



Urban Informality: International Trends and Policies to Address Land Tenure and Informal Settlements

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Introduction

Without a doubt, how Puerto Rico addresses its myriad housing challenges will have a tremendous impact on the lives of millions of the island's residents for the foreseeable future. Housing provides security, is fundamental to the reproduction of socioeconomic well-being, and is the basic unit of a community's social fabric. Moreover, housing is central to economic development and a critical component of our planning efforts. Despite its importance, Puerto Rico has consistently lacked a cohesive approach to address the island's housing needs.

The reconstruction process that is slowly taking shape in the aftermath of Hurricane María provides a unique opportunity to collectively define a planning and policy framework for Puerto Rico's housing sector. This report aims to jumpstart an exchange of ideas and information that hopefully leads to a series of on-the-ground conversations around policy goals and effective solutions. In order to move forward a constructive series of conversations, its contents are broadly focused on defining key concepts, presenting shared understandings and common misconceptions highlighted in the academic and practitioner literature, and providing examples of programs and efforts, mostly outside the Global North, that can serve as points of departure for prospective policy designs. It is the first of a series that will address critical and relevant housing issues, including: land tenure and informal settlements, affordable housing and safe and durable housing.

Among the many controversies surrounding the relief and emergency management stages after hurricanes Irma and María was the inadequate delivery of aid from the federal agencies to poor communities in the island⁴. One of the many obstacles faced by poor households who sought federal support was the lack of formal land titles among residents of informal settlements⁵. The United States (US) Federal Government proved to be ill-prepared to address challenges related to land tenure and urban informality in the post-disaster recovery process, given that informal settlements are relatively rare in the mainland US. Nonetheless, informal settlements are a common occurrence in Puerto Rico and tenure security has been an ongoing concern in the island for decades.

The Government of Puerto Rico has proposed a three-pronged approach to address urban informality in the post disaster recovery and reconstruction stage: (1) relocation of households in hazard-prone areas, (2) a massive land title granting initiative, (3) and a community resiliency planning effort⁶. Although these programs are barely getting off the ground, numerous queries abound regarding their effectiveness, especially when prior experiences with similar initiatives across the globe are considered. Although it seems like a unique situation, especially when viewed from a continental US vantage point, the reality is that urban informality is a global phenomenon and informal settlements

⁴ Robles, Frances. (2018). "FEMA Was Sorely Unprepared for Puerto Rico Hurricane, Report Says". The New York Times. Available at: <https://www.nytimes.com/2018/07/12/us/fema-puerto-rico-maria.html>

⁵ Florido, Adrián. (2018). "Unable to Prove They Own Their Homes, Puerto Ricans Denied FEMA Help". National Public Radio. Available at: <https://www.npr.org/2018/03/20/595240841/unable-to-prove-they-own-their-homes-puerto-ricans-denied-fema-help>

⁶ These strategies are detailed in the "Puerto Rico Disaster Recovery Action Plan" developed by the Puerto Rico Department of Housing and submitted to the Department of Housing and Urban Development (HUD), as part of the Community Development Block Grants – Disaster Relief (CDBG-DR) program. Available at: <http://www.cdbg-dr.pr.gov/en/action-plan/>

are manifested at much larger scales than in Puerto Rico, especially in countries of the Global South. Indeed, urban informality is the main source of housing for the rapid urbanization that is taking place in the world.

The following sections provide an in-depth review of global trends in urban informality and policies that have been implemented to address tenure insecurity and informal settlements. We strongly believe that learning from experiences outside of the Puerto Rico context can help us attain the needed perspective to better inform policy decisions.

Urban Informality

What is Urban Informality?

At a most basic level, urban informality is a form of producing the built environment and occupying land that is different from the established norms (Di Virgilio et al., 2014). It is a multidimensional process that can manifest itself in numerous ways: absence of legal property rights, non-compliance with rules and codes, lack of planning, low-quality and low availability of urban services, as well as the poor environmental conditions of a human settlement. Such manifestations of informality exist in multiple contexts and take several forms and names depending on their dimensions, location and form. In particular, urban informality is associated with a variety of typologies that include slums, shantytowns, illegal settlements and encampments, favelas, among others (UN Habitat, 2016). These names correspond to the form, location and physical conditions of settlements as well as the social views and cultural constructions around them. A common characteristic of urban informality is the process through which informal settlements are built and occupied. In informal urban developments, occupying a plot is the first step towards the development of a piece of land, which is the inverse from formal developments, where occupation is the final step in a process that follows a legal and regulated sequence that includes: legal tenure, planning, and supply of services and infrastructure (Smolka and Damasio, 2005). This paper uses the term “informal settlement”, which captures a variety of conditions while avoiding the introduction of subjective and potentially negative connotations.

Historically, high-levels of urban informality in cities of the Global South have been associated with rapid population growth due to rural-to-urban migration and high fertility rates, financial hardship and lack of economic opportunity, the impossibility of governments to enforce zoning codes and plans, and limited resources to provide adequate housing to all populations. Other factors that contribute to informality include humanitarian crises, conflict, natural disasters, and more recently, climate change. These factors lead to the occupation of empty lots and self-construction of housing in public, communal and private land; to the unlicensed subdivision and sale of private, communal, and public land by speculators; the development of irregular and/or extra-legal public housing projects; the unauthorized subdivision of previously legal plots for the construction of additional buildings outside of existing codes and plans; the occupation of riverbanks, reservoirs, mountain sides, and other environmentally protected areas; and the occupation of public spaces such as streets, pavements, and highways (UN Habitat, 2016). Urban informality can also manifest in smaller scale actions, such as the construction of houses that don't meet building codes, the infringement of zoning regulations in a legally owned property, or the use of property for unauthorized activities.

While informality and poverty have been historically interrelated, as current trends show, this relationship is not straightforward. Informality continues to be a widespread but its persistence is not

tied to the growth of poverty. In fact, in many contexts, urban informality continues to grow while poverty is declining.

Although urban informality has been a persistent phenomenon and fundamental characteristic of cities in the Global South, it can also be found in developed nations, including the United States. In the United States, the most visible case of informal settlements is that of rural communities in Southwestern border states called *colonias* (Durst and Wegmann, 2017; Ward, 2010). However, urban informality in the United States also manifests itself in a variety of ways that include: lack of adequate property titles, infringement of building and zoning codes, and trespassing of property rights including squatting and encampment (Durst and Wegmann, 2017). This will be discussed in greater detail in the section titled “Informality in the US”.

