#### METROPOLITAN HOUSING AND COMMUNITIES POLICY CENTER



#### **RESEARCH REPORT**

# Literature Review of Housing in

# Latin America and the Caribbean

### **Phase I: Global Housing Research Initiative**

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# Foreword

Habitat for Humanity International, together with our sponsor and partner, Cities Alliance, and our research contractor, Urban Institute, is very pleased to present this report on the first phase of the Global Housing Research Initiative. The intent of this research is to create an evidence-based platform that can guide the continued advancement of housing policy and practice — particularly in regard to shelter and the living conditions of the poor.

Because an abundance of research has been conducted in Latin America and the Caribbean for the past 15 years, we are beginning our efforts there. Unfortunately, much of the previous research has remained unavailable to practitioners, policymakers, and academics. Urban Institute and contributing researchers have uncovered more than 1,000 studies, and these make up the annotated bibliography contained in this report.

Our intent with this first phase of the report is threefold:

- Identify, categorize, and analyze the research that has been conducted in recent years.
- Disseminate this body of knowledge to practitioners, policymakers, academics and the private sector.
- Propose subject matter for topic areas warranting more attention, research, and analysis in the near future.

Our goal has been to present this report at the United Nations Conference on Housing and Sustainable Urban Development — better known as Habitat III. We are eager to share our findings at the October 2016 gathering because it shows the extent to which key principles of the right to housing, first articulated at Habitat II in 1996, are being achieved. These seven principles form the basis for many key housing initiatives undertaken during the last 20 years:

- Security of tenure
- Availability of services, materials, facilities, and infrastructure
- Affordability
- Habitability (i.e., a decent and safe home)
- Accessibility
- Location
- Cultural adequacy

As we look ahead to the next 20 years and the growing need to ensure the poor have access to adequate housing, Habitat is committed to making the best housing information available to all of our colleagues in the sector. We welcome your input, feedback and participation in this effort.

In partnership,

out Renfe

Jonathan T. M. Reckford CEO, Habitat for Humanity International

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## **Executive Summary**

Habitat for Humanity International (HFHI), under the auspices of Cities Alliance (CA) and in partnership with several other leading housing organizations, established the Global Housing Research Initiative in late 2015 to examine how housing investment and policies effectively address the housing needs of a growing urban population, particularly the poor. As prescribed by HFHI, the initiative's larger intent is to "lead to widespread deployment of the most effective and scalable strategies for responding to the global housing deficit."

This document—a practitioner-accessible literature review of housing-related scholarship published in the Latin America and Caribbean region—is the product of the first effort under this initiative. Researchers at the Urban Institute collected approximately 1,000 documents published between 2000 and 2016, identified through archival searches of academic sources and from recommendations from the project's group of contributing researchers throughout the region. Documents were classified by subject matter, region, publication type, and level of evidence into a comprehensive bibliographic database and annotated bibliography to produce this synthesis review for housing practitioners' and policymakers' use.

In general, the literature review demonstrates a marked growth in the rate of research, evaluation, and monitoring production in housing, land use, and related subjects for this region over the last two decades. Much of this growth is attributable to the encouragement of national governments in the region's wealthier nations and through multilateral aid and development organizations. Despite the volume of publications that the researchers reviewed, there is still a general paucity of rigorously produced evidence around housing issues in Latin America and the Caribbean. Certain subregions continue to be overlooked with regard to research production; in particular, research and evaluation reports for the Caribbean basin were difficult to find. Incubating a research infrastructure through academic supports, data collection, and opportunities for peer review could fill in many of the subjectarea gaps identified in this report.

Table ES1 summarizes the key observations and evidence, along with critical gaps in the specific housing and housing-related research areas covered in this review. Narratives and detailed references are provided in the body of the report, with a concluding synthesis of general observations about the state of housing research in the region and suggestions for prioritizing future research activities to fill in the gaps.

#### TABLE ES1.

Summary of key themes and evidence gaps by research topic and subtopic

Key themes	<b>Evidence gaps</b>
1. Low-income housing conditions	
<b>1a. Impact of physical housing quality</b> Housing produces multiple physical and environmental impacts.	There is no common standard for housing quality globally or in the region,
	and there are limited methods of assessing housing quality that can be used to measure impacts across national programs or to serve as enforced targets.
Housing produces environment health effects.	There is insufficient data to measure each cause and the cumulative effects.
Housing effects educational attainment among children.	The specific contributions of different causes—including housing stability and housing quality—are not clear.
Specific design and construction techniques improve physical and environmental quality in housing.	There are few studies that consider the interactions of different materials and designs and their system effects.
1b. Process of auto-construction and consolidation	
Policies and programs to support auto-construction or self-building have grown.	Surveys of housing conditions show improvements, but they have not been able to attribute improvements to specific policies and programs separate from other factors.
Much auto-construction is still independently or privately performed, and multiple factors contribute to households' decisions and capacity to improve their housing.	Studies describe individual factors, but there is little assessment of the contribution of each factor to household decisions.
1c. Barriers to housing improvement	
Key barriers to improvements are all typically associated with poverty, such as lack of land availability, affordable construction materials, infrastructure connections, access to urban amenities, and income overall.	There are few studies looking at the variety of decision barriers across different geographic and economic contexts; case studies dominate this field.
1d. Displacement	
There are multiple causes of displacement across different contexts, ranging from natural hazards to gentrification.	The processes of displacement in different contexts are not explored.
There are both positive and negative consequences to public relocation programs for communities and individual households, depending on the individual community and relocation plans. Negative effects include relocation to areas of concentrated poverty, exacerbated segregation, and lost social capital. Positive effects can include improved access to urban amenities and better-quality housing.	The outcomes of individual relocation programs are increasingly studied, but there is no body of evidence about the collective and common effects of these programs across the individual cases.

Key themes	Evidence gaps
1e. Climate change mitigation and adaptation	
Low-income housing and informal settlements are the most vulnerable to climate change's effects in the region, but they do not necessarily receive the proportional attention in national mitigation and adaptation policies.	Most current and rigorous evidence is based on climate effect modeling and housing or population projections. Future assessment and evaluative evidence is needed as climate policies and effects are realized for both mitigation and adaptation goals.
<ul> <li>2. Land use, management, and policy</li> <li>2a. Regularization</li> <li>Regularization has a positive effect on households and communities in specific contexts, with some notable examples of negative or neutral effects.</li> </ul>	The effects of different regularization types or strength are not explored.
Titling is often conducted with other housing, land, or property policies, such as infrastructure construction, taxation, etc.	The challenge of pinpointing the specific effects from titling as opposed to other actions remains.
The implementation of titling is often inconsistent, yielding corruption in processes and disparities in household outcomes.	More implementation studies of titling and regularization are needed, and these could explain some of the differences in outcomes.
<b>2b. Availability of land for low-income housing</b> Land surveys and housing assessments are increasing but still incomplete.	More data collection and monitoring of land uses are needed.
The effects of increasing land supply (e.g., development incentives, use of publicly owned land) on property values and segregation are mixed.	The outcomes of policy interventions across different urban contexts and from different baseline conditions need to be explored.
The effects of land-use regulations like zoning are also associated with negative effects on housing affordability, although not in all cases.	Comparisons of regulatory contexts and their effects on housing affordability are needed.
Studies of policy outcomes—incentives and regulations—are growing.	Case studies dominate. They rarely consider a replicable mix of actions.
<b>2c. Alternative forms of tenure</b> Alternative tenure and ownership structures (like housing cooperatives or land banks) are increasing in the region, with some noted benefits.	There are few studies of the outcomes of alternative forms of tenure, and none about how these compare to traditional ownership or rental.
<b>2d. Housing segregation, disparity, and equity</b> Rapid urbanization increases physical segregation (especially by income group but also by gender, immigrant status, and other classes). Related disparities in access to housing finance, availability of construction materials, etc., also exist.	Academic studies on levels and patterns of segregation have increased significantly, and several countries measure segregation rates of large cities. Some scholars argue that there are insufficient methods for measuring segregation and disparity. Overall, though, the lack of research on race, ethnicity, gender, or immigrant status and housing persists.
The territorial growth in individual city size is a factor highly associated with segregation patterns, along with gaps in public capacity and tools.	Few studies look at the variety of factors and their contributions to segregation at both the urban and the neighborhood levels.

Key themes	Evidence gaps
Public policy is helpful for addressing segregation and disparities but only in coordination with other private and quasi-public actions and service access.	There are few to no studies that analyze policies that might increase equity, primarily because of the lack of policies.
<b>2e. Spatial distribution of housing and opportunity</b> Spatially segregated groups have disparate access to amenities like services, nutrition, education, recreation, and transportation that lead to jobs, health, and related opportunities.	Like housing segregation literature, there is a wide and still-growing volume of literature on spatial mismatches between populations and needed services. Most studies only describe the increasing disparities in access.
There are several demonstration projects in the region seeking to remove barriers, most of which are focused on improving transportation options for the poor, increasing services directly in low-income communities, or incentivizing density development activity in central areas.	Pilot innovations are showing promise with regard to some social and economic outcomes, but replication in other cities or spatial contexts in the region will help to confirm whether the action itself is the cause.
3. Financing and investment	
<i>3a. Financial incentives for housing construction</i> Financial incentives for affordable housing development are common policy tools in the region, and these are employed for many different reasons.	Scholars argue that these incentives are needed in comparison to other policy options, but a cross-country comparison of incentives is needed.
The invariable output of financial incentives is an increase in the number of available housing units. Their outcomes are mixed. Some studies have been done on housing market distortions, housing quality improvements, segregation, neighborhood effects, and shelter access.	The challenge of comparing the increase in units from an incentive versus other policy actions (or that might occur independently) persists. There is a wide opportunity for more work on the outcomes of these incentives across all of these outcome areas.
<b>3b. Taxation</b> Taxation policies that yield more public revenue are increasing throughout the region, and their implementation is tied to discussions around regularization to make tax policy tenable.	Additional analysis of how regularization and taxation are mutually enforcing policy actions is needed.
Though few studies exist, there has been implementation analysis primarily focused on issues of transparency and land valuation.	There are opportunities to study equity outcomes from valuation and taxation specifications as polices increase, in addition to the process studies.
<b>3c. Microfinance</b> Housing microfinance has been promoted as a tool for quality improvements, but constraints associated with the general microfinance industry and challenges associated with low-income housing in the region (such as title) limit its growth.	Studies of finance alternatives that are available to low-income households and their selection of microfinance are needed.
Longer-term outcomes from housing microfinance interventions and related subsidized housing microfinance interventions on household finances, housing quality, and other household outcomes as well as the microfinance enterprise outcomes, are not clear.	Outcome studies from these interventions that compare outcomes for clients to those for alternative financial service recipients and for alternative housing program recipients are needed.

Key themes	Evidence gaps
<i>3d. Loan and mortgage contexts</i> Mortgage and other formal housing finance products have grown and continue to expand in the region aided by securitization and banking regulations. This growth has benefits and limitations.	The literature is primarily descriptive of the markets, their wider economic effects, and the variety of finance options, and less focused on the outcomes for individual households' housing quality and location.
These products primarily continue to serve middle- and upper-income households, as affordability and operational challenges continue to exclude low-income households. Efforts to extend affordable finance products to the poor have had mixed outcomes, from adding valuable assets to some households to producing housing-induced poverty in others.	There is opportunity for more scholarly literature focused on how different financial products affect outcomes for individual households' financial capacity or well-being, especially financial products targeted to the poor, following the example of the few rigorous studies performed in some of the wealthier nations (e.g., Brazil, Chile, and Mexico).
4. Housing policies and the enabling policy environment	
<b>4a.</b> Quantification of housing deficit and conditions to inform policy approaches All countries in the region perform some version of housing condition assessments or census, though alternatives for more rigorous data collection have been suggested. Census data on housing is the best source to locate and georeference housing needs for smaller territorial units. Most studies show decreasing qualitative and quantitative deficits in housing across the region.	Data quality on informal settlements is still a concern in all countries but particularly in the poorest countries and those with a higher proportion of informality. Improving the public research infrastructure might be helpful and there is a need to integrate local and national datasets on these areas.
Data and evidence are increasingly used to inform national and local housing policies, particularly among the wealthier nations in the region with more public resources and a housing research infrastructure.	Studies of the use of evidence itself are few and far between.
<b>4b. Housing policy approaches</b> Housing policies are increasingly being implemented at both national and local scales.	Implementation studies of the intermingling of policies at these scales are needed at the same time as comparisons of the outcomes between the two governance approaches.
Similar policy approaches and specific programs are being employed across the region, with differences noted primarily between groups of nations by general income level and economic output.	Policy analyses of the similar pathways of housing policy in the Latin American and Caribbean region should continue, given current population and economic projections.
<b>4c. Demand-based housing subsidies</b> Demand-based housing subsidies are the most common housing policy tool in the Latin America and Caribbean region, the most prominent model of which involves a subsidy for housing finance credits based on a household's active savings and investment.	Studies comparing different subsidy programs for the same population have not been developed.

