the public (meso) space of streets and sidewalks; may include community decisions to create one-way streets; single-side parking; restrictions on location of *puestos*, etc.
- Policies to enhance garaging, including financial supports for patio and front room conversion to garage a vehicle
- Policies to improve security and local neighborhood policing: controlling gangs, minor drug offenders; controlling excessive noise from home and workshops
- Financing to assist buyouts and *traspasos*, and to facilitate market performance
- Technical and financial assistance to redesign access to upper floors (staircases) and to assist elderly couples that wish to take advantage of downsizing households by redesigning the space and renting rooms
- Intervention to reduce flooding risk for affected areas of both communities

*Mexico City:*

The particular challenge in Mexico City will be to accommodate the practice of lot sharing and high densities, and to achieve a recasting of the dwelling environment alongside new or more flexible ownership and titling regimes that will allow second and third generations to benefit from the asset created by their parents.

- Financing policies to facilitate market sales and property transfers through mortgage market access to low-income households including access to INFONAVIT, social interest funds for rehab

- Policies to promote lot sharing and tenure security; planning and redesign of spatial layout of existing and new dwelling structures
- Policies to promote title transfers to second and third generation stakeholders; promotion of wills and inter-vivo transfers; policies to promote shared family title; dispute resolution policies and pro bono organizations to assist with title disputes; title “cleaning” where titles are clouded
- Promotion and regulation of rental or other economic opportunities where stakeholders wish to engage in partial rent-seeking
- Credit and technical assistance to facilitate housing rehab, may include: microfinance; home improvement grants and loans; pro bono or low-cost technical assistance for stair construction; bathroom expansion and improvement; rewiring and pipe replacements; improved subdivision of space paying attention to privacy and access; improved ventilation and lighting.
- Policies to enhance adoption of green and sustainable applications such as: recycling and composting; solar panel or passive water heating; patio gardens and planters; improved insulation and energy efficient appliances; etc.
- Policies to promote local civic engagement and mobilization around issues of: security; sustainable neighborhood and home improvement; local traffic circulation and use of meso (sidewalk and street) space

## **SUMMARY**

These two metropolitan case studies can best be read alongside those in Guadalajara in Chapter 3. Mexico is the only LAHN country that includes more than a single city, and the differences that we observe between the three cities should offer a salutary lesson that there is no one-size-fits-all set of policies, nor will the priorities for intervention at any of the three levels discussed here and outlined in Chapter 2 be similar in each city. Land markets, housing trajectories, lot sizes, local authority priorities and fiscal capacities will all play an important part in shaping the practices of housing and community rehab.

The hope is that the Mexico City and Monterrey studies, together with the examples described in the other chapters, will have successfully made the case for the need to think creatively about a

new generation of housing policies targeting the older (now) consolidated *colonias populares* and barrios. Largely ignored in policymaking in the past, this chapter has demonstrated that many of these dwellings represent a very substantial asset for current and future low-income households. Yet, unless we think creatively about how best to maintain that asset and make the housing stock work for new scenarios and new household needs, then the housing stock is likely to be seriously eroded. Because of entrenched weaknesses in formal financing structures (principally the lack of micro credits and mortgage funding), consolidated colonia housing and land markets are not functioning well, thereby penalizing the poor by reducing their capacity to benefit from their sweat equity and housing asset value. If political and wider population “buy-in” for housing rehab is to occur, then a number of incentives must be considered: 1) ways of ensuring clean title or a share in the same; 2) provision of technical assistance and loans; 3) full engagement of resident participation in local rehab; 4) attention to how incentives might be given to owners to facilitate tenement and apartment upgrading without significant hikes in rental costs; and 5), efforts of local authorities to ensure replacement of defunct infrastructure and provide adequate security and protection for the community. Only an integrated and multiplex approach, anchored in block and community level resident participation, adequately supported by local authorities, is likely to lead to a successful strategy of rehab and revitalization of the innerburbs in Mexico cities.

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