Common misconceptions about urban informality

Common views on urban informality are often based on misunderstandings and prejudices that not only affect public perception but also the opinions of policymakers. For example, it is often assumed that the lack of a legal property title means that a plot of land was acquired outside the market. However, the majority of informal land has been acquired through market transactions in which speculators misinform buyers of the present and/or future legal condition of the land. In fact, informal land occupations, which were common in the 20th century throughout the Global South, are rare today (Smolka and Larangeira, 2012a).

Furthermore, it is often wrongly assumed that informal settlers dedicate very little or no resources towards housing. However, that is not the case. Individuals living in informal settlements spend more economic resources in housing than those involved in the formal housing market, once cost is adjusted for the location, lack of infrastructure and connectivity, cost of basic needs such as water, and price of land, which is often as expensive as in well-established neighborhoods (Smolka and Larangeira, 2012a). Informal development, however, allows for the purchase of smaller lots than those recommended (which can reduce total cost), for the building of dwellings in an incremental fashion (which spreads cost over multiple years), and for the avoidance of costs associated with meeting construction codes and regulations (Bredenoord and van Lindert, 2010; Fernandes, 2008; Holston, 1991).

Another misconception is to think that informal settlements are occupied exclusively by the poor. A variety of studies have shown that this is not the case. Older and more consolidated inner-city slums are more heterogeneous in their socioeconomic composition than formal neighborhoods (Abramo, 2006 in Smolka and Larangeira, 2012). Residents of very consolidated informal urban settlements who hold formal jobs and legal tenure of their house often don't move, despite having the means to do so. This is often due to the attractive location of the settlements, near jobs centers and strong social networks to which long-time residents belong (Perlman, 2010). In a similar manner, informal dwellers are not trapped in their neighborhoods and often move in and out of settlements as they experience economic ups and downs or try to maximize gains in formal and informal real estate markets (Abramo, 2006 in Smolka and Larangeira, 2012). Furthermore, as several authors have pointed out, middle and upper classes can also engage in informal development when they occupy desirable land in protected natural areas, or outside of land use plans (Roy and AlSayyad, 2004).

Latin American views on urban informality and policy approaches

While informality is present across the globe, this paper draws mostly on the experience of Latin America, a region with the longest tradition of scholarship on this topic and where informality has played a more important role in urban development than anywhere else in the world. Since the second half of the 20th Century, the region has responded to the challenges of rapid and unplanned urbanization with a variety of policies and interventions that correspond to evolving views on the nature of informality and its relationship with poverty—both as a cause and source of possible solutions. This section provides a brief summary of some of the most relevant viewpoints and policy approaches.

Early studies on informal urbanization were based on a concept known as the *theory of marginality*, which tried to explain the phenomenon using a cultural rationale that defined shantytowns, slums, and favelas as an urban malaise. Experts agreed that given the economic, social and physical conditions of these settlements, marginality would produce more marginality in a self-reinforcing cycle where the “backward” values of poor residents hindered their possibility of joining advanced segments of society. Views of marginality as a form of self-reinforcing poverty inspired punitive policies aimed at forcefully stopping the expansion of informal urbanization and eliminating existing settlements. In the least violent instances, slum removals were complemented with the relocation of populations to state-built, low-cost housing projects. This approach, however, came at a great financial cost to governments, who were not able to satisfy growing housing needs. These kinds of policies were common in most urbanized and wealthier countries in the region, including Mexico and Brazil.

A “leftist” perspective on marginality also coexisted with the punitive view. It examined the relationship between informality and marginality through a different lens that highlighted its positive traits and argued that informal urbanization was not the problem but the solution to urban poverty (Castells, 1984; Perlman, 1980). For instance, this view highlighted the way in which the poor substitute economic wealth with their own labor in the production of housing, and how the incremental process of auto-construction makes financing easier, given that low income groups lack access to regular banking options and often have unsteady income sources. Similarly, flexibility makes housing adaptable to the needs of families who can adapt the size of their home in response to changes in family composition.

Government responses based on this view allowed (and in some cases promoted) informal urbanization, discarded slum removal policies and allocated investments to support self-help initiatives, where households built their own dwellings, rather than producing public housing. Under this approach, governments implemented policies that protected the rights of residents to remain in their land and worked towards regularizing tenure and the provision of services. These policies, it should be noted, were often employed to engage in political clientelism and cooptation (Duhau, 2014).

Ultimately, the concept of marginality was criticized both from the left and right⁷. A Marxist vein set its sights on two important issues: first, on the notion of a dual society that was composed of

⁷ For a summary of the evolution of scholarship on Marginality see: Perlman, J.E., 2005. The myth of marginality revisited: The case of favelas in Rio de Janeiro. *Becoming global and the new poverty of cities*.

people espousing modern versus traditional values and preferences; and second, on the perception that cultural traits could be an obstacle for certain groups to become incorporated into the modern economy. In contrast, this scholarship considers marginality as the structural outcome of a capitalist system, where certain nations stand at the periphery, participating in unfavorable terms in mostly extractive industries and suffering from technological backwardness. Furthermore, rather than being considered external to the processes of capital accumulation, activities of the so-called marginalized are central to peripheral capitalism: these activities produce goods and services that are necessary for the capitalist and middle classes. Thus, rather than being a dual and separated society, formal and informal are part of one single social arrangement.

On the housing policy front, this way of thinking has led to a mixed approach where informal development is not romanticized and its positive effects are not used to justify the retrenchment of state as provider of social welfare. As such, governments should not forego their responsibility to provide the means for the poor to better participate in capitalism. In short, this approach calls for a cooperation between the state and the poor, in such a way that the state takes up the burden of the most complex and expensive components of the process of production, in coordination with the poor, who contribute the knowhow, labor and their limited economic resources. Examples of this approach include the case of Brazil, discussed in Section 4.4 and Tijuana in Mexico, discussed in Section 5.