Key themes	Evidence gaps
Several rigorous studies have been employed to assess these programs' effects on housing access, spatial segregation, and household finances—all showed mixed effects, depending on the context and particular program.	Opportunities to continue to rigorously pursue the long-term outcomes of these programs continue, especially regarding household outcomes (such as health, educational attainment, and income) and neighborhood satisfaction and community outcomes (such as segregation, economic development, and services).
While the effects of these programs in reducing housing deficits are reported consistently, their benefit for the lowest-income households is mixed.	Policy analyses regarding tweaks to program requirements may help expand the reach of these programs, with subsequent verification evaluations.
<b>4d. Rental housing policy</b> Homeownership policies and programs have dominated in the Latin America and Caribbean region, though rental housing policies are becoming necessary given urbanization, affordability, and segregation rates.	Continued housing tenure studies are needed to determine whether private market rentals are becoming more common and which demographic and household profiles can access rental housing when encouraged by policies and programs. In this and all other subtopics in this topic, there are few to no rigorous evaluations or research products given the lack of rental policies.
The lack of affordable, well-honed formal rental markets leads to informal rental housing, with its consequent housing quality, household assets and savings, and overcrowding conditions. Informal rental housing has also had community-level outcomes with regard to segregation patterns.	Conditions in informal rental housing should be monitored, along with its costs and location and regional effects, to determine whether and how appropriate rental interventions for the poor are needed. Data at the neighborhood level are critical.
Public housing was a common rental housing policy option, but it has largely lost favor because of its segregation and housing quality effects.	Policy analyses are needed regarding housing construction incentives for rental housing that does not perpetuate segregation.
Few examples of market-based rental housing subsidies exist in the region.	The lack of rental subsidies is exacerbated by the lack of information on private rental markets—both formal and informal—and low-income households' challenges with accessing subsidized units.
Local policies for regulating rental units, such as tenement and eviction laws or renter rights, are rare. Where such policies are employed, scholars argue that they serve as disincentives for landowners.	Demonstrations of regulations based on rental market considerations could produce more evidence about the effects of rental regulation.
<b>4e. Rural and urban housing policy</b> Several policy studies point to gaps in comprehensive regional plans that consider urban, suburban, and exurban territories—resulting in increased sprawl and segregation. A few urban expansion demonstrations have shed light on potential desired outcomes for poor households.	Research-based demonstrations of comprehensive planning for existing metropolitan regions, as well as ongoing policy interventions for dealing with future regional changes, are needed.
<b>4f. Neighborhood development programs</b> Like slum-upgrading programs, neighborhood development programs targeting a variety of populations or places with the hope of improving conditions for a city's poor have generally improved housing conditions and inventories but have resulted in a mixed bag regarding community outcomes.	Most studies are case based and describe the implementation of pilot projects (including the government's role, multilateral finance, and community engagement), as opposed to outcome studies of the broad national, or even urban, effects from these programs.

Key themes	Evidence gaps
5. Social organization	
<b>5a. Community-based housing solutions</b> The influence of collective community action focused on housing can be overshadowed by political and private interests in low-income communities and especially in informal settlements. As a consequence, scholars argue that strong links with local government and nongovernmental organizations are critical for change in this area.	Case studies and histories dominate this field, and there are few comparative studies of community action in different contexts or in response to different conditions.
Despite lack of robust evidence of impact on housing, strong social networks and capital are common in these communities. This condition is even noted as a desirable one within informal settlements.	Again, case studies are common. The prevalence of case studies limits the ability to develop policy interventions that can harness social capital for common and individual household benefits.
<b>5b. Social capital impacts of housing programs</b> Housing programs typically increase mobility and change neighborhood dynamics, both of which shape social capital. In all cases, housing programs must consider existing local capital to yield positive outcomes for the poor.	The field is dominated by exploratory case studies, because most neighborhood development projects are place based. Additional research into common social capital outcomes is needed.
Housing programs' direct outcomes are mixed and include outcomes both positive (increased educational attainment, collective action opportunities, etc.) and negative (concentrated poverty, increased crime, social tension, etc.).	Research into taxonomies of past housing programs and program specifications mapped onto negative and positive outcomes could help generate clearer program recommendations.
<b>5c. Community participation in housing programs</b> Historically, most housing programs have not engaged comprehensively and systematically with community members—a failing some scholars suggest contributes to negative program outcomes.	Case studies of community engagement processes—or their lack—are common. Most of this work described the techniques, tools, and approaches used to define the quality and nature (e.g., "top down") of engagement.
When implemented, community engagement often yields positive outcomes for residents with regard to beneficiary satisfaction, perceptions of government, and housing unit maintenance.	Resident and occupant surveys of housing programs are rare, and analysis of these data is necessary.

## Introduction

In 2009, the world's urban population surpassed its rural population for the first time in human history. The demand for safe, decent, and affordable housing has evolved qualitatively as well as quantitatively, with dramatic, positive increases in average household wealth in most countries leading to physical improvements in housing conditions. On the whole, the number of residents living in slums or informal settlements has also receded as a portion of the urban population in the last two decades, despite an increase in absolute numbers. The decades of effort from multilateral development organizations, national governments, markets, nongovernmental organizations, and communities themselves have improved the housing conditions of contemporary global citizens and demonstrated what can be possible in housing. Efforts to advance access to housing have been supported by international human rights law, since the inclusion of the right to an adequate standard of living in the 1948 Universal Declaration of Human Rights. Building on this and other international agreements, safe, adequate housing emerged as a core component of the Habitat II agenda ratified in Istanbul in 1996. As such, the basic principles of adequate housing established by the United Nations (detailed in box 1) have formed the basis for many key housing initiatives, policies, and programs over the past two decades and about which research documentation is included in the pages that follow. However, the work is far from over.

In Latin America and the Caribbean, affordability—particularly in dense urban growth areas—has emerged as a critical factor equal to housing quality, formalization and title regularization, and access to urban services, among other contributors to household well-being and the challenges facing public policy and charitable interventions. The affordability of shelter has been complicated by an overall reduced prioritization of housing and land use in national policy, the consequently increased reliance on the private market to provide housing options, and a subsequent promotion of homeownership as a policy goal—often to the neglect of rental or other more cost-effective or sustainable solutions. As the United Nations Human Settlements Program (UN-Habitat) would argue in its 2016 World Cities Report, housing needs to resurge as a policy and program priority, and sufficient attention must be paid to the types of housing tenure, finance, and construction options made available.

#### BOX 1

#### Seven Basic Principles of Adequate Housing

- Security of tenure: housing is not adequate if its occupants do not have a degree of tenure security, which guarantees legal protection against forced evictions, harassment, and other threats.
- Availability of services, materials, facilities, and infrastructure: housing is not adequate if its
  occupants do not have safe drinking water, adequate sanitation, energy for cooking, heating,
  lighting, food storage, or refuse disposal.
- Affordability: housing is not adequate if its cost threatens or compromises the occupants' enjoyment of other human rights.
- Habitability: housing is not adequate if it does not guarantee physical safety or provide adequate space, as well as protection against the cold, damp, heat, rain, wind, other threats to health, and structural hazards.
- Accessibility: housing is not adequate if the specific needs of disadvantaged and marginalized groups are not taken into account.
- Location: housing is not adequate if it is cut off from employment opportunities, health care services, schools, childcare centers, and other social facilities, or if it is located in polluted or dangerous areas.
- Cultural adequacy: housing is not adequate if it does not respect and take into account the expression of cultural identity.

Source: Office of the United Nations High Commissioner for Human Rights and UN-Habitat, 2009, "The Right to Adequate Housing."

Research is needed to meet this goal. Without empirical evidence, housing deficits cannot be assessed, interventions' outcomes cannot be evaluated, and appropriate policy and programs cannot be designed. Rigorous evidence of the outcomes from housing programs, market interventions, and policies is uncommon. This gap is evident in all housing contexts and in every region of the world, especially in middle- and low-income nations. Fortunately, individual scholars are moving the boulder forward with support from practitioners, policymakers, and multilateral organizations. These entities expand research as well as advocate for scholarship's critical role in identifying trends, designing

appropriate programs, and monitoring their effects—the hallmarks of practice-oriented research. For the benefit of housing practitioners and policymakers, this field must continue to grow.

It is in this spirit that Habitat for Humanity International (HFHI), the Cities Alliance (CA), and a group of other stakeholders including the Brazilian Ministry of Cities and Caixa Econômica Federal, Chile's Ministry of Housing and Cities, UN-Habitat, and the Inter-American Development Bank (IDB)— have partnered to create the Global Housing Research Initiative. The initiative's purpose is to "examine how housing investment and policies address the housing needs of the poor, improve the sustainability of cities, expand economic activity and promote equity and resilience for households and communities in the global south, and for the urban poor in particular." (HFHI 2015).

In contrast to most other research collaborations, this initiative is collectively focused on developing a practitioner-focused research agenda, engaging stakeholders from all sectors in dialogue with experienced researchers and scholars of housing and housing-related issues and policies. The ultimate intent of the initiative's establishment is the widespread deployment of the most effective and scalable strategies for responding to the global housing deficit. The path toward that outcome requires increasing the knowledge and capacity of practitioners of all kinds (from public sector agencies to community-based organizations, and even private sector firms) about housing conditions for low-income households and the success or failure of past programs to address them.

The Global Housing Research Initiative is intended to be a multiphase effort, with the first phase's culmination timed to coincide with the third United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in October 2016, where this report will be delivered publically. The Initiative's research advisory council (RAC), formed simultaneous to this phase's start, guided and will continue to oversee this initiative as it expands to include a broad coalition of national governments, civil society organizations, research institutions, and private and public actors and funders globally. Because Habitat III will be in Quito, Ecuador, the preliminary phase of the initiative also includes a literature review of housing research in the Latin America and Caribbean (LAC) region. The Initiative partnered with the Urban Institute (Urban) to execute this first project.

### Purpose

The initiative's first phase focuses on assembling, analyzing, and disseminating the most compelling housing-related research from the LAC region since 2000. Additionally, the work seeks to identify the topical gaps in the existing inventory of research and make recommendations for prioritized additional research topics. The LAC research review is intended to serve as a pilot for similar reviews in other

regions seeking to identify and analyze relevant and rigorous research on the programs and policies that affect low-income households and communities and their access to adequate, affordable housing.

To date, there have been dozens of reviews in addition to hundreds of individual research projects in the subject areas of housing and land use in the LAC region. Yet, few provide a level of synthesis that can be understood by multiple audiences—including researchers, housing program practitioners, and public sector and policy staff. The challenge and need to synthesize housing research is especially relevant for LAC because of its high level of engagement, innovation, and intervention on issues of lowincome housing. LAC governments and civil society groups have recently experimented with various types and scales of housing intervention to meet the needs of a growing urban population.

While such overviews provide important basis for a comparative understanding of the region's housing conditions and improvements, most of the research to date involves more targeted analysis of a housing strategy, program or experience in one locality or country context. The studies remain disjointed by city, country, or topic, and often are presented in formats inaccessible for a practitioner audience, behind paywalls of scholarly journals, or in a foreign language. These constraints have limited the degree to which research has informed housing policies and programs in the region.

### Methods

The attached review is the product of extensive archival mining, bibliometric referrals, and peer input from the initiative's RAC members; exactly 1,019 unique documents were reviewed. Each document's attributes, including author names, document title, year, publication type, publisher, and language of publication (typically, Spanish, Portuguese, and English), were standardized during the bibliographic phase in April 2016. At this point, researchers from across the LAC region were solicited to participate in the contributing researchers group to provide additional bibliographic references. RAC members and confirmed contributing researchers have provided input either via e-mail or phone, or through a series of in-person meetings held in São Paulo, Brazil; Toluca, Mexico; and Santiago, Chile, at different stages of the work's development. This list of RAC members and contributing researchers is provided in appendix A.

From the final bibliographic list, Urban's researchers produced an annotated bibliography with sufficient detail about the source to link to other potential sources and provide a picture of the overall state of literature. Reviewers read each document and provided additional attributes—or annotations—to summarize more detailed information, which was the precursor to the full and final literature review communicated here in written narrative form. The first set of annotations dealt with the relevance of a proposed document to the subject of LAC housing overall, and then its relevance to a specific

**geographic grouping**. For the LAC region, subregions are Mexico, Central America, the Caribbean basin, the Andean region, Brazil, the Southern Cone, and a classification of "Latin America" for studies with cross-regional scope; and (2) an overall **housing-related topic** and specific **subtopics** as defined by the initiative and the RAC. Documents were classified under the subject-matter areas in table 1.

#### TABLE 1

#### **Taxonomy of Housing Research Topics and Subtopics**

#### 1. Low-Income Housing Conditions

Includes research on housing dynamics in low-income communities, including physical quality of housing, technology and auto-construction, consolidation processes, upgrading, and displacement

1a. Impact of physical housing quality on household and community dynamics

1b. Process of auto-construction and consolidation

1c. Barriers to housing improvement

1d. Displacement

1e. Climate change mitigation and adaptation

#### 2. Land Use, Management, and Policy

Includes research on land policy and markets, land-regularization programs, and the impact of tenure and titling on lowincome households

2a. Regularization

2b. Availability of land for low-income housing construction

2c. Alternative forms of tenure (co-op; lease to own)

2d. Housing segregation, disparity, and equity

2e. Spatial distribution of housing and opportunity

#### 3. Housing Finance and Investment

Includes research on means to mobilize capital for housing investment, as well as the financial implication of housing access and investment for the poor

3a. Financial incentives for housing construction

3b. Taxation

3c. Public-private partnerships

3d. Microfinance

3e. Loan and mortgage contexts (including securitization)

#### 4. Housing Policies and Enabling Environment

Includes research on housing policies and programs, often government led, designed to create access to housing for lowincome families

4a. Housing subsidy programs

4b. Rental housing policy

4c. Rural and urban planning policy

4d. Neighborhood development programs

#### **5. Social Organization**

Includes research on the social dynamic of housing and neighborhood development for low-income communities, as well as alternative models for housing provision

5a. Community-based housing solutions

5b. Social capital impacts of housing programs

5c. Community participation in housing programs

#### Source: HFHI 2015, page 7.

**Notes:** Documents were collected in all subtopics with final tallies noted within their individual research reviews. The single exception to this is subtopic 3c, "public-private partnerships," for which a small number of only tangentially relevant articles were collected. These articles are referenced in other subtopics (particularly, 3a and 4a) in reference to private sector engagement with public policy around housing issues. Further, subtopic 4a, "housing subsidy programs," was distributed among two additional subtopics, "quantifying housing deficits" and "housing policy approaches," because of the volume of sources.