A second and important alternative position to the notion of marginality has been put forward by “liberal” thinkers who share the notion that social prosperity and wellbeing are linked to the market (de Soto, 2003). According to this view, all individuals should have the opportunity to engage in entrepreneurial activities in one way or the other, since poverty (and informality) emanates from obstacles that hinder participation in capitalist markets—for instance, because they have been given less resources to begin with. Similarly, certain institutional and legal arrangements can also be hindering the capacity of the poor to engage in entrepreneurial activities, as in the case of codes and regulations that make formal construction expensive or even impossible for those without enough resources.

Policy responses based on this view focus on limiting the direct involvement of the state and promoting and expanding market solutions. These include: training informal workers to become employees or entrepreneurs, extending credit lines and microfinancing opportunities, and enacting campaigns to formalize varied economic activities. With regards to housing, these approaches are based on two main ideas: (1) on providing demand subsidies, usually through schemes where private developers, who are perceived as more efficient, build low-income housing and the government provides potential residents with subventions to cover the cost; and (2) advancing pro-market, liberal policies focused on auto-construction by highlighting its flexibility and potential benefits. These policy solutions, of which Hernando de Soto’s are the most well-known, prescribe eliminating barriers to self-building, including legalization of tenure, to ensure access to property that, in turn, could generate wealth via rental, sale, or serve as collateral for credit that would allow the poor to fund other productive activities. This approach has been promoted by multilateral institutions such as the World Bank and has inspired a number of titling and regularization programs across the region and the globe such as COFEPRI in Peru (Discussed in Section 4.4.)

Despite the popularity of these ideas, the assumptions that legal tenure will provide access to credit and social mobility have been questioned by several empirical analyses of title regularization programs. Examining the Peruvian experience with mass titling, scholars like Field and Torero (2006) show that advancing legal tenure does not automatically lead to increased opportunities for

collateral-based lending. Moreover, their work shows that property titling does aid poor households in financing micro entrepreneurial ventures. In a separate research effort, Galiani and Schargrodsky (2010) show that a land regularization program in Argentina led to increased investments in housing, child education and the reduction of household size for entitled families, relative to the control group, but that these effects were not attained due to improvements in credit access.

Global Trends

While urban informality is usually associated with widespread poverty, current trends show that this is not always the case.

Urban informality and poverty in numbers

Trends in urban informality show that, far from a receding phenomenon, it is intimately related to the expansion of urbanization ⁸:

- About one fourth of the world's urban population lives in informal settlements.
- In Latin America, informal settlements grow at a faster pace than poverty rates.
- In Latin America, between 50 and 75% of informal settlements were formed through illegal land appropriations.
- Between 2000 and 2010 living conditions in informal and low-income settlements throughout the Global South improved as a result of broad efforts tied to the United Nations' Millennium Development Goals.
- About 90% of urban growth is taking place in cities of the Global South, which increase their populations by 70 million residents each year.
- In Africa, over half (61.7 %) of the urban population lives in informal settlements.
- In Asia, home to half of the world's population, 30% of the population lives in informal settlements.
- In Latin America and the Caribbean, where regularization programs have been implemented for decades, 24% of urban population lives in some form of informal settlement.
- Urban areas in developed regions also suffer from high levels of inequality. In Europe, about 6% of the population cannot afford adequate housing. In the US, there is also a large number of persons that live in conditions that could be described as extreme poverty or slum-like.
- There is a direct relationship between the growth of informality and a shortage of adequate low-income housing. While in recent years private investments in real estate and housing for middle-and-upper income populations has increased, this has not led to more affordable housing for the poor [In the US or globally?].

Urban Informality in the US

Urban informality occurs in the United States, but it is certainly less visible than in the Global South. While exact figures on its prevalence are difficult to come by, there is a growing scholarly interest in the issue. The following section describes some of the most common typologies of informal practices which are primarily characterized by the infringement of codes or trespassing of property rights.⁹

⁸ With data from UN Habitat, 2016

⁹ Based on Durst and Wegmann, 2017

Urban informality as infringement of property rights

This is the most straightforward form of urban informality and is most commonly observed when an individual transgresses someone else's property rights or illegally occupies public spaces. These practices most often involve physically occupying somebody else's land or property, such as the establishment of a homelessness encampment, vehicle living, tent-cities and squatting abandoned buildings (through trespassing).

Urban informality associated to transfer of property

This form of urban informality is related to the process of property transfer via purchase or inheritance. It is common in cases of death where a will is not available or the transfer of property ownership is not clear. This can lead to a situation where a property's interest is not recorded for years and were the lack of title makes it impossible to sell, rent or transfer. Another transfer-related situation is the informal sale of property, usually in a direct transaction between seller and buyer without intervention of brokers, title companies, etc. The most common situation is one in which the seller finances the transaction and the buyer does not receive the title until all payments are completed. Estimates from Way (2007, In Durst and Wegmann 2017) show that as of 2007, around 3.7 million owner-occupied dwellings in the US had informal purchase agreements such as seller-finance mortgages or installment contracts. Most of what is known about informal property sales is based on the **colonias** in Texas, where developers sold unserviced land via installment contracts known as **contracts for deed** (Larson, 1995; Ward, 1999 in Durst and Wegmann 2017) to buyers who lack proof of ownership documentation.

Land-Use and zoning-related urban informality

This kind of urban informality is rather invisible because it usually takes place within legal properties, but it is fairly common. These kinds of practices include the subleasing of property to multiple residents without proper permit, the overcrowding of units beyond zoning limits, or the renting/leasing of buildings not zoned for residential purposes (lofts, warehouses, commercial spaces).

Urban informality resulting from illegal subdivision

The most well-known case of this kind of informality is the **colonias** in Texas, documented extensively by Peter Ward. **Colonias** are the product of developers who divided land without basic services and sold lots with the promise that services would eventually arrive. The lack of services over time led to some of the worst living conditions in the United States. While Texas' **colonias** are the most well-known cases, they're common throughout New Mexico, Arizona, California and even North Carolina (Donelson and Esparza, 2016; Mukhija and Monkkonen, 2007, 2006).

Urban informality derived from code violations

These are commonly associated with the maintenance and repair of buildings but also have different manifestations. Wegmann (2015), for instance, notes cases in which homeowners build an addition, have it inspected and permitted, and later alter it with the intention of transforming it into an independent living space that can be rented or used by other household, in violation not only of building codes but also zoning laws.

Problems Related to Urban Informality

While urban housing informality manifests itself in different forms, there are certain commonalities and shared problems that arise from the legal and physical constraints faced by informal settlers. These problems manifest themselves in social, economic, health, environmental and cultural domains. While there are different terms to describe informal urban development, this section uses the definition of “slums” used by the United Nations. Although most of these problems are observed in the Global South, they are also evidenced in poor and slum-like communities in the US and other developed nations.

According to the UN Habitat (N.D)¹⁰, slum households are defined as households that lack at least one of the following:

- Durable housing of a permanent nature that protects against extreme climate conditions.
- Sufficient living space which means not more than three people sharing the same room.
- Easy access to safe water in sufficient amounts at an affordable price.
- Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people.
- Security of tenure that prevents forced evictions.

Frequent problems associated with informal settlements

Compared with other urban populations, informal settlement dwellers suffer greater economic, social and spatial exclusion and thus cannot enjoy the benefits of key amenities available in alternative urban settings. For example:

- Informal settlements dwellers often face physical marginalization and difficulties accessing jobs due to the remote location of their communities and the lack of adequate transportation services and infrastructures.
- Lack of basic services, such as water, sewage, electricity and cooking fuel produce health hazards and other hardships. For instance, exposure to human waste, pests and wastewater leads to higher incidences of infectious diseases. Similarly, lack of fuel and electricity results in other public health issues such as respiratory problems generated by burning of fossil fuels inside homes. This problem particularly affects women and children who spend more time indoors.
- Substandard dwellings are more vulnerable to weather, fires, dust and crime.
- Informal settlements are often located in hazardous areas, near waterways, on slopes or close to industrial facilities, exposing residents to a variety of environmental hazards due to floods, mudslides, fires, air, water and ground pollution.
- Living in a poor informal settlement has concrete effects on life expectancy. Across the globe, 20% of the poorest urban population struggles to achieve 55 years of life expectancy, while the 40% wealthier surpass 70 years of life expectancy. Similarly, amongst the 20% poorest, infant mortality—for children 5 years and younger—is twice the rate of wealthier quantiles (UN Habitat, 2016).

¹⁰ http://mirror.unhabitat.org/documents/media_centre/sowcr2006/SOWCR%205.pdf

- Lack of basic public amenities also has social consequences. For instance, informal urban settlements that lack street lamps and adequate spaces for recreation have a higher incidence of crime among young residents.
- Irregular street layouts make access to law enforcement and emergency services more difficult.
- Social stigmas are also common. Studies have shown how the lack of an official address or having an address associated with a slum reduces the possibility of securing a job and accessing services (Wacquant et al., 2008).
- Lack of legal ownership also eliminates the possibility to access several forms of credit, building wealth, transferring property to children and engaging in other forms of financial transactions.
- Political and financial vulnerabilities are also prevalent. For instance, informal dwellers might be convinced to participate in fraudulent schemes under the assumption that they will gain legal tenancy of their land, or be expected to support politicians and social leaders in exchange for promises of tenure security and infrastructure upgrades.

Possible Policy Interventions to Address Urban Informality

Good Land Governance

Effective land governance is a complex endeavor that requires sophisticated technical, institutional and legal capabilities. At a global level, land governance has received much attention due to its central role in efforts to meet the UN's Millennium Development Goals (Deininger et al., 2010) as well as the more recent Sustainable Development Goals.

Land governance is comprised of the “policies, processes and institutions by which land, property and natural resources are managed” and includes “decision about access to land, land rights, land use and land development” (Deininger et al., 2010, 3). Good land governance reduces corruption and bribery and sets the conditions for the sustainable management of resources, and overall economic development. Good land governance guarantees property rights and generates benefits for vulnerable groups, including women, the poor and children. Effective land governance should help coordinate and plan different economic and social functions in cities and regions, and contribute to reducing the effects of climate change.

Land policy, in turn, requires of multiple systems of spatial governance, including land administration systems, spatial data infrastructures and a cadaster that clearly identifies parcels and plots. Each of these elements are key pieces of a hierarchical system that can provide the capacity to enforce property rights (titles), property restrictions (zoning and land use), and property responsibilities (taxation) (Deininger et al., 2010).

Cadaster

The cadaster is an instrument for recording land that identifies the geographical location, tenure and value of properties. In its traditional form (known in the Spanish language literature as *Catastro Territorial*), the cadaster is a database that incorporates geographic, legal and fiscal information. As a tool that allows for the systematic inventory of property, it can contribute to proper land policy if used to guarantee equitable taxation, tenure security and proper zoning enforcement.

In Latin America, proper cadaster administration is limited by the challenge of scarce resources, rapid and informal development, lack of proper technologies and institutional infrastructures for physical surveying and maintenance of databases. Efforts to modernize cadasters in recent years have led to the adoption of an expanded role and definition. This new model, called *Catastro Multifinalitário* (or multipurpose cadaster), incorporates data that serves other functions beyond tax collection, including capturing the social and environmental characteristics of a property and the occupants of plots and buildings (Erba, 2007). Under this new paradigm, a cadaster is not a centralized repository of information, but a robust geographical and informational system that uses a unique identifying number to link diverse institutional databases to harness multi-dimensional information on a particular lot or property and its residents.

Regardless of whether a cadaster is traditional or multipurpose, data completeness and accuracy is fundamental. Cadasters tend to under-capture data on informal developments and developments in hazardous areas, thereby inscribing social inequalities into databases that are used to inform policy decisions. To address this issue, new technologies are being used to facilitate data collection that is accurate and able to respond to rapid urbanization changes.

Remote sensing via the use of satellite imagery and specialized algorithms has received a great deal of attention among experts as a low-cost method of data collection. These methods, while not perfect, can improve accuracy and coverage and can also be finetuned to capture specific dimensions that respond to policy concerns. However, such an approach can result in the exclusion of communities and the entrenchment of inequality when mapping techniques are performed without complementary, on-site ground-truthing (Acolin and Kim, 2017). For instance, remote sensing can capture informal settlements in hazardous areas when housing characteristics conform to predefined structural typologies (e.g. concrete houses or houses with tin roofs), but houses that do not conform to such typologies (e.g. wooden houses or houses made of mud or debris) would not be registered using satellite images. More traditional approaches to data collection, such as on-site visits and field surveys, can be used to complement more sophisticated data collection methods, like remote sensing, to gain a fuller picture of what's happening on-the ground. These technologies and data collection approaches to cadaster maintenance can help reduce structural and institutionalized inequalities.