The annotated bibliography helps identify gaps where there is an insufficient volume of literature on specific subject or for a specific geographic region. The bibliographic database and the annotated bibliography for this work are available separately.

In addition to each document being classified according to its relevance to the LAC region and the established housing topics, it was classified based on the nature of the research or evaluation design underlying the report—from exploratory thought pieces to experimental program or policy evaluations. The evidence-type taxonomy used for this literature is described in table 2.

#### TABLE 2

#### **Taxonomy of Research Types**

#### Experimental

In an experimental study, the investigator actively manipulates which groups receive the agent or exposure under study. An example is a randomized controlled trial in which two comparable groups are assigned to either treatment by a policy or program or no treatment (i.e., the control).

#### Quasi-experimental

Quasi-experimental research shares similarities with the traditional experimental design or randomized controlled trial, but it specifically lacks the element of random assignment to treatment or control. A quasi-experimental study almost always has a comparison group (with the exception of time-series studies).

#### **Policy analysis**

Policy analysis typically involves predicting or determining which of various policies will achieve a given set of goals in light of the relations between the policies and the goals. This could include analysis of existing policy contexts, which is analytical and descriptive—it attempts to explain policies and their development but is not an evaluation of its effects. This could also include analysis for new policy, which is prescriptive—it is involved with formulating policies and proposals (e.g., to improve social welfare). We categorize many censuses, demographic surveys, and housing deficit studies in this group.

#### **Case study**

Case studies are analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied holistically. The case that is the subject of the inquiry should be an instance of a class of phenomena the case illuminates.

#### Scholarly exploratory study

Exploratory research is conducted for a problem that has not been clearly defined and helps determine the best future research design, data collection method, and selection of subjects. We include theoretical scholarly pieces without data analysis (qualitative or quantitative) in this grouping.

#### Advocacy monograph

Less rigorous studies or reports designed to make the case for a certain policy or program or to raise awareness of a certain issue are classified as advocacy monographs. These are often published by nongovernmental organizations and government agencies.

Source: Urban Institute.

The final tally of documents included in the bibliographic database was 1,019 distinct monographs,

including books, book chapters, peer-reviewed journal articles, published working papers, and

organizational research briefs. The majority of these were collected and reviewed in the annotated

bibliography, which included 823 documents. The distributions of studies by geographic focus and by overall topic are shown in figures 1 and 2, respectively.

#### FIGURE 1





**Source**: Urban Institute tabulation. **Note:** *N* = 1,019.

#### **FIGURE 2**

#### **Distribution of Reviewed Studies by Topic Area**



**Source**: Urban Institute tabulation. **Note:** *N* = 1,019.

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#### FIGURE 3 Frequencies of Reviewed Studies by Subtopic



**Source**: Urban Institute tabulation. **Note**: *N* = 823

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These distributions clearly denote the abundance of housing research proliferating among wealthier nations in the LAC region, particularly in Brazil, Mexico, Chile, and Argentina, and the paucity of work in the Caribbean basin and Central America. The vast majority of research work has been conducted in land use and related land management and policy subtopics or in overall housing subsidy programs—a pattern reflective of that in other regions. When housing subsidy program research is looked at in more detail, we can see that it produced the most prolific amount of product in the recent past—with 156 reports noted in that subtopic alone (figure 3).

Drawing from the complete research database, the top sources of research on housing were largely research centers and universities; the 10 largest producers of this type (table 3) collectively published 131 pieces of research. Generally, research produced was academic led, sponsored by insitutions of higher learning. However, multilateral organizations produced significantly more publications individually. The largest research producer of reports and documents related to housing in LAC was the IDB, which produced60 publications on housing for the period analyzed.

#### TABLE 3

**Top Sources of Housing Research at Regional Level** *Institution and website, by type* 

#### **Multilateral organizations**

United Nations Economic Commission for Latin America and the Caribbean, www.cepal.org Inter-American Development Bank, www.iadb.org World Bank, www.worldbank.org UN-Habitat, www.unhabitat.org

#### Research organizations, universities, and university-led journals

CLACSO-Latin American Council of Social Sciences, www.clasco.org.ar Cuadernos de Vivienda y Urbanismo (Pontificia Universidad Javeriana), revistas.javeriana.edu.co/index.php/cvyu FLACSO-Facultad Latinoamericana de Ciencias Sociales, www.flacso.org Latin American Housing Network (University of Texas at Austin), www.lahn.utexas.org/ Lincoln Institute of Land Policy, www.lincolninst.edu/ Laboratório de Habitação e Assentamentos Humanos (Universidade de São Paulo), www.fau.usp.br/depprojeto/labhab/ Revista INVI (Universidad de Chile), revistainvi.uchile.cl/ Universidad de los Andes, www.uniandes.edu.co/ Universidad Nacional de Colombia, unal.edu.co/ Vivienda Popular (Universidad de la República), www.fadu.edu.uy/vivienda-popular/ Independent academic journals Cadernos Metrópole, www.cadernosmetropole.net EURE Journal of Latin American Urban and Regional Studies, www.eure.cl Habitat International, www.journals.elsevier.com/habitat-international

Revista Brasileira de Estudos Urbanos e Regionais, unuhospedagem.com.br/revista/rbeur/index.php/rbeur

Urban Studies, usj.sagepub.com

# **Housing Research Reviews**

The final literature review presented here is a synthesis of the key themes and the state of the evidence for each subtopic. The summaries for the topics describe the volume of literature and noticeable gaps as well. Not every document or monograph reviewed in the bibliography or annotated bibliography is explicitly cited in the reviews for the purpose of brevity. Those citations explicitly listed are mentioned as emblematic of the literature. We refer interested parties to the bibliographic database and the annotated bibliography for the more comprehensive set of references.

### 1. Low-Income Housing Conditions

Exactly 162 documents were classified as falling under the general topic of low-income housing conditions, particularly those associated with housing conditions in informal settlements or self-built neighborhoods such as upgrading programs. The research reviewed in this section encompasses studies on housing dynamics in low-income communities, including physical quality of housing, technology and auto-construction, consolidation processes, upgrading, displacement and climate change mitigation. Recent studies have estimated the scale of housing deficits for the region, finding that one in every three households in LAC struggles with some form of inadequate housing. Specifically, 5 million households rely on another family for shelter, 3 million live in houses that are beyond repair, and 34 million live in houses that lack one or more of the following: title, water, sewage, adequate flooring, and sufficient space (Bouillon 2012). The subtopic with the largest proportion of research products involved barriers to housing improvements, which included challenges for upgrading programs.

In urban areas, a large share, though not all, of these shelter deficiencies are concentrated in informal settlements, defined by UN-Habitat as neighborhoods characterized by overcrowding, poor or informal housing, inadequate access to safe water and sanitation, and insecurity of tenure (UN-Habitat 2003a). In Latin America, one-third of the total urban population was living in informal settlements in 2001, while in countries such as Haiti, Nicaragua, Belize, Bolivia, Guatemala, and Peru, this represented over two-thirds of the urban population. On the other hand, in Chile, Costa Rica, Uruguay, and various Caribbean islands, slum dwellers represented less than 15 percent of the country's urban population. Research shows that not all residents of self-built neighborhoods experience the same levels of deprivation, and disaggregation by type and level of deprivation is necessary for appropriate solutions (Moreno 2011).

Research reviewed in this section considers, in addition to living conditions in informal settlements, the characteristics of low-income housing in other typologies, such as subsidized units, consolidated neighborhoods, and even occupations in vacant buildings. The research in this section is divided into five subtopics: impact of physical housing quality on household and community dynamics, process of auto-construction and neighborhood consolidation, barriers to housing improvement, displacement, and climate change mitigation.

#### 1A. Impact of Physical Housing Quality on Household and Community Dynamics

The literature reviewed in this section considers the impact of physical housing quality on household and community dynamics in both formal and informal settings. While the majority of the studies in this topic focus on urban household conditions, a few studies focus directly on housing conditions for rural households, which typically experience greater qualitative housing deficits. Four themes emerged in the research reviewed: assessments of shelter deprivations and methodologies for assessing quality; linkages between housing conditions and health, stability, and quality of life; analysis of different building typologies and built forms and how that relates to well-being; and opportunities for innovation in construction of sustainability to improve living conditions.

Various authors explore shelter deprivation and the connections between housing and poverty, generally finding that the two are linked. At the neighborhood level, poor neighborhoods experience concentrations of health-threatening environmental issues, as well as challenges in accessing quality education or jobs (Moreno 2011). Household-level conditions also impact the well-being of a family, based on the size, materiality, and safety of a unit. Camargo and Hurtado (2011) challenge the popular perception that access to housing diminishes household poverty, maintaining that it is not clear how, for how long, or at what costs, especially when poverty is considered via a multidimensional approach. In fact, conventional housing strategies may cause housing-induced poverty, either through debt burden or through isolation from economic and social networks of the city. While there is no consensus in the literature on how to evaluate the quality of housing or housing policies to capture the connections between housing and poverty, a few scholars propose new qualitative methods to capture key features such as integration or participation (Ramírez 2002; Freitas 2004).

Several experimental studies make connections between housing—including the physical quality of the living environment and the tenure arrangement - and health, making a strong case for establishing minimum living standards. For example, Gertler et al. (2012) evaluated the Mexican program to deliver materials and technical assistance to provide concrete floors (Programa Piso Firme), finding that

indicators of both children's physical health and mother's mental health improved. Indicators of children's health outcomes include reduced incidence of diarrhea, anemia, and parasites, whereas mother's health was measured through surveys on mood and level of stress. Similarly, an experimental study by Galiani and Schargrodsky (2004) in Buenos Aires relied on a natural land-titling experiment to show that having a formal title lead to health gains—specifically, increases in weight-for-height among children and a reduction of teen pregnancy. A third experimental study (Galiani et al.2014, 2015) found that a prefabricated housing solution in three countries (Mexico, El Salvador, and Uruguay) improved the quality of housing and had notable outcomes in terms of children's health, such as significant reduction in the incidence of diarrhea; the impact was seen in two of the three countries studied. Notably, this topic is one of the few topic areas related to low-income housing in which experimental studies have been conducted.

Other studies have made the connection between living environments and health, showing the health risks associated with certain built environment features, such as the lack of potable water or sewage causing increased incidence of diarrhea or acute respiratory infection among the urban poor (Fay and Wellenstein 2005; Rojas 2014). For example, when analyzing infant mortality by living standards, research from São Paulo shows higher coefficients of infant mortality for residents of favelas or informal areas (Ventural et al. 2008). Alzate et al. (2012) document the Colombian government's strategy of "new rural housing" through a quasi-experimental study analyzing the conditions of beneficiary and wait-list households to find that health elements of the strategy were ineffective, as households still experienced environmental and sanitary deficiencies. Based on connections between housing and health, Magalhães et al. (2013) argue for greater integration of housing and health programs, and Cohen et al. (2006) analyze the Healthy Housing movement in Brazil, a program focused on merging health-promotion strategies with a focus on healthy environment, as a pathway toward this integration.

In addition to connections between housing and physical health and well-being, research points to connections between housing and educational attainment as well as social and emotional stability. At the regional level, a study by the United Nations Economic Commission for Latin America and the Caribbean (Kazttman 2011) found that variations in housing quality affect the educational development of youth, and other studies show that children living in precarious housing conditions have lower enrollment, attendance, and performance at school (Moreno 2011; Rojas 2014). More broadly, some scholars organize their work around the quality of life frame. Shifting the attention to subsidized housing projects, Jiron and Fadda (2003) conducted an evaluation of quality of life focusing on three typologies of housing programs in Santiago, Chile, targeted to different income groups, and identified

various neighborhood and metropolitan-level challenges to quality of life. The authors found that the design of programs gave greater attention to the physical conditions of the surroundings, rather than environmental, sociocultural, or economic conditions. This is attributed to the lack of coordination between housing and other social policy programs, including health, education, transport, and urban planning. In Campinas, Brazil, Kowaltowski (2006) conducted a post-occupancy evaluation in five low-income housing developments, finding that satisfaction with housing conditions there is high, despite low feelings of security. However, this satisfaction is due to access to homeownership opportunities, rather than to the design of the homes and neighborhoods.

Several studies address the connections between specific elements of the built environment, such as scale, building typology, and construction materials, and viability of production and resident wellbeing (Ballén 2009; Mitchell and Acosta 2009; Oliveira 2012; Barraza 2014). While there are no conclusive studies about the impact of different sizes of social housing schemes, Oliveira (2012) explores the relation between number of units and resident satisfaction in social housing in Brazil, finding that integration between social housing residents with those of surrounding areas is best accomplished at a smaller scale, through dispersed units or smaller buildings. The stigma perceived by residents in this case decreased as the scale of the building did. Building on this literature, research especially from the fields of design, architecture, and engineering—suggests potential innovations in construction of sustainable habitat to improve resident outcomes (Grassiotto and Grassiotto 2003; Lovera 2005; Lobera and Michelutti 2007; Carvalho et al. 2009; Flores Cerqueira 2012; Alonso et al. 2016).