Land Regularization

Informal development puts extra pressure on land governance, and efforts to regularize settlements should aim to incorporate these sites into land management systems to enable a proper integration of functions and effective management of rights, restrictions and responsibilities. The following section includes a detailed discussion of several regularization experiences from Latin American countries. As the cases show, institutional and economic limitations and political constraints have made it difficult to translate titling programs into effective land management, which requires expensive cadasters and other spatial data systems.

Land regularization is a process whereby a government intervenes in illegally occupied lands with the intent of legally recognizing property titles or other rights to occupy land, and to provide urban infrastructure or services (Calderón Cockburn, 1998). There are different approaches to land regularization but most of them respond to common challenges, such as: lack of urban serviced land; lack of resources to implement large-scale relocation schemes; community resistance to relocation; legal mandates to provide access to adequate housing (right to housing/housing as a human right); environmental costs of relocation, and existing legal rights that allow settlers to occupy land (Fernandes, 2011).

In Latin American nations, regularization schemes have fallen under the purview of urban land management authorities. For instance, in more centralized nations such as Mexico and Peru, regularization policies and projects have mostly been carried on by national-level institutions. In Brazil, where municipalities have more administrative power and financial resources, these projects have been led by local governments (Fernandes, 2011). Nevertheless, existing literature shows that successful regularization schemes require effective land governance, which is only possible with active participation—in the planning and financing of these projects—of all government levels, and in coordination with private actors, citizen groups, NGOs, professional organizations (such as architects and lawyers), academics and multilateral organizations (Fernandes, 2011).

Regularization schemes can be classified into three main types: 1) those focused on fixing legal issues (tenure); 2) on improving physical/environmental issues and; 3) integral schemes that incorporate the two prior ones, which are less common (Di Virgilio et al., 2014).

Programs focused on tenure: COFOPRI in Peru

The majority of regularization schemes in Latin American countries have focused on addressing legal issues related to tenure. In great part because they are less expensive (per household), garner greater attention from the wider public, are expected to have positive ripple effects and have been widely promoted by international organizations (Di Virgilio et al., 2014). Mexico and Peru have extensive experience with large titling programs. The following paragraphs discuss the case of Peru and the COFOPRI, or ***Comisión para la Formalización de la Propiedad Informal*** (Commission for the Formalization of Informal Property) a program that distributed 1.6 million property (freehold) titles between 1996 and 2006.

COFOPRI is a national-level program that was created by the Law for the Promotion of Access to Formal Property. The Commission is a centralized, national level agency responsible for designing and executing of the ***Programa de Formalización de la Propiedad*** (Property Formalization Program). COFOPRI was established in 1996 to work in coordination with the Urban Building Registry and a series of legal structures for the prescriptive acquisition of occupied lots. The program was co-financed with national, international aid and World Bank funds (Fernandes, 2011).

COFOPRI's activities and goals have included:

- Promoting massive access to property legalization as an instrument for reduction of poverty and urban precarity.
- Generating property rights with legal security for formalized lots.
- Increasing quality of life for low income urban and rural residents, who can use property to access formal credit mechanisms.
- Strengthening an individual's capacity to participate in the formal financial system. Keeping formalization expenses low or no-cost.
- Helping increase the benefits of formalization and titling.
- Guaranteeing management and maintenance of a Cadastral Information System.
- Promoting the development of cadastral capacities within local governments.

While the program was very successful at increasing legal tenure, it had a narrow approach that focused on solving on legal issues while ignoring the need to promote the socio-spatial integration of informal areas. Furthermore, critiques of the program show that this approach did not address the root causes of informal development, and created an expectation that all informal settlements would be legalized, which led to an increment in the number of new informal developments. The program also ignored the need to improve the cadaster systems. Furthermore, despite the assumption that titling would increase participation in formal economy and access to credit, research has shown that these gains failed to materialize because financial institutions tend to not take previously informal property as collateral (Fernandes, 2011).

Several studies have shown the limits of COFOPRI. For Instance, Field and Torero (2006) show that titling can actually have a negative effect on a lender's perception of risk, as titling signals financial institutions that it will be more difficult to foreclose on client's whose property has been protected by state policies. These researchers also found that most lending has happened through a public bank that provides in-kind loans in the form of building materials for improvement, which, while helpful, cannot be turned into other forms of investment.

Physical upgrading approaches: Favela Bairro Program in Brazil

An example of regularization programs focused on physical upgrading *is Favela Bairro*, which was modeled after the Program for the Urbanization of Popular Settlements in Rio de Janeiro where the municipality performed and financed sanitation and street improvement works in collaboration with residents of targeted communities, who contributed with labor.

As with the titling-focused approach of COFOPRI, the *Favela Bairro* Program in Rio also sought to address poverty through providing residents of informal settlements with better opportunities to participate in the city's economy. However, rather than employing a simple understanding of informality —i.e. lack of access to titling—, it was based on a complex definition of precarity that links poverty with cultural, physical and social exclusion. In addition, instead of focusing on giving informal residents access to financial systems via land regularization, it focused on erasing divisions between formal and informal areas, reducing stigmas and integrating informal neighborhoods into the rest of the city through investments in infrastructure, public space, transportation services and housing improvements (Riley et al., 2001).

Favela Bairro projects included a number of basic components such as the installation and upgrading of water and sanitation infrastructure; public and domestic lighting networks; road construction; public spaces improvements, including squares and walkways; the elimination of natural hazards; the construction of new housing for resettlement; waste collection systems; the construction and refurbishing of buildings to be used as nursery schools, community and income generation and training centers; the construction and operation of new sports and leisure facilities; and the construction of commercial establishments.

Along with these actions, the program also included assistance to begin the process of tenure regularization for informal households. However, in contrast with Peru's case, the program in Rio de Janeiro only generated 2,333 titles despite targeting 50,000 families. Moreover, of the 2,333 title applications only 145 actually completed the registration process (Larangeira, 2002 in Fernandes, 2011). Similarly, the high cost derived from a focus on physical improvement—of about \$4000 per household—limited the possibilities of scaling up the program, leaving only 100 out of 1200 favelas in Rio served.