#### 1B. Process of Auto-construction and Consolidation

For low-income populations in many, but not all, LAC countries, auto-construction, or self-building, is the principal strategy to access housing in both urban and rural areas; however, land tenure and availability issues prove more difficult in the former. The literature reviewed in this section explores auto-construction and neighborhood consolidation, and several studies reviewed observe these processes longitudinally. Over the past several decades, most governments have moved away from policies of slum clearance and evictions in favor of upgrading programs and even incremental housing. While formal policy approaches to neighborhood development are addressed more thoroughly in topic 4d, some research in this section assesses how those programs have impacted both household-level and neighborhood development. Last, a small body of work proposes novel, sustainable approaches to retrofitting or improvements in self-built neighborhoods. While much of the literature considers the production of self-built housing within the broader context of informal settlements, Del Huerto (2014)

also recognizes invisible informality as the process of self-building that occurs within the integrated city through densification, allowing for a more efficient use of existing infrastructure and accommodating residence in better-served integrated neighborhoods, though concerns of building standards and overcrowding remain.

From a theoretical standpoint, the literature on the social production of habitat, which emerged at the end of the 20th century, is relevant for the understanding of household and neighborhood consolidation. Ortiz (2012b) defines this is as processes that generates habitable spaces and housing units under the control of self-producers and other social agents operating on a nonprofit basis. The social production of habitat is explored in more length in topic 5. At the intersection of theory and policy, several authors document and analyze the transition at the national policy level toward progressive or incremental housing policies (Ferguson and Navarrete 2003; Magalhães 2012), finding this approach appropriate for the low- to moderate-income majority. Case studies and process evaluations document how this is done in practice, for example, with regard to participation in Colombia (Vargas et al. 2010), incremental housing in Chile (Greene and González 2004, 2012; Aravena and Iacobelli 2013; Gray 2014), and the Tu Casa program in Mexico (Jardón 2007).

Several studies analyze the characteristics or conditions in informal settlements, and many review the degree to which policy efforts to directly address these communities have changed the conditions (O'Hare 2001; Rodriguez 2008; D'Ottaviano and Pasternak 2015; Calderón 2015). In general, studies that measure conditions between census periods reveal improved conditions, especially for service coverage. For example, through analysis of the intercensus period from 2000 to 2010, Pasternak and D'Ottaviano (2016) document a general improvement in access to infrastructure services and basic living improvements in Brazil on nearly all indicators (e.g., potable water and sewage, electricity), suggesting that federal policy interventions in informal settlements have been effective. However, this investment was focused in Brazil's largest cities, and authors argue for better integration of small and medium-sized municipalities in progressive policy implementation.

Additionally, multiple case or exploratory studies have documented the processes by which informal settlements are created and consolidated at the household level, involving the effort of individuals and households to improve the physical characteristics of their homes through available income or access to informal, typically high-interest loans (Karina de Arruda Lima Brasil 2003; Valverde 2006b; Sá 2009; Leitão 2009; Gattoni et al. 2012). The incremental consolidation of the home is done through independent or family labor, or in some cases, through hiring of a local contractor. Research in El Salvador found that family strategies for investment vary widely, and availability of disposable income is a requirement for these processes, even though approaches to and speed of investment are not necessarily dictated by income (Gattoni et al 2012). Brandão and Mählmann Heineck (2003) explore how the meaning of "home" for different families then influences the design and process of consolidation. Romero et al. (2005) look specifically at the role of women in assisted self-building programs, arguing that solidarity networks, often led by women, are an important resource traditionally overlooked by housing programs. While much of this process is done at the family unit, community organizations may accelerate this process. Based on studies of consolidation in Cartagena de Indias, Guarín (2003) concludes that in the absence of such community organizations, communities often lack the connection to relevant municipal or state agencies to access physical and social resources necessary for improvements. At the neighborhood level, research similarly explores how the processes of formation and consolidation occur (Lombard 2014). Hernández et al. (2014) relate the growth of informal settlements to politics and mechanisms of local control, documented through the case of Tampica, Mexico, as authorities often take advantage informal conditions for political gain.

A growing body of literature, led by the Latin America Housing Network, is focused on the consolidation of second-generation neighborhoods (Ward, Jiménez, and Di Virgilio 2014a and 2014c) and approaches that could holistically address housing rehabilitation and community revitalization. This research primarily employs detailed case studies to track conditions in settlements formed in the 1970s or 1980s, in what was then the urban periphery but has since been fully integrated into the urban fabric. The network conducted a comparative research project using an intensive case study methodology in 11 cities (detailed in Ward, Jiménez, and Di Virgilio 2014b) to gather household, settlement, and municipal data about rehabilitation and retrofitting. Based on the findings, authors propose a new agenda of physical development, financing, legal regulation, and social mobilization policies to target housing and neighborhood rehab of cities' old established working-class, self-built neighborhoods. Ward (2015) argues that second-generation neighborhoods have been disregarded as a policy priority but are crucial to efforts to encourage high-density mixed-use and mixed-tenure neighborhoods. One core challenge in second-generation neighborhoods is the issue of ownership, inheritance, and residential mobility. Ward (2011; 2012) documents how original "owners" or their family members typically remain in the same housing units, which are inherited by children and grandchildren. However, confusion over ownership and "clouded" land titles often prevent low- to moderate- income families in these communities from reselling and capturing the accrued value of the home. Similarly, Gilbert (2001) documents how, unlike housing units for middle- to upper-class individuals, low-income, self-built houses are seldom resold, raising the question of whether these homes have true exchange value.

Finally, a cluster of studies explores low-cost and low-tech innovations in construction or retrofitting at the household level (Sattler 2007; Sullivan and Ward 2012; Masotti et al. 2016), as well as

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strategies for tactical urbanism at the neighborhood level (Brillembourg and Klumpner 2008; Werthmann 2009), to improve living conditions and facilitate more socially sustainable approaches to planning. Additionally, Samora (2010) proposes qualitative criteria for evaluating housing quality in multiple built environments.

#### 1C. Barriers to Housing Improvement

Research identifies many barriers to housing improvement at the household, neighborhood, and city levels, such as poverty, lack of infrastructure, land tenure, access to finance, and exposure to risk, among others. While key topics such as regularization and loans are addressed at length in other sections, the research reviewed in this section—primarily case studies and policy analysis—shows how these are direct barriers to improving the quality of one's habitat.

Notably, Simoni and Szalachman (2007) compiled a metareview of poverty reduction programs focused on housing through five core pathways (access to land, access to housing, availability of basic services, access to public space, and income distribution based on productive activities), highlighting the diversity of approaches employed across the region to address these barriers. Based on the inability of many of these programs to make substantial improvements in the quality of life for the urban poor, García (2007) documents a case-study from San Cristóbal, Venezuela, to develop a series of considerations before intervention: the design of the program to address the structural cause of the issues, a socially responsible approach, and inclusion of the affected population. At the city scale, García (2001) finds that development of informal settlements over several decades in Monterrey, Mexico, is linked to planning and urban management instruments of the city, as the municipal authorities have no mechanisms to meet low-income households' demand for urban land. Dysfunction of land markets, more broadly, and the lack of housing policy instruments applicable in informal settings are generally viewed as core barriers to stability and housing improvement (Maricato 2003; Baltrusis 2004; Valença 2008; Abramo 2009; PAOT 2010; Rueda 2011).

Inadequate infrastructure is an additional barrier to improving housing quality, notably because it requires significant investment and technical knowledge, especially when adding infrastructure to large, dense settlements or those located on slopes, hills, or other risk areas. Based on these conditions, the investment required varies widely. In Brazil, for example, the costs amount to approximately one-third the cost of a completed low-income standard home (Abiko et al. 2007).

While costs of upgrading are generally assumed to be prohibitively high in center-city areas or in risk zones, several authors address city-level benefits to pursuing such strategies. Magalhães and Rojas (2007) examine the challenge of informal settlements in urban centers, through the case of the Igarapés Program in Manaus, Brazil, concluding that settlement-upgrading projects in downtown areas are more than poverty-alleviation operations; rather they are full urban development operations that also benefit the poor. Documentation of the Igarapés Program reveals that it is feasible to do upgrading in environmentally sensitive, centrally located areas. Hernández (2010) analyzes marginal housing on the periphery of the open-air dumps in Tamaulipas Mexico, finding that it is necessary to clean up open dumps following official standards set by government, as development will continue to happen due to marginalization and lack of appropriately priced housing stock in the city.

However, access to secure land or infrastructure at the household level may not be enough to allow for improvement of housing conditions, especially where low-income households may not be able to access lending to improve the physical conditions of their homes. For example, Niño (2006) demonstrates that the institutional barriers that prevent poor people from leveraging their assets due to the lack of private financial institutions willing to lend to the poor and, accordingly, the lack of formalized or secured property rights are not the main reasons titles do not become loans in Colombia.

In addition to the more structural barriers to housing improvement, some research reviewed links housing quality and natural disasters. Focusing on recovery in Haiti, Moreno (2015) defines three housing typologies emerging out of the earthquake recovery process—settlements (UTEB y Ambassade d'Italie), sites planning (La Piste), and relocation neighborhoods (Morne Hôpital) —and how each are influenced by diverse agendas and perspectives of the international aid.

Overall the research in this section finds that there are multiple, interconnected barriers that make it difficult for households and communities to improve quality of housing without access to appropriate tools or policies and technical and financial resources.

#### 1D. Displacement

Closely connected to studies that weigh the advantages and challenges of consolidation and upgrading of existing settlements and construction of new subsidized housing, a small body of research reviewed in this section assesses the rationale, processes, and impact of displacement or relocation on low-income households. The literature focused on displacement presents various causes, such as the development of new infrastructure or public works, revitalization programs in city centers, removal from risk zones, and reconstruction after natural disasters. Another small body of literature assesses

the impact on households of the move or transition from a self-built environment into public housing. The literature in this section is mostly exploratory. Little research has been done on this issue at a metropolitan, national, or international scale; existing research primarily includes case studies presenting both qualitative and quantitative data on resident experiences of relocation. Their findings warn of the negative impacts of such moves, however, they cannot offer an integral vision of the demands and opportunities for settlement and resettlement throughout a city.

Revitalization of city centers or touristic zones is a driver of displacement. Santos (2010) analyzes the spatial reorganization of Recife, Brazil, through the tourist revitalization process, drawing on resident interviews. Findings suggest that the perceived success of revitalization is complex, but residents benefitted from new housing alternatives that allowed people to expand or adapt their units over time. Analyzing the case of Bogota, Castro (2003) explores involuntary displacement caused by public works during the last three district administrations, observing that the formation of neighborhoods or settlements is a sociopolitical process and the displacement is as well.

Research in various countries has documented the difficulties that low-income families face with the move to subsidized housing, due to change in neighborhoods and interruption of social and community capital. Looking at the emblematic case of La Toma de Peñalolén, Santiago de Chile's last large informal settlement eradicated in 2006, Salcedo (2010) uses focus groups and other qualitative methods to collect data from residents before and after the move out of the settlement and into subsidized housing. Qualitative findings suggest that the move to subsidized housing in Chile may actually have increased social problems, such as violence and disintegration. In Buenos Aires, Cravino (2010a) studies resident perceptions of neighborhoods of subsidized housing, finding that the move to a new neighborhood for many residents means a devaluation of their locational capital; in many cases, although they valued the home, residents preferred the community of origin. Mejía-Escalante (2012) documents the resettlement of a historic informal settlement in Medellín to subsidized housing in the urban periphery, challenging the notion of adequate housing. While the households gained security of tenure and greater coverage of basic services, the move implied greater costs, especially transportation from the new community to social and economic connections near the community of origin.

#### 1E. Climate Change Mitigation and Adaptation

Of the broad literature on climate change and its impact on the LAC region, a much smaller body of work is directly focused on housing. Preliminary housing-related projects around mitigation (or reductions in the greenhouse gasses that create climate change) have focused on energy-efficient lighting and appliance standards. Housing construction case studies include documentation of the application of Brazil's Selo Casa Azul in its Minha Casa, Minha Vida housing, and Mexico's INFONAVIT credit program, which incentivizes developers and homeowners to adopt green technologies whose savings can be monetized for additional credit (Martin et al 2013). Other nations promote voluntary green building standards and improved urban land planning to reduce transportation emissions, such as Colombia's private production of public housing through Ciudad Verde, its successful public housing macroproject (Henao Padilla 2011). These programs are monitored largely by national environmental agencies as part of their international obligations, and individual evaluations of their impacts on housing quantity, quality, and affordability are rare.

Another body of work focuses on climate adaptation policies and programs (that is, responses to climate change's effects). This work, which is also composed of policy analyses and case studies, highlights the significant threats climate change poses to LAC housing and communities, such as longer periods of rain, more consecutive droughts, increased intensity and frequency of hurricanes and tropical storms, and rising sea levels (Irazábal 2010, IDB 2013). Sullivan and Ward (2012) find that in recent years there has been increased awareness and efforts to prepare for and mitigate climate change, but the focus has largely targeted middle- and upper-income residential neighborhoods in urban areas. However, the impacts of climate change in urban areas disproportionally affect low-income housing and informal settlements (UN Habitat 2011c). Low-income housing and informal settlements tend to be located in areas particularly exposed to suffer from natural disasters such as landslides (Irazábal 2010). These areas have no or poor basic infrastructure, such as drainage systems, and their households tend to lack the financial resources necessary to prepare for natural disasters that are a consequence of climate change (UN Habitat 2011b).

Some studies, such as that conducted by FONDEN, Mexico's disaster fund, shine light on particular efforts to assess the degree of housing vulnerability (Aragón-Duran 2015). Aguilar (2004) takes on a broader scope and assesses the vulnerability that Mexican urban areas face. Most studies on housing and climate change have been policy oriented in method and focused on financing options (Ghesquiere et al. n.d.; Cardenas et al. 2007). Martin et al. (2013) find that these types of financing mechanisms mainly address the mitigation of climate change. As environmentally tied housing policies increase in the region, further studies are likely to blossom.

### 2. Land Use, Management, and Policy

In the general topic of land use, management, and policy as it relates to housing conditions and access, the researchers identified and categorized 338 documents—the largest number of references for any one topic area. A large portion of documents was found in relation to the subtopics of land availability and regularization, but the largest portion of documents related to housing segregation and equity in housing access. The growth of work in this area since 2000 reflects the parallel stressors of increased urbanization (and its ensuing land impacts) and housing accessibility, particularly for the lowest-income households. While land-regularization and titling research continued its dominance in the 1990s within the time frame covered by this review, spatial and nonspatial housing segregation, housing access, and consequent challenges for poor households to access transportation, employment, and urban services due to limited housing options all rose in prominence in the literature.

#### 2A. Regularization

Regularization, or the formalization of informal settlements, is a popular policy response to informal patterns of habitation in Latin America (Clichevsky 2003). Scholarly attention on the topic was largely spearheaded by Hernando de Soto's work in Peru in the 1990s (de Soto 1989 and 2000). Some of these policies have been in place for decades, and they are generally expected to improve housing security, economic stability, and overall well-being (Caria 2008; Castagna, Raposo, and Woelfin 2010; Escudero 2012) although positive impact remains contested by some scholars. The studies reviewed in this section outline the diversity of regularization models, as well as their scope across LAC. A number of studies also underscore the growing challenges faced by implementation, as well as the consequences and limitations of such policies. Many of the studies evaluate regularization policy within the context of specific countries, but the evidence for their success is both limited and controversial.

A large body of literature explores the extent of need within specific countries, as well as local regularization strategies. Fernandes (2011) explains that in South America there are two main paradigms for regularization: Peru and Brazil. Peru has largely focused on legalization of tenure through titling. In three separate analyses, Calderón analyzes Peru's legalization strategies between 1996 and 2008, and evaluates the extent to which policies positively impacted the social and economic situations of families. Calderón finds that legalization can improve safety, and that residents can benefit from the symbolic status of property (Calderón 2004, 2006a, 2006b, 2013). In contrast to Peru, Brazil tends to combine legal titling with upgrading of public services, job creation, and community structures

(Fernandes 2011). São Paulo's 2001 program focuses on legalizing tenure as well as redeveloping the city center. Budds and Teixeira note that the program has been improving the quantity and quality of housing for low-income populations, and that it has been more cost effective than other measures (Baltrusis 2004; Budds and Teixeira 2005; Costa and Hernández 2010; Brandão 2013; Magalhães 2013; Falcão 2014; Araujo 2016). Other scholarly and case studies have focused on Argentina (Sáenz 2003; Cravino 2010b; Di Virgilio, Guevara and Arqueros Mejica 2012), Panama (Escudero 2012), Colombia (Echeverria and Rincón 2002; Torres 2012; Camargo and Hurtado 2013; García-Ubaque et al. 2014), and LAC broadly (Smolka and Furtado 2002, 2014; UN-Habitat 2003a; Ward 2003; Cities Alliance 2007; Calderón 2010; Di Virgilio et al. 2014; Nahoum 2014).

A large number of studies address the challenges jurisdictions face implementing these types of policies. Mexico's largely disappointing agrarian law reforms in the 1990s are a topic of considerable attention (Nuijten 2003; Muñoz-Peña, de Janvry, and Sadoulet 2003; Assies 2008; Monkkonen 2012a). Olivera notes that inhabitants were not given enough autonomy to control their own land, and instead too much power was left with the federal and state governments. Municipal administrative and financial capacity was also identified as a limitation (Olivera 2001). Common challenges in Mexico and across Latin America also include judiciary resistance, attitudes about the legalization process of occupied land, and residents' perceptions of the regularization policy (Gilbert 2002; Clichevsky 2003; de Souza 2004; Calderón 2006a, 2006b, 2010, 2013; Fernandes 2008; Almansi 2009; Smolka and Biderman 2009; Rodríguez and Di Virgilio 2013).

A handful of studies also explore the limitations and unintended consequences of regularization. While it is often believed that a property deed adds value, this assumption may require more nuance. Using data from the 1999 Costa Rican urban housing survey, Mendez finds that some groups actually value property titles more than others (Mendez 2006; Blanco, Gilbert, and Kim 2016). Regularization policies can also be disruptive, even leading to urban conflicts, as Di Virgilio argues in her study of the villas in Buenos Aires (Di Virgilio et al. 2010, and 2012). Property rights are also complex and cannot always be manipulated by state intervention (Nuijten 2003). Indeed, providing titles for households does not guarantee security for women, especially in areas where gender inequalities may prevent property ownership (Varley 2007). Further, residents in formalized settlements are subject to property taxation and service provision fees, which are often unaffordable to residents (Perlman 2010).

Despite regularization's long history, the number of rigorous quantitative evaluations is limited. Most of the studies evaluate programs within the context of a specific country and more research is needed to identify best practices and the extent to which programs meet their specified goals.

#### 2B. Availability of Land for Low-Income Housing Construction

The availability of land at affordable prices is a key determinant of the supply of affordable housing. Land prices are affected by a number of factors, including the supply of land that can be developed, construction costs, volume of land demanded, structure of land ownership and taxation, and land-use regulations (Rojas 2016). The high price of land in Latin America contributes to the affordable housing shortage, as well as the persistence of informal land markets and speculative nature of land markets (Smolka 2003). A review of the literature on the availability of land for low-income housing focuses on the scale of the problem within specific countries, some of the drivers of land costs, and, finally, some of the policy options. While a handful of case studies provides possible solutions to the challenge of land availability, this is a policy area that has been less rigorously evaluated.

A large body of research explores the scale of need within specific countries. The problem of available land in Brazil is the focus of a number of studies. Menna Barreto Silva and Moreira (2007) identifies land availability, as well as the financing of facilities and maintenance costs, as a major obstacle to the provision of affordable housing in Brazil (see also Bomfim 2004; Perez 2007; Whitaker Ferreira 2012; Beltrame 2013; Denaldi 2013; da Piedade Morais and Oliveira Cruz 2015). A number of studies also focus on the Colombian experience. Mendez et al. (2014) evaluates the national government's Social Housing Macroprojects, which were intended to promote affordable housing throughout the region but have faced challenges of land availability in the various contexts of implementation (Gallo 2008; Santoro 2011; Vitta 2012; Camargo 2013). UN-Habitat's (2011a) report on affordable land and housing outlines the scale of need throughout the region, as well as the complexity of policy responses from governments and nongovernmental organizations (Duarte 2010; Herzer et al. 2011; Murillo 2014a).

One primary determinant of land availability is price. Traditional supply and demand theory suggests that an increase in the supply of land lowers housing prices. However, Araque's study of land prices in Bogota revealed that this may not always be the case. In Bogota, an increase in the supply of urban land failed to lower prices. Instead, the construction sector tended to capture the surplus, keeping housing prices the same (Barreto Silva 2000; Araque and Caballero 2009; Murillo et al. 2010; Sobrino 2014). The price of land also determines where it is supplied. A handful of studies have explored how the shortage of affordable land increases residential segregation and racial inequalities in urban areas (CEPAL 2003; Monteiro 2006; del Rio 2010; Carvalho 2013; De Queiroz Ribeiron 2014; Linke et al. 2016).

Land availability is also impacted by land-use regulation. That is, regulation may act as a tax on development, putting upward pressure on land prices and depressing supply. However, less is known about how this plays out in countries where enforcement is more relaxed (Dowall and Monkkonen 2007; Goytia, de Mendoza, and Pasquinim 2010; Ortiz 2012a). A study of the impact of land-use policies in Argentina finds that municipalities with more regulation actually have less compliance with property laws. Properties selling illegally in these areas have lower land prices (Monkkonen and Ronconi 2013).

Fewer studies have explored the best strategies to address a shortage of available land for affordable housing. Peixoto's 2011 policy analysis of the Metropolitan Region of Belo Horizonte in Brazil identifies a lack of affordable housing, but also a large number of vacant units. Peixoto explores some government initiatives trying to address the imbalance, as well as possible best practices to address it. Other strategies reviewed include how to promote residential inclusion through the rehabilitation of old structures and the construction of new ones, as well as strategies of allowing communities to participate in land value increments (Ruiz-Tagle 2005; Furtado 2010). There is some consensus in the literature that a consistent effort should be made to reduce informality, but there is recognition that doing so may exacerbate affordability challenges with perverse effects on poverty (World Bank 2002; Smolka 2003; CIDOC and SHF 2011). While land availability is a key challenge for the provision of affordable housing, there is a dearth of best practices that have been rigorously evaluated, and it is not clear that what works in one country could be replicated elsewhere.

#### 2C. Alternative forms of tenure

Latin America's housing market has long been characterized by formal and informal forms of tenure. Both rental and owner-occupied housing is generally considered formal if a property owner, including an occupant, holds a title deed to the property (Arbelaz et al. 2011). However, rapid population growth in urban areas coupled with limited government capacity has complicated government efforts to provide adequate housing for low-income populations (Gilbert 2009; Sierra and Tarazona 2013). In the push to regularize or formalize the informal settlements that continue to proliferate in the region, alternative models for property tenure and ownership have gained traction as a means toward both quasi-formalization and making formal housing more accessible to low-income households (Lanjouw 2002). Research has also considered approaches to indigenous land tenure and titling systems, which continue to be a challenging in multiple LAC countries (Plant and Hvalkof 2001). Forms of these alternative models in LAC are diverse but ultimately few and far between. Likewise, their consequences
for welfare and equity are complex but have not been subject to any kind of rigorous study. Many case studies and scholarly exploratory pieces reviewed provide examples of alternative tenure models, though the evidence of their success is limited.

Most of the scholarly work has focused on the potential for alternative forms of tenure rather their application or subsequent outcomes. In Brazil, for example, Macedo (2008) argues that new land tenure paradigms, based on legitimacy rather than legality, are emerging. These alternative forms of tenure, such as housing cooperatives, can provide one possible solution to the instability of informal housing. Housing cooperatives, such as the successful Uruguay model, are explored in greater length in section 5c. From a land-use perspective, research documents their potential to provide access to services and housing security; they may even promote city renewal without displacing low-income residents (Fontana et al. 2015). A number of scholarly and case studies profile models of alternative tenure within the context of specific countries in Central and South America (Fruet 2005; Baravelli 2010; Aravena et al. 2014). Land banks; community land trusts; new titling arrangements to reflect joint ownership; affordable and simple measures for transferring properties; and partnerships between the public, private, and nonprofit sectors to construct affordable housing are other alternatives (Arlindo dos Santos Silva 2009; Gilbert 2009; Graheda and Ward 2012; Camargo 2013; Irazábal 2016).

A smaller body of research has focused on the potential benefits of alternative tenure—though most of this work is speculative given the lack of actual examples. These studies take as a starting point the tension between formalization and its unintended consequences on affordability and inequality. Aristizabal and Ortiz (2004) discuss some of the benefits and limitations of informal housing in urban areas. On the one hand, informal housing provides land and a certain level of security for low-income families. On the other, different types of tenure provide different measures of economic security, and many households may feel threatened with eviction in the absence of a perceived claim to the property (de Souza 2001). Security for women can be even more tenuous, as rights to their land usually depend on their relations with their husbands or in-laws (Lastarria-Cornhiel and Giovarelli 2005).

While the benefits of alternative forms of tenure could be substantial, little research has focused on their effectiveness. A case study of low-income housing cooperatives in Porto Alegre, Brazil, suggests that land-use restrictions, lack of access to construction finance, and lack of a supportive legislative framework limit their success and their replication (Fruet 2005). More research remains to be done on the success of alternative forms of tenure and the environments to which they are best suited in the region—though alternative tenure is a vastly unexplored phenomenon globally.

#### 2D. Housing segregation, disparity, and equity

In the realm of Latin American and Caribbean development policy, spatial segregation and its effects on urban quality of life has historically been a robust strand of critique. This strand has only become more important in light of the region's rapid urbanization, to which appropriate housing policy has not been able to catch up. As such, the literature within this subtopic is far less prescriptive than descriptive, reflecting the magnitude of the problem of spatial segregation and the lack of tested solutions in the region. Beyond describing the nature of segregation in various LAC countries and the region as a whole, the literature also addresses the causes of geospatial disparity, the actors involved in either exacerbating or improving the situation, and the consequences of prolonged or increased segregation on certain demographic groups.