One unexpected outcome of *Favela Bairro* and similar programs based on physical improvements has been gentrification. This is especially common in centrally-located settlements that have increased in value and appeal after their upgrading, and where land developers and landlords have pressured residents to sell or move out, effectively displacing communities and converting these areas into middle-and upper-class neighborhoods (Durand-Lasserre, 2006 in Fernandes, 2011; Perlman, 2010).

Socio-spatially integrated approaches: PMIB in Bogotá

The third model of regularization is the socio-spatially integrated approach to regularization. Socio-spatial integration requires a broader set of strategies and measures, ranging from promoting urban and environmental sustainability to strengthening local communities and empowering women. While this type of regularization program is less common, there are several cases exhibiting limited success that have been used as global examples among practitioners.

One such case is the ***Programa de Mejoramiento Integral de Barrios*** (PMIB) established in Bogotá in 2004. The program was one of several neighborhood improvement efforts that have taken place in Bogotá since the 1970s. The program was tied to the city's ***Plan de Ordenamiento Territorial*** (Land management plan) and is considered a housing, built environment, and well-being policy aimed at reducing urban poverty through multi-agency collaboration, citizen participation and effective land management. The plan combined physical planning with infrastructure, transportation, environmental remediation and public space improvement, as well as social and cultural improvements that included: construction of schools, libraries and recreation facilities (Merchan Rincón, 2016).

While the program mostly focused on collective improvements (addressing the social function of land), it also supported individual housing upgrades, including physical improvements, titling and tenure regularization. The program was designed to target those settlements that had more critical poverty conditions and faced greater environmental risks.

An important component of the plan was its linkage to effective land management, which was intended to connect localized interventions to a metropolitan land use plan and promote multi-scalar land management coordination. Another important component of the program was environmental management. It focused not only on improving connectivity and quality of public space, but also on environmental risk reduction, resource management and territorial reordering, even when that meant relocation of certain communities (Merchan Rincón, 2016).

Upgrading Experiences

Upgrading programs are not necessarily focused on land regularization and try to bring improvements to the quality of life of informal settlements, regardless of tenure issues. These projects generally do not target individual households but instead aim to improve social outcomes for the whole community through improvements to public infrastructures and spaces, and amenities with collective uses.

Guatemala City: El Mezquital

The El Mezquital project was the result of a Guatemalan municipal development policy focused on urban upgrading and road infrastructure maintenance implemented between 1993 and 1997. The project operated in line with several foreign aid objectives tied to the country's post-civil war peace process. It was co-sponsored by the World Bank and received additional support from UNICEF, who provided technical assistance for participatory approaches to urban upgrading and housing development.

The El Mezquital project was focused on physical improvements and regularization, and included assistance for: new settlement layouts, streets and footpaths, drainage, street paving, water supplies, wastewater treatment, new housing construction, home improvements, and new community facilities such as schools and clinics. The total project cost was about \$14 million.

Although quite basic in its design, when compared to other efforts outlined in this document, it is a good example of a simple and effective post-humanitarian crisis intervention effort with citizen participation (Imparato and Ruster, 2003).

Among the most relevant aspects of the project are¹¹:

- Community participation: Its beneficiaries participated intensively in the planning of projects and contributed their labor in upgrading efforts.
- Community organization: The project provided the support and incentives for organizing the community in ways that allowed them to subsequently manage infrastructural improvements.
- Complementarity between the World Bank and UNICEF: This project evidenced that the collaboration between the World Bank—who provided financial resources—and UNICEF—who provided intense technical assistance and supervision—helped compensate for the weaknesses of Guatemalan government institutions in the post war period.
- Emphasis on cost recovery: The project promoted the principle of cost recovery and implemented several mechanisms for such a goal, including consumption metering systems. This has resulted in acceptance and support for service charges by local organizations which also help to reduce delinquency.

Tijuana: Participatory Community Upgrading

Tijuana's community upgrading programs came to existence during the transition period when local democratization and decentralization was advanced in Mexico in the late 1990s. This program is considered a pioneer effort that combined participatory budgeting with community management (Imparato and Ruster, 2003).

Tijuana's community upgrading projects were a response to the rapid and uncontrolled urban development that took place since the 1960s. This rapid growth dynamic was further complicated by the city's irregular topography, the great number of settlements in risk areas and extreme climatic conditions that fluctuated between draught and intense rain. Upgrading initiatives focused on basic improvement works under the municipality's responsibility which were defined by groups living in informal settlements. Their demands focused primarily on: the paving of streets, the improvement or construction of schools, and the introduction of storm drainage infrastructure.

The cost of neighborhood upgrading was shared between beneficiaries, who contributed with 30% of the expenditures, and the municipal government, who contributed the rest using its own funds and funds channeled from the federal government. The projects were directly managed by a community committee that oversaw the funds, hired contractors and supervised the actual works.

This approach contrasts with other projects that had been deployed nationally in years prior, such as the highly centralized ***Solidaridad*** program, where the federal government implemented infrastructure upgrading projects in a top-down fashion that served to advance political clientelism. Tijuana was one of the first cities to elect an opposition party in the country, and the center-right PAN administration chose a decentralized approach whereby the state would step away from being the main provider of upgrades and instead play an enabling role.

This participatory upgrading program created the conditions for an improved community participation in the governance, budgeting and financing of projects, and is considered an important example of how to advance local decentralization and democratization in the country. On the other

¹¹ From Imparato and Ruster, 2003.

hand, the overwhelming focus on street pavement and sewage reflects an approach that prioritized urgent needs and did not lay the groundwork for a more integral, comprehensive and multidimensional approach to urban upgrading (Imparato and Ruster, 2003).

Chile: Programa de Recuperación de Barrios

Chile's ***Programa de Recuperación de Barrios*** is a country-wide strategy aimed at improving low-income areas through a comprehensive and integral approach. The program, established in 2010, responds to the failures of prior housing policies dating to the 1970s. These policies included: titling schemes, slum removals, and more recently, direct subsidies for low-income families purchasing units built by private developers. More recent approaches, focused on subsidies for housing, have been criticized due to the low-quality of construction available for low income households. These houses were inadequate for families in terms of their design and physical attributes, and because developers selected remote locations (to lower costs), residents were located far from jobs and other urban amenities. This led to the rapid decay of the built environment and the rise of environmental and social problems, including violence and unemployment (MINVU, 2014).