As stated, the majority of the literature is largely descriptive of spatial inequality and the disparities that arise from segregation, so takeaways are likewise limited. Many authors (Clichevsky 2000; Lombardo, Di Virgilio, and Fernández 2002; Yory 2006; FUNDASAL and UNDP 2006; Carolina 2006; De Almeida, D'Andrea, and De Lucca 2008; Roberts and Wilson 2009; Fitch and Chávez 2011; Costa and Pequeno 2015; Marques 2015; Mera et al. 2015; Canettieri 2015) take up the fundamental task of demonstrating that urban inequality in LAC is "socioterritorial," as Di Virgilio and Perelman (2014) articulate. Others focus specifically on the nature of spatial inequality and gender disparities (León 2011; Deere, Alvarado, Twyman 2012), the environment and natural disasters (Filho and Caceres Cortez 2010; Gohn 2010), or the role of global finance (Arriagada 2003a; Francisco da Silva and Pedro da Silva 2003; Bodsford and Hidalgo 2008). The most interesting sources in this subset deal at a high level with the state of research on spatial inequity. These works highlight both the insufficient quantitative methods that understate the degree of spatial inequity (Sabatini 2006; Siclari 2006; da Gama Torres and Bichir 2006) and the importance of "micro-segregation"—or segregation at the neighborhood level—in addition to the macro-level segregation often of focus.

There has been extensive scholarly attention on the causes of housing segregation and spatial disparities. Many authors across national contexts have settled on the state's culpability in failing to implement policies that proactively address decades of poor urban planning, insufficient housing construction, an unequal access to housing finance (Maricato 2000; De la Espriella 2007; Botelho 2007; Sabatini and Brain 2008; Franco 2010; Petrella 2012; Carrera 2013). In an analysis of the causes of segregation in Mexico, Monkonnen (2012a) categorizes four drivers of segregation and spatial disparities: urban growth, rate of growth, land-use factors such as density spatial mismatch between jobs and housing, and, finally, housing market characteristics, including rental housing, housing quality, and financing. Of particular note in this subset of literature is Maria da Piedade Morais and coauthors'

(2003) quantitatively rigorous analysis of a range of indicators (including immigration status, income level, household size, educational attainment, tenure, gender, race, and age) and their relative effects on slum creation in Brazil. Findings suggest that city size and other locational variables have considerable influence over the existence of slums and residential segregation.

The literature, focused on actors affecting the nature of spatial inequity, parallels the previous subset detailing causes, insofar as the state (at municipal, state, and country levels) is the major player held responsible. In general, the literature agrees that housing policies alone cannot redress spatial inequity without additional policies to improve the access and reliability of social services, so that the impact of living on the periphery can be reduced (Fix 2001; Rodriguez and Di Virgilio 2007; Pequeno 2008; Pinheiro de Oliveira and Pedlowski 2012; Monkkonen 2012b). Other authors focus specifically on certain aspects of the state's culpability, including the lack of capacity of planning and construction professionals (Klaufus 2012a), outdated zoning codes (Santo Amore 2013), the decentralization of planning controls and regulation that has enabled the growth of gated communities throughout the region (Libertun de Duren 2006; Mussato 2011), and the disproportionate influence of international financial capital in housing development (De Mattos 2010). An interesting strand of more exploratory research centers on the agency of the resident—specifically the resident in the urban poor demographic—and strategies to advocate, organize, or self-build in response to segregation, though this body of research is still underdeveloped (Klaufus 2012b; Simpson 2013; Murillo 2014a).

The final subset of this literature deals explicitly with consequences of housing segregation and spatial inequity, though all of the sources referenced here mention the consequences of growing disparities to some extent. Gender is certainly the most rigorously assessed within this discussion of disparities. Gandelman (2009) demonstrates that female-headed families have a lower probability of homeownership in 13 of 17 Latin American countries and MacDonald (2004) provides extensive statistical tables quantifying the connections between female-headed households and various poverty indicators. Another burgeoning strain of research is the quality (and perception of the quality) of safety and security for disadvantaged groups living on the periphery (Di Virgilio and da Representaçao 2005; Villagran 2012; Ploeger 2012), particularly for women and children. Finally, some research has begun to detail the effects of segregated housing on land markets, mobility, and informal labor (Arriagada and Simoni 2000b; Duhau 2003; Monkkonen 2011a), but the mechanisms of causality require further development

In general, the literature grounded in this area is far from fully developed. Research, highly descriptive at this point, exists at the stage of advocacy more so than evaluation. Future research should focus on rigorous policy analysis so that best practices for reversing spatial segregation can be

shared across the region. Additionally, in terms of understanding the impacts on marginalized subgroups, race and ethnicity or immigration status as a factor affecting housing segregation is significantly under researched when compared to other indicators like gender and income. Other factors to explore with regard to their implications in housing accessibility and conditions are age, sexual orientation, citizen status, and household stage in life cycle.

#### 2E. Spatial Distribution of Housing and Opportunity

Housing location has implications not only on segregation at an urban scale but also on access to opportunity at an individual household level. The literature in this section focuses on the spatial distribution of housing and its interactions with individual opportunity, which includes transportation, employment, public services and utilities, and urban amenities. In a case study of two neighborhoods, Carman (2011) examines how housing location along historical factors affects access to opportunities and, ultimately, social dynamics. The majority of the literature covers this topic in a descriptive way, where the historical development of the conditions affecting these interactions is discussed, though a significant subset does so through detailed policy analyses.

The Ministerio de Vivienda y Urbanismo (MINVU 2005) in Chile delves into identifying housing needs across the country, including houses' structural needs as well as their access to utilities like the sewage system. To address these needs, MINVU recommends using government-led programs to improve not only housing but also its surroundings, focusing on vulnerable populations. Some other analyses cover myriad examples of how strategic planning has been put to use to overcome spatial challenges and improve individuals' access to opportunity (Alcaldía de Medellín 2011). Sometimes the strategies involve improving a city's public transit, with implications for employment opportunities (Lago 2007; Dureau et al. 2015). Other strategies focus on improving access to academic opportunities (Ribeiro and Katzman 2008). Studying Mexico's northern border, Peña (2005) finds some quantitative improvement in delivery of services where access and distribution had been uneven, mainly affecting lower-income groups. Duarte and Malheiros (2012) highlight the importance of cross-departmental collaboration at the city level to better integrate the relevant actors in the process of urban planning, ultimately decreasing the possibility of challenges such as the uneven distribution of services Peña finds in Northern Mexico.

Another subset of literature on this topic examines the urban form of cities, meaning the space, places, and boundaries of that city, particularly dealing with the question of policentricity—that is, whether a city has various socioeconomic centers. Most of this literature is focused on Mexico, with

Mexico City being evaluated as polycentric. Lombardo et al. (2003) and Monkkonen (2011a) both have a broader perspective on the question of policentricity, reflecting on how urban spaces transform. Monkkonen (2011a) in particular examines how Mexican cities sprawl and concludes that new housing purchased through mortgage financing often has better access to basic urban infrastructure compared to housing built incrementally through self-building strategies. Despite this, other authors conclude that Mexico City remains monocentric (Garrocho and Campos 2007; Suarez and Delgado 2009; Alvim, Kato, and Rosin 2015). Suarez and Delgado (2009), for instance, find that although the city has minor subcenters of employment, most jobs are concentrated in large agglomeration along central corridors.

Access to opportunities, ultimately has impact on quality of life—a major focus of the literature reviewed for this section. Hall, Madrigal, and Robalino (2014), Di Virgilio (2013), and Ferre, Gandelman, and Piani (2010) all take on the question of the impacts location and access to opportunity have on peoples' lives and their life satisfaction. However, in their econometric analysis, Ferre, Gandelman, and Piani (2010), warn that life satisfaction depends principally on housing and only minimally on neighborhood characteristics, arguing in turn that life satisfaction cannot be used to value neighborhood-related public goods.

Other studies are more focused on particular outcomes. Di Virgilio (2011a) examines the complexity of how opportunities and limitations impact housing mobility. Celhay and Sanhueza (2011) explore labor outcomes of slum dwellers and social housing tenants in Santiago de Chile. Interestingly, they conclude that, for men, living in the slums is correlated with better labor outcomes, including higher rates of participation in the labor market and higher employment rates, even after controlling for geographic location. Also, focusing on lower-income populations, Winchester (2008) hypothesizes that an awareness of the economic vulnerability of the urban poor has not been fully integrated into urban policies, limiting the opportunities and access to stable incomes and employment. Rojas (2008) looks at health outcomes of marginalized communities and concludes that the best way to improve these outcomes is through a holistic approach in which housing and social variables are incorporated to inform policy for community development. In short, while the focus of the research is diverse, there is agreement that access to opportunity has real impacts on the outcomes of individuals and should therefore be taken into consideration when formulating housing policy.

### 3. Financing and Investment

Financial inputs are essential to all housing and land-use interventions. The institutions and tools that generate these financial conditions and interventions have been the focus of legal, fiduciary, and social subsidy programs for centuries—from mortgage banking to gap funding in affordable housing programs. In the LAC region, particularly with the advent of mortgage and other banking institutional supports in the 1990s (yet relatively low levels of participation in mortgage systems), this topic is of critical importance to the literature review. The researchers identified and categorized 89 documents in this topic, with the vast majority focused on general mortgage and housing finance contexts and products targeted to low-income households.

#### 3A. Financial incentives for housing construction

One area of housing policy that has received significant focus in LAC has been the incentivizing and—in some cases—subsidizing of affordable housing construction among private and quasi-private developers and related entities. Little housing incentive research has been done at the regional level; instead, most of the literature focuses on singular national or city contexts. As such, this subtopic primarily comprises case studies, but policy analyses and more exploratory works are also presented. The sources broadly serve one of three functions: (1) demonstrating the justifications for incentives and exploring the structure of incentives provided, (2) describing the outputs and outcomes of these incentives and the effects on the housing market more generally, and (3) providing broader conceptual critiques or commenting on the unintended consequences of public financial incentives.

Despite using different approaches to demonstrate the need for housing construction incentives (ranging from policy analyses to more theoretical arguments), authors seem to agree that such incentives are definitely needed to build the housing finance market in Latin America. For example, incentives are needed in Mexico to realign the type of housing demanded by the market with the type promoted through government subsidies, given the changing housing construction sector in the past decade (Vargas-Hernández and Hayashi Vega 2014). Lovera (2013a) provides a useful regional literature review of research on construction and real estate development from the mid-20th century to 2010 and identifies threads of research that stand to be further developed, including the relationship between real estate capital and financial capital and how the production of space is affected by dominant patterns of real estate development.

Literature evaluating incentives focuses on a range of outcomes, including the growth of the housing finance market, the geographic spread of construction, and housing quality (Córdova 2015; Fernanda da Silva and Wickstrom Alves 2013; and Maya and Cervantes 1999, respectively). Authors focus on the interaction between new private actors in these markets and typical government interventions and regulations that have persisted for decades. This interaction results in the creation of quasi markets, which have diluted some effects of incentive systems put in place to spur construction while improving others (Córdova 2015).

The trade-offs between achieving effects in the quantitative and in the qualitative housing deficits is further explored in terms of geographic development. Regarding the former, scholars assess Brazil's landmark incentive program, Minha Casa Minha Vida (MCMV), which pairs credit access to low-income populations with construction incentives to developers. With the goal of constructing 1 million units over two years (40 percent of which were intended for low-income populations meeting certain minimum wage thresholds), MCMV succeeded in increasing the regional diversity of construction by spurring development in underinvested areas and increasing the value of those developments. It did not succeed in improving low-income families' access to shelter, indicating that creditworthiness criteria must be adjusted—an argument that resurfaces throughout the literature (Fernanda da Silva and Wickstrom Alves 2013; Cardoso 2013; Santo Amore, Shimbo, and Rufino 2015; Rolnik 2015).

Finally, authors take a more conceptual approach to understanding the growing tension between the influx of private capital in housing markets across the region and long-held beliefs about social housing—more specifically, housing as a human right. These studies are primarily exploratory, employing conceptual frameworks like Lefebvre's production of space and the right to the city to detail how private developers are fundamentally transforming the character of Latin American cities (Lefebvre 1991; Rufino 2012; Sanfelici and Halbert 2015).

#### **3B.** Taxation

Taxation policy at both national and local government levels has been another major subject of financial institutional change related to housing by virtue of its input to the general good (i.e., regularized, quality housing can be taxed) and its product (i.e., property tax provides revenue for social programs, including housing assistance). Multilateral global organizations have actively encouraged improvements in LAC tax policies for the last decades to take advantage of the region's growing economic productivity and increasing land regularization, while discouraging regressive tax regimes. Specifically, the literature on property taxation is unified in its call to improve the technical and administrative capacity of

municipalities so that tax systems across Latin America can be made more profitable. De Cesare (2010; 2012) draws on results of an exploratory survey of tax systems across Latin America to make these recommendations, arguing that property taxes are not yet significant revenue sources for municipalities because they require necessary capacity developments, chief among them formalization of property assessments and cadastral records. Smolka and De Cesare (2006), in their policy analysis of property tax structures, also highlight the informally housed as a market untapped by tax systems that could provide a pathway to land tenure and further integration into the formally housed and employed population.

Beyond the need for better and more tax programming, much of the literature on LAC's property tax potential underlines the lack of transparency and clarity around property taxation and recommends efforts to improve public understanding of land capture and valorization to improve resident buy-in (Arriagada and Simoni 2001; Smolka 2013). Transparency in land valuation was a particular concern, with Domingos (2011) suggesting that committees external to municipal governments should be convened to depoliticize while institutionalizing this process. Uribe and Bejarano (2009) provide a useful annotated bibliography of Latin America's property tax systems by country. The challenges faced by current tax regimes as presented in these studies will likely limit their potential expansion as a financial tool for low-income housing.

#### 3C. Microfinance

Microfinance, or the system of lending to low-income or impoverished individuals to catalyze their selfsufficiency, has experienced immense growth globally in recent years. This growth makes the subsector of microloans dedicated to financing housing ownership and improvements—referred to as housing microfinance—an important realm of policy to assess in the LAC region.

Given the robust and varied literature on microfinance in Latin America in general, studies related to housing microfinance gaps, developments, and outcomes are difficult to identify. Published studies fall into four general themes: (1) descriptions of the growth and massive scaling of housing microfinance (in Peru and Mexico in particular, with later expansion in Central America and Brazil); (2) descriptions of the practice and implementation of microfinance in housing, including critiques of its application that mirror criticisms of general microfinance globally; (3) analyses of the enabling environments that make housing microfinance tenable for both lender and borrower (many of which are relevant to other topics in this literature review, like land regularization and public subsidies); and, finally, (4) outcomes of the

region's housing microfinance programs on housing quality, household financial conditions, and the financial community.

Regarding the scaling of housing microfinance, researchers largely agree that expanding access to noncollateralized credit options is the key to building a more accessible market in the LAC region (Hoek-Smit 2008). For the impoverished, housing microfinance as a tool for slum upgrading is also identified as an area for further research, specifically where economic models are employed (Stein and Vance 2008). Critiques of housing microfinance implementation mirror those of microfinance in general: scholars have called for increased technical and administrative capacity as well as greater transparency in lending for housing construction and improvements (Ferguson 1999; Anderson et al. 2002; Stein and Castillo 2005; Hokans 2008).

Among the various case studies of housing microfinance implementation across Central and Latin America, the urgent need for a better institutional enabling environment is made clear. Microfinance cannot be successful without greater formalization of property rights for borrowers and better legal protections for lenders (Ferguson 1999). As scaling occurs more rapidly, housing microfinance institutions might consider effective regulations and partnerships with credit bureaus to improve the information flow between lenders and borrowers (Valdivia et al. 2003). The general perception of housing microfinance among scholars is positive. Case studies point to the immense opportunity that lower-income borrowers present—especially as the sector looks forward to building capacity for lending in the longer term—but warn that balancing incentives for borrowers and lenders will be complex (Mesarina and Stickney 2007; Young, Hokans, and Ahern2009).

Of particular note is Stickney's (2014) assessment of "base of the pyramid" investments for housing across the LAC region for its focus on how housing microfinance can be made to work with informality. While many authors introduce the collateral and credit risk issues raised with informality, Stickney details how collateral is dealt with in each housing-related investment made across the region. Despite Stickney's assessment, no experimental or quasi-experimental analyses of housing microfinance programs have been performed to date in the region. In sum, housing microfinance has been effectively implemented in several LAC countries in the last three decades though the growth of other financial incentives has been just as impressive.

#### 3D. Loan and mortgage contexts

The expansion of mortgage lending and securitization across Latin America and the Caribbean is a final area of consideration within housing finance literature; like taxation and microfinance, access to mortgage lending has also become more widespread in the past few decades. The research is presented in terms of the following three fluid and often mutually applicable themes: (1) research addressing the general state of the mortgage and securitization market, (2) research analyzing and offering recommendations for growing these markets, and (3) research specifically focused on low-income borrowers and improving access to mortgages. Overall, the publications included in this subsection are among the most rigorous dealing with financing and investment. The studies are far less exploratory than those for other subtopics discussed within the literature review, and often use sophisticated modeling to drawn robust conclusions.

The first subset of the literature on loan and mortgage contexts consists of broad overviews of the mortgage and securitization markets in the LAC region as a whole and in some of its more populous countries, including Argentina, Brazil, Chile, and Colombia. This literature details the creation of these markets in the 1980s and 1990s (Angel 2002b; Banzas and Fernández 2007; Jha 2007), traces the key players in market development (López Piñeros 2004; Pardo and Velsaco Sanchez 2006; Alarcón, Demaestri, and Piedrabuena 2014), and offers criticisms of the markets as they exist today (Cristini and Moya 2004; United Nations Human Settlements Program 2008; Auguste, Bebczuk, and Moya 2011; Sancho, Rivera, and Rosales 2012).

Criticism mainly highlights the nature of mortgage market growth in many LAC countries, which has tended to support loan access for middle-class and wealthy populations with formal incomes. This has made accessing affordable mortgages more difficult for low-income populations. Whereas most authors blame credit supply constraints for limited mortgage markets in the region, Auguste, Bebczuk, and Moya (2011) uniquely point to the lack of demand for affordable mortgages in Argentina due to macroeconomic volatility and insufficient property rights. Connections are also drawn to the need for better rental housing policy if mortgage markets continue to be insufficient (Coulomb and Schteingart 2006).

The next subset deals with the growth and barriers to expansion of mortgage and securitization markets, with a specific focus on the role played by multinational entities such as the World Bank and the IDB in contributing to this growth or lack thereof. At the regional level, the literature identifies a trade-off between growing shelter finance markets via increased private sector involvement and

enacting policies with a poverty-alleviation focus (Buckley and Kalarickal 2006; Zanetta 2004; Bouillon 2012).

This trade-off is also discussed at the national level, though recommendations focus on making particular countries more competitive within the region. Recommendations include improving the transparency of regulatory and legal environments and prioritizing public-private collaboration when enacting policies that affect the mortgage market (Rojas 2001; Boils 2004; Palomino and Wong Barrantes 2011; Bebczuk and Demaestri 2014; Sancho, Rivera and Rosales 2012). These recommendations are echoed for national program evaluations as well, including those for Brazil's Housing Financial and Real Estate Financial Systems, INFONAVIT's mortgage model in Mexico, and Colombia's UPAC system (Royer 2014; Pardo and Sanchez 2006; Serrano Rodríguez 2011, respectively).

Though much of the literature in this area is fairly recent, some authors specifically deal with the effects of the global economic crisis of 2008. Cardoso and Leal (2010) argue that Brazil's nascent securitization market served as protection against the severe mortgage lending consequences faced by countries that practice securitization more widely, while Micco et al. (2012) hail Chile's effective public-private collaboration in terms of navigating through the volatility of the economic crisis successfully. Authors agree that postcrisis comparative analyses of private and public bank lending patterns should be a research priority.

The final subset of loan and mortgage context research directly takes on the trade-off identified above: that is, this literature addresses financing alternatives for low-income populations. The subset can generally be divided into two categories between the evidence-base studies that offer policy solutions for low-income housing finance and more theoretical literature that traces the development of the biased markets.

Among the more methodologically intensive literature, authors have built various models to better understand how low-income populations interact with the mortgage lending market. López-Silva et al. (2011) use a database of borrower characteristics provided by Mexico's INFONAVIT to analyze the relationship of subsidy-receiving borrowers to loan defaults, concluding that such borrowers do not default sooner than borrowers not receiving subsidies. Carvajal Calderon et al. (2015) use models to predict the likelihood of obtaining housing in Colombia given various population characteristics, concluding that households with more members, more elderly members, and higher lease payments are significant barriers to homeownership. Both pieces (in addition to others with a regional focus) function to promote poverty reduction policies at the macro level, and subsidy programs more specifically (Held 2000; Cohen et al. 2007).

Of particular note is Monkkonen's diverse work on Mexico's mortgage lending market and its effects on informal employment, residential segregation, and vacancy rates. Findings include that INFONAVIT has been particularly successful in serving lower income clients since the global financial crisis because of its more flexible mortgage products (Monkkonen 2011b); that the drastic increase in available housing finance has had a secondary effect of contributing to neighborhood socioeconomic segregation beyond "natural" income sorting (Monkkonen 2012a); and that mortgage lending, more so than international migration or the drug war, is associated with a hollowing out of central cities as mortgage-financed houses are being built in the urban periphery (Monkkonen 2014). On the whole, Monkkonen's work warns against the unintended effects of expanded housing finance and prioritizes governance—especially by urban, local governments—in the effort to correct for these adverse effects on Mexico's urban environment.

The theoretical literature is less varied, insofar as authors commonly employ a Marxist approach to understanding the financialization of housing provision in the LAC region. These analyses begin from the popularly held idea in Latin America that adequate housing is a universal right, then detail the contradictory nature of housing policies that since the 1990s have led to clearer pathways to homeownership for some but less access to housing for the most vulnerable (Fix 2012; Rolnik 2013; Royer 2014; Soederberg 2015). This strand of literature is not optimistic that increased access to mortgages can be the magic bullet for providing adequate housing for all people, especially without healthy government interventions to reprioritize a poverty reduction focus.

The literature presented in this section has been unified in its assessment of a growing mortgage lending market that can credit private sector involvement as the catalyst. It is also in agreement over the risks that accompany this growth, namely for low-income borrowers whose access to affordable loans remains limited across the region. Like other housing finance mechanisms discussed, rapid growth in mortgage markets has been achieved at the cost of losing the region's historically pro-poor orientation toward housing provision. This effect has likely been exacerbated in the wake of the recent global financial crisis, but more research with this specific contextual lens is needed.

### 4. Housing Policies and the Enabling Policy Environment

The researchers identified and categorized 323 documents in this overall topic, the second-highest volume for any topic studied. The majority of these documents, in turn, focused solely on demand-based housing subsidies. This subtopic outranked all others in the entire literature review. One reasonable cause for this growth in research has been the proliferation of national reviews of housing conditions used to design subsidy programs—as well as the subsidy programs themselves—in the last two decades. Several evaluations and reviews sponsored by multilateral organizations and national governments have helped assess the effectiveness of these programs. This phenomenon is especially true in the more advanced economies in the region. Because of the abundance of work in this area, additional subcategorization between the deficit and the subsidy programs is articulated below for clarity.

#### 4A. Quantification of Housing Deficit and Conditions to Inform Policy Approaches

Each country collects information about the state and quality of housing through national census processes. In the majority of countries, censuses are conducted biennially. The majority of the studies referenced in this section make use of publically available census data for analysis of housing deficit and need at the regional, national, or municipal scales, and stress the importance of accurate estimations of housing conditions to design appropriate policies and programs. While authors agree that census data are the best (and often only) data source available for determining the quantity of total housing stock, as well as its spatial distribution, several studies provide alternative methodologies to capture data on housing conditions and deficits in informal settings.

A recent IDB compilation of housing demand and deficit in the region (Bouillon 2012) found that 32 percent of households living in cities experience some kind of housing deficit. Multilateral institutions such as the Economic Commission for Latin America and the Caribbean or the IDB regularly publish reports providing synthesis, integration, and analysis of country-level housing deficit and demand information across the region (Szalachman 2000; Arriagada 2003b, 2005; CEPAL 2009; Rojas and Medellin 2011). Overall, findings show that the proportion of urban households with housing deficits is declining across the region, particularly for low-income households.

This body of research makes a strong connection between definitions of the housing deficit and associated methodologies for measurement of housing need, as well as housing sector policy design. Many favor diversified methods to capture demand for new units and improvement of existing ones. Authors stress the importance of reliable deficit estimates both quantitative (i.e., discrepancy between the quantity of housing units and the number of households in the country) and qualitative (i.e., the degree to which existing units meet basic quality standards). Through analysis of deficits in four countries, Szalachman (2000) suggests that disaggregated studies by socioeconomic characteristics about the head of household—including gender, age structure of household, level of education, occupation, disability or limited mobility- are necessary to ensure that programs such as demand based subsidies are targeted appropriately to ensure equity in access to the benefit. Recognizing variation in housing conditions and challenges between countries, Rojas and Medellin (2011) advocate for contextualized and appropriate local solutions, finding that new construction is necessary in certain countries, while improving quality of housing should be emphasized in other contexts. Due to the infrastructure challenges in the region, the authors advocate for settlement-upgrading programs as part of the housing policy strategy in all countries.

At the country level, government agencies and independent research institutions, as well as local universities, engage on issues of housing deficit and demand in a more nuanced way to suggest improvements to housing policies and programs. Multiple studies reviewed involve secondary analysis of census data and assess the degree to which the production of social housing has filled in those gaps. While this review will not report on country-level findings in housing deficits, works cited on the topics include, for Mexico, González Tejeda (2006), for the Caribbean, McHardy and Donovan (2016), for the Southern Cone, Capello and Galassi (2011) and Chamorro (2015), and for the Andean region, Castillo (2004).

In some cases, such as Brazil, the research community has partnered with census bureaus and government agencies to streamline this process. The Fundação João Pinheiro is responsible for providing official estimates of the housing deficit in collaboration with the Ministry of Cities and the Brazilian Census Bureau. The methodology adapted is the sum of four parts: precarious households, family cohabitation, excessive burden on rent, and excessive density of rented homes. The total deficit in Brazil for 2010 was estimated at 6.4 million units, which represents 12 percent of the country. Information was also presented at the municipal level (Fundação João Pinheiro 2010).

At the municipal level, analysis of housing demand, deficit, and provision provide a more nuanced picture of sociopolitical and economic conditions and policy approaches. For example, Rodríguez and Di Virgilio (2009) present the conditions of low-income housing and popular habitat in Buenos Aires. Other analytical and exploratory studies at the municipal level include Pasternak and D'Ottaviano (2016), Pasternak (2001), Amaral de Sampaio and Pereira (2003), and Souza (2001).