The ***Plan de Recuperación de Barrios*** was designed to address specific policy shortcomings and was based on four principles:

- A multidimensional and integral approach: the program understands that community problems and urban realities are comprised of fiscal and social dimensions. As a result, the program uses multiple strategies that address physical, social, spatial, environmental and cultural factors.
- Deliberative citizen participation: it is based on the notion that community and city development must be co-decided with effective citizen participation. Appropriate neighborhood revitalization requires institutionalized mechanisms and resources for community participation in local and territorial governance efforts.
- Multi-scalar territorial approach: it understands that cities are complex systems composed of units of different sizes and diverse hierarchies, interconnected by economic, social, political, environmental and cultural links. Neighborhood interventions, thus, should not only be sensible to territorial characteristics but seek to articulate transformations across different locations and respond to multi-scalar needs.
- Sustainability: urban upgrading requires that efforts contribute to improving quality of life and also able to survive over time. Thus, projects need to improve the resource management capacity of local actors and guarantee maintenance of projects and infrastructures in the long term.

The actual redevelopment schemes under the program are based on the particular needs of each neighborhood and include different areas, such as:

- Green and open space
- Urban services (sewer, electricity)
- Amenities (health, recreation, culture)
- Connectivity and transportation infrastructure
- Complementary issues, such as beautification and other aesthetic and comfort improvements
- Real estate acquisition

Each neighborhood improvement plan includes five components that include: diagnostic and project management, citizen participation mechanisms (social management), communication and information, the development of multisectoral strategies to link projects to different agencies, private sector and governments; and the development of cross cutting goals, such as: social cohesion, local identity, sustainability and safety.

The projects carried out under this program are focused not on increasing the number of available housing units, but on improving the quality of existing units as a strategy to remediate the shortcomings of prior formalization and housing initiatives (MINVU, 2014).

Alternative Forms of Tenure

Discussions on housing markets in the Global South tend to stem from the notion that there are parallel markets for formal and informal forms tenure. While most of the push in last decades has been towards formalization and titling as a step towards single family homeownership, experts have recently begun to consider other forms of legal tenure that go beyond renting or homeownership.

The growing interest in these alternative forms of tenure respond to: the institutional challenges of providing housing and advancing homeownership amongst all sectors of the population (Gilbert 2009; Sierra y Tarazona 2013 in McTarnaghan et al., 2016), the embracing of progressive ideas that consider housing as a human right (United Nations General Assembly, 2018) and the need to find solutions to combat displacement and gentrification that often accompany regularization schemes.

Alternative forms of tenure include: housing cooperatives, land banks, community land trusts, joint ownership, and new forms of partnerships between the public, private, and nonprofit sectors to construct affordable housing (Arlindo dos Santos Silva 2009; Gilbert 2009; Graheda and Ward 2012; Camargo 2013; Irazábal 2017, in McTarnaghan et al., 2016).

As the Urban Institute and Habitat for Humanity argue, the consequences for inclusion, welfare and equity of alternative forms of tenure have not been subject to rigorous study, and have been mostly examined through case studies that provide limited evidence of success (McTarnaghan et al., 2016). In short, the benefits of alternative forms of tenure in the Global South could be substantial, but little research has focused on their effectiveness. Nevertheless, the expansion of these ideas and models brings to the forefront the need to further examine the complex and often contradictory ways in which notions of housing as an individual or collective right—and a means for individualized economic advancement and collective environmental wellbeing—come together in efforts to improve housing for the poor across the globe.

In the US context, the discussion of alternative forms of housing tenure has also been a topic of growing interest among scholars and housing experts. As in the Global South, propositions to move beyond a renter vs homeowner dichotomy respond to increasingly high cost of housing in urban centers but also to changing views on homeownership that resulted from the subprime mortgage crisis and the Great Recession. These shifts are remarkable given that the US has historically positioned individual home ownership as the most important instrument for wealth accumulation and as a central tenet of American culture (Hirt, 2015; Vale, 2007).

In the US, traditional alternatives to homeownership mostly fall within four broad categories: limited equity cooperatives, community land trusts, owner-occupied houses with affordability covenants, and lease-to-own programs (Graves, 2011).

- **Limited equity housing cooperatives (LEHCs)** are corporations in which residents buy a low-cost share of a building but have limits on the returns from the resale of housing units.
- **Community land trusts (CLTs)** are nonprofits that enable participants to own the physical structure of their home but not the underlying land, which they lease from the CLT. The CLT either repurchases the homes at below-market prices whenever the owners decide to resell or requires them to resell their homes to another income-eligible household for a below-market price.
- **Shared-equity deed-restricted** homes provide lower-income families with owner-occupied housing, with deeds that restrict resale to another income-eligible homebuyer for a formula-determined “affordable” price. Covenants restricting the resale usually last at least 30 years.
- **Lease-purchase programs** allow participants to select a home and a finance agency buys the home on their behalf, which serves as initial owner, mortgagor, and property manager for a period of approximately three years (Graves, 2011).

Wegmann et al. (2017) recently proposed an alternative framework to the traditional views on tenure that place rent and homeownership as the two ends of a one-dimensional scale. In the traditional scale, renting provides less control over housing choices and produces less wealth, while homeownership provides more control and wealth (Fig 1). In contrast, Wegmann et al.’s two-dimensional method (Fig 2) for analyzing tenure modes accounts for hybrid modes of tenure that have different effects on equity building, financial and legal risks and responsibilities, control over housing choices, and access to existing subsidies. This model portrays how different modes of tenure produce different tradeoffs. Depending on the particular household situation, some forms of tenure may or may not be optimal. As the authors argue, this analytical model highlights the need to revise the relationship between subsidies, tenure security and inclusion, and the need to expand support to make all kinds of tenure secure—which would guarantee the right to housing.