While census data are widely used and recognized, some researchers and nonprofits have challenged the reliability of such information because of its limitations with integrating informal areas, stressing that lack of accurate information or underreporting leaves such communities out of the public policy process. Through a field methodology involving volunteer data collection and participatory research methods, the Center for Social Research at the nonprofit TECHO has conducted alternative censuses throughout the region to determine the characteristics of informal settlements in terms of land tenure, size, shape, and physical risks, as well as level of community organization. To date, studies have been conducted in Chile (TECHO 2015b), Nicaragua (TECHO 2015a), Argentina (TECHO 2013) and Colombia (TECHO 2015c). For the purpose of the informal settlement studies conducted by TECHO across the region, each area is defined as a cluster of a least eight families without regular access to at least one basic service (water, electricity, sewage), in an irregular situation of land tenure. Further, Ferreira et al. (2007) offer a methodology to estimate the population living in precarious settlements based on statistical analysis to correct for the tendency to underestimate.

In sum, the research reviewed estimates housing demand, challenges, and needs in countries across the region, which are seen as essential input to the appropriate policy design and implementation processes addressed in the following sections.

#### **4B. Housing Policy Approaches**

This section predominately consists of assessments of both historical and contemporary approaches to housing policy in LAC. While this mostly concerns housing policy at the national level, studies of local implementation of federal plans or municipal housing policies in large cities such as São Paulo and Buenos Aires are also included. While these studies are not evaluative, some do provide analysis on the capacity of governments to implement housing programs, especially programs designed to be carried out by municipalities. Several studies reviewed in this section provide alternative policy proposals based on the assessments of housing need and policy. While these articles are presented in a highly context-specific format (most focus on an individual country or city), the policies implemented across the region share many characteristics. This overview shows general trends toward subsidy programs designed to spur the production of *new* housing units accessible to low-income families, while neighborhood upgrading and urbanization projects have been pursued simultaneously in select cities. Section 4c will delve into studies that assess the performance of such policies through evaluative, exploratory, and case study research. Several alternative policy models, such as rental programs or

neighborhood upgrading are also relevant within the larger discussion of policy strategies in the region; those are reviewed in sections 4d and 4f, respectively.

Several studies that examine trends at the regional level highlight the similarities and differences in housing policy, typically in the countries with the most robust housing policies and programs, such as Brazil, Mexico, Argentina, Chile, and Colombia (Buckley and Kalarickal 2005; Jha 2007). Murray and Clapham (2015) find that those countries passed through three common phases: (1) minimal government intervention and the spread of informality, (2) bank-financed programs during the Washington Consensus period, and (3) a production phase led by the construction sector and financed through subsidies. This third phase is the attention of much contemporary research on housing policies in LAC. Gilbert (2004) tracks the diffusion of this approach, which originated in Chile in the late 1970s, and Sepúlveda Ocampo and Fernández Wagner (2006) offer a conceptual Latin American perspective on the promotion of market facilitation and adoption of the demand subsidy model.

Large metropolitan areas that have pursued housing programs and policies that complement or divert from the national approach have also been the subject of significant policy review and documentation literature. For example, research on Buenos Aires (Dunowicz et al. 2000; Rodríguez et al. 2007, 2015; Rodríguez and Di Virgilio 2011), São Paulo (Cities Alliance 2008), and Fortaleza (Maximo 2012; Freitas and Pequeno 2015) addresses municipal capacity for both policy design and implementation. Further, research has focused on analysis of municipal capacity, including Arretche's (2012) work on the evolution of management instruments during the 2000s decentralization phase and Reese's (2001) on decentralization planning in Quilmes, Argentina.

A final group of monographs has been produced at the country level to document and reflect on changes in policy approaches over time; these pieces represent critical thinking about housing challenges more than program evaluations. In Mexico, (Puebla 2002; Coulomb and Schteingart 2006; Iracheta 2011) the low-income housing sector and the policies that shape it have gone through a period of state deregulation and increased participation of the private sector from the 1990s onward. Brazilian policy development in the housing arena has been extensively documented, although much of this work is only available in Portuguese (Lopes 2000; Maricato 2005; Bonduki 2008, 2011, 2012; Bonantes 2009; Valença and Bonates 2010; Bonduki and Koury 2010; Secretaria Nacional de Habitação 2010; IPEA 2011; Almeida 2012; Junqueira de Andrade 2013; Rubin and Bolfe 2014; Aguiarm 2014; Freitas, Whitehead, and Santa Rosa 2015). Notably, Rodrigues and Moreira (2015) compiled a review of scientific literature on Brazilian housing policy from 1964 to 2014. A significant body of research has also been produced to document the Colombian experiences with low-income housing policy (Escallón 2012; Baena and Olaya 2013; Gilbert 2014a, 2014b), as well as other Andean region countries (Angel

2000a; Fernandez-Maldonado and Breednord 2010). For the Southern Cone, both the Chilean (Arriagada et al 2004; Siclari 2012; Chamorro 2015) and Argentine (Cuenya 2000; Zanetta 2002; Angel 2001a; World Bank 2006; Zavala 2010; Kullock and Murillo 2010; Barreto 2012; Rodulfo 2015) trajectories for low-income housing are well documented in policy analysis literature, as, to a lesser degree, is that in Uruguay (Magri 2015). In Central America, Angel (2002a, 2000b, 2010) led the IDB's research efforts to conduct policy diagnosis and guidelines for action. Similarly, in the Caribbean basin, almost all research documenting housing needs, approaches, and policies has been conducted by multilateral institutions (Angel 2001b; McHardy and Donovan 2016). The exceptions are Cuba and Venezuela, whose state-driven housing policies have been subject to more theoretical and academic interrogation (Lovera 2007, 2013b, 2015; Uzcátegui 2008; González Couret 2009).

The research reviewed is largely descriptive and the work in the following section builds on this thorough policy documentation to assess the performance of demand-based subsidy programs, arguably the most widely used programs in the region today.

#### 4C. Demand-based Housing Subsidies

The research reviewed in this section moves toward evaluating and assessing the implementation of demand-based subsidy programs at the regional, national, or local levels. While program mechanics vary from country to country, housing subsidies are designed to provide resources to households that would otherwise be unable to access formal housing units. Many countries use the ABC model ("ahorro, bono, crédito," or "savings, subsidy, credit"), which requires household savings to access the mortgage subsidy. Others provide targeted mortgage-free subsidies to very low income families. Over the past few decades, many LAC countries have moved away from the direct construction and management of subsidized housing units, opting to devolve that responsibility to the private sector.

While this body of research provides lessons learned for certain aspects of this housing provision model in various contexts, there are only two outcomes evaluations to date (Marcano and Ruprah 2008; Pecha-Garzón 2011), which address the effectiveness of the subsidy program for reaching targeted populations and measure the degree to which housing conditions improve. Other scholars present both quantitative and qualitative findings on the performance of such programs, based on housing production, location and quality of units, and residents' perception, among others. In terms of quantity, recent research on the effectiveness of demand-based subsidy programs is overwhelmingly produced in Portuguese about Brazilian programs. This is in part due to a major effort by the Ministry of Cities to

engage a network of scholars in research and evaluation of MCMV across the country as well as researchers' and domestic research centers' willingness to engage on the topic.

At the regional level, through an empirical analysis of shelter-induced poverty, Ruprah (2010) finds that ABC housing programs, as currently designed, further increase indigence and poverty rates because beneficiary households do not always have the capacity to pay mortgages, household taxes, and other costs and fees. Accordingly, the author concludes that housing should be considered in poverty analysis and that programs should increase existing vouchers for initiatives targeted at very low income households to prevent further increases in shelter-induced poverty. Buckley, Kallergis, and Wainer (2016a, 2016b) document the emergence of housing programs at the global scale, including in Latin America, and despite broad uptake across the Global South, the authors warn that the programs are deeply flawed and do not adequately address affordability concerns. Instead they propose that governments pursue policy models linked to the urban policy environment, income, and regulatory frameworks.

Country-by-country analyses, detailed below, highlight important successes of demand-based subsidy programs, especially with regard to reduction of the quantitative house deficit and improvement of basic living conditions. But many studies address the potential issues and repercussions of such programs, such as inefficiency for serving low- or very low- income families, housing-induced poverty, poor quality housing, isolated locations, and secondary problems related to crime, drugs, and risky behavior in these emergent neighborhoods. There is not consensus, however, about how to apply this model to reach positive outcomes, or on how such programs are expected to perform.

Chile was the first Latin American country to pursue demand-based subsidies starting in the late 1970s, and there is a rich body of research evaluating program performance, through both rigorous quasi-experimental studies and detail-rich case studies (Rodríguez and Sugranyes 2005a, 2005b, 2009; Ruprah and Marcano 2007; Marcano and Ruprah 2008; Salcedo 2010; Siclari 2012). With regard to targeting, a rigorous evaluation of the ABC model finds that it was inappropriate when targeting poor households; in turn, the targeting of the program was ineffective with high rates of under-coverage and leakage (Marcano and Ruprah 2008). Additionally, the impact evaluation reveals that although the program had significant positive effects on living conditions (access to water, sewerage, and electricity), it had a negative effect on overcrowding and had no discernable effects on welfare indicators (poverty, school attendance, occupation ratio, etc.). The authors attribute this to high residential segregation and the peripheral localization favored by developers due to lower land costs. These findings are also

model is deficient and not appropriate for families, who in turn adapt and expand units outside regulatory norms and safety considerations. Postoccupancy surveys documented by Rodríguez and Sugranyes (2005b) show that two-thirds of residents desire to leave their units, despite having no alternative options. As a response to these demands, over the past 10 years the Chilean government has invested resources in these neighborhoods to mitigate many of the challenges; this program is discussed more fully in section 4g.

Although the largest Brazilian demand-based subsidy program, Minha Casa Minha Vida, began only recently in 2009, a vast body of literature documens implementation of the program to date, partly because the government commissioned set of studies that engaged universities and research centers across the country. Similar to the Chilean case, research on MCMV has mixed findings, as authors balance the importance of reducing the quantitative deficit with concerns regarding location, quality, public safety, and community capital, among others. Topical coverage of the research on MCMV is also quite broad, including general process or implementation studies (UN-Habitat 2014; Santo Amore, Shimbo, and Rufino 2015), evaluations of territorial and social impacts (Corrêa 2012; Cardoso 2013; Denaldi 2013; Kalil et al 2013; Vasconcellos 2015; Santo Amore, Shimbo, and Rufino 2015; Oliveira de Menezes 2016; Carvalho and Caxeiro Stephan 2016), assessments of the market-orientation (Cardoso, Aragão, and Souza Araújo 2011; Krause, Balbim, and Lima Neto 2013; Nascimento 2016), and analysis of political and institutional structure and the degree to which the program connects to the national housing plan (Neto, Moreira, and Schussel 2012a, 2012b; Klintowitz 2016; Pequeno and Rosa 2016). Critics of the program argue that it is motivated by an economic-growth logic, and the lack of regulation causes issues of quality, spatial distribution, and scale. Additionally, research has documented that targeting the program to the lowest income groups (0-3 minimum wages) with the most housing needs has not been successful.

In Mexico, research documents how housing production for low-income households has expanded dramatically over the last two decades through INFONAVIT and FOVISSTE financing loans, but warns of the spatial impacts of such production, notably widespread urban sprawl (Durán Contreras 2003; Villavicencio and Hernández 2004; Tamayo 2007; Lopez Estrada and Leal Iga 2012; Herbert, Belsky, and DuBroff 2012; Ziccardi 2012; CIDOC and SHF 2011). Most studies identified note that the production of such an elevated quantity of housing units on the urban periphery has created severe problems in the quality of life of program beneficiaries and has surpassed local governments' capacity to provide necessary infrastructure and mitigate the socioenvironmental effects of this fragmented form of urban development.

A quasi-experimental evaluation of the social-interest housing program in Colombia (Pecha-Garzón 2011) documented improved outcomes in the beneficiary group relative to the control group, including housing units in better condition and walls and floors of better materials, more occupiable space and lower residential density per bedroom, improvement in security of tenure, and reduction of households living near natural hazards. However, overcrowding was documented in beneficiary households that shared their units with other households, a common occurrence among the beneficiary group. Additionally, the study found that beneficiary targeting worked well in the program, as few individuals who did not meet the characteristics of the targeted population received services. However, very low income households did not appear to access this credit because of the barriers presented by the savings and mortgage requirements. Based on the findings, the author calls to expand the program and increase the subsidy for the lowest-income groups. Several others have analyzed this policy in the metropolitan context in Bogota (Jolly 2007a and 2007b; Agudelo 2013). The similar challenge of program uptake among the lowest-income groups was documented in Uruguay (Garabato and Ramada-Sarasola 2011).

In Peru, Calderón (2015) conducted a mixed-methods assessment of the Programa Techo Propio Adquisición de Vivienda Nueva, highlighting the difficulties implementing these programs at the desired scale. Peru faces a quantitative deficient of nearly 400,000 units, of which the programs have been able to cover 25 percent; however, Peru has a more significant qualitative deficit, which the programs have only successfully reduced by less than 5 percent. This occurred although the 2006–2015 National Housing Plan proposed prioritization of the qualitative deficit. The high cost of land is attributed as one of the key barriers to implementing the program at scale. Based on the findings, the author calls for the state to take a more active role in the housing program to financially structure the projects, better integrate appropriate land uses, provide infrastructure and basic services, and manage the demand through a more efficient public administration.

Findings on demand-based subsidy programs in different country contexts are similar. On production, in every country except for Peru, many studies recognized that this model has produced a large quantity of units to address the quantitative housing deficit. However, most programs have struggled to effectively target services to low- or very low income households, which experience the largest qualitative and quantitative housing deficits. With regard to housing quality, studies find improved living conditions in new houses. However, significant deterioration is observed over time, especially as documented in the Chilean case showing households informally expanding their units. Location is