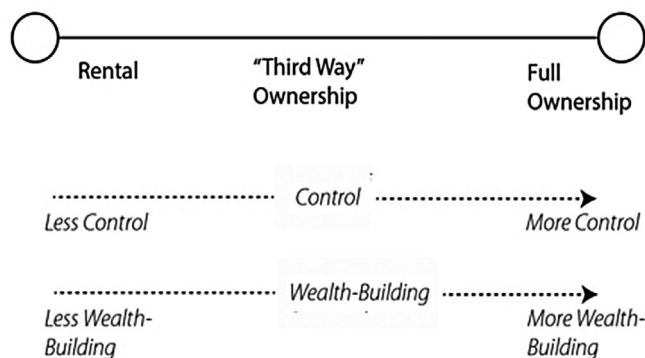


Figure 1: One-dimensional view of tenure, from Wegmann et al., 2017

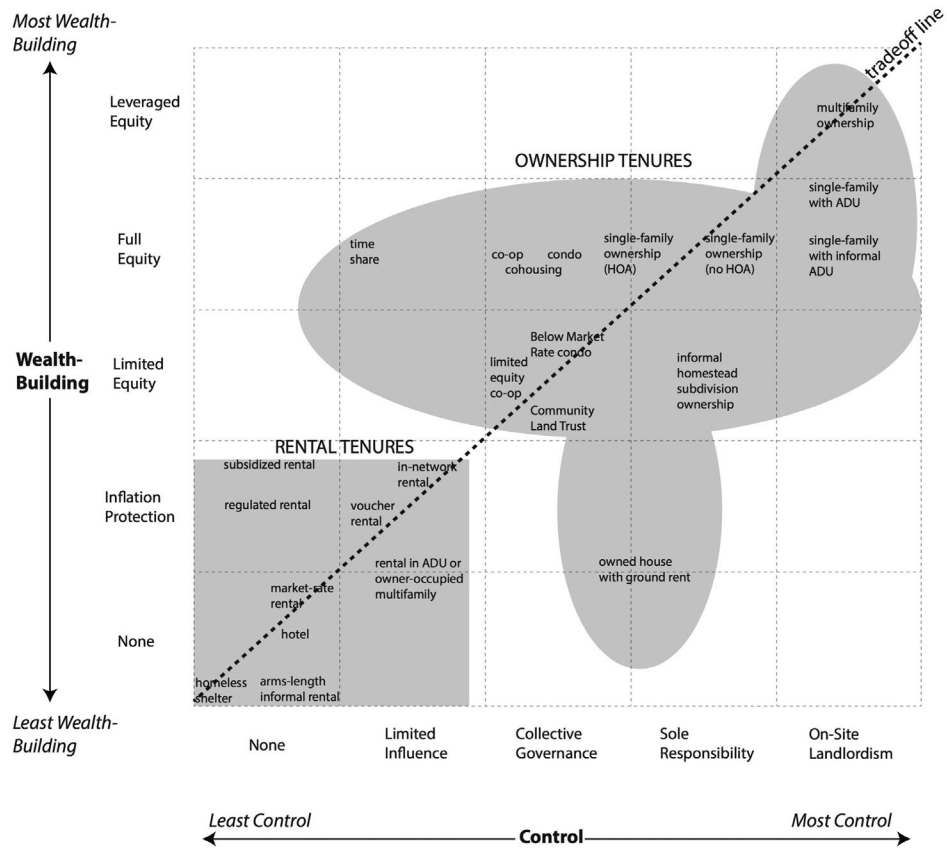


Figure 2: Two-dimensional view of Tenure, from Wegmann et al., 2017

Conclusions

Urban informality is a global phenomenon present in all societies, including the US, and is practiced by individuals and households in all social classes. Informality is usually associated with large informal settlements with substandard living conditions where residents lack legal ownership of their land and dwellings. However, informality can be observed at all scales, including infringement of building and zoning codes in legally owned land. While informality is often seen as a low cost, outside of the market solution to housing needs, most informal housing is acquired through market transactions at a higher cost than legal real estate.

Views on informality have changed over time, which has led to the adoption of different policy approaches. The prevailing tendency is not to eliminate informal settlements but instead provide the means for formalization and upgrading. Depending on the ideological leanings of those in power, responsibility is primarily placed on the state, the private sector, citizens or a combination of these.

Despite global poverty reduction, informal urbanization continues to be an important driver of urban growth. Across the Global South, informal developments house between 25% to over 60% of urban population and, given the steady growth of population in Africa and South Asia, these numbers are expected to keep growing. In the United States, these trends are hard to quantify since informality related to housing and land tenure tends to occur in rural or semi-rural areas, such as *colonias*, or—with the exception of homeless encampments—within legal properties and out of sight of the public.

Living in an informal settlement can have several negative repercussions for the wellbeing of its occupants. Some of these negative effects are related to the design and construction characteristics of a dwelling, but also tied to the physical conditions of where they are located. These problems span across health, economic, social, and cultural dimensions. Overall, these issues can lead to the reduction of life expectancy and often to the reproduction of poverty, inequality and precarity.

Titling and regularization efforts have been the focus on multiple programs across Latin American. While most of these programs assume that property rights will enable economic advancement, research shows that these kinds of projects have mixed results. In many cases, titling can produce more informality and will not necessarily increase access to credit. On the other hand, legal tenure is associated with social and human capital improvements.

The variety of renovation schemes that have been pursued illustrate some of the complex challenges for effective and inclusive urban upgrading projects. While experts and scholars know that effective projects must address legal, physical and social issues, and use participatory governance institutional designs, these are both difficult and expensive to achieve. The variety of cases shown in this report point to several lessons. First, in cases where institutional capacities are limited, such as post-war Guatemala, other institutions can step in and provide the needed financial and institutional support. Second, as Mexico's case shows, citizen participation in budget and project management decisions is not enough to break the tendency to focus on immediate needs at the expense of long-term, multi-dimensional and cross-scalar solutions to urban poverty. Chile's case, on the other hand, point to the benefits of having a strong land and territorial management capacities, and a government that promotes citizen participation and public-private collaboration.

Finally, a recent focus on housing as human right, the persistence of legal, institutional and governance challenges to land regularization, as well as the increasing cost of urban land has brought

attention to diverse alternative tenure programs. These include: housing cooperatives, land banks, community land trusts, joint ownership, among others. While research on the effects of alternative tenure mechanisms is limited, the assumptions on the relationship between homeownership, tenure security, social equity and economic advancement need to be revised.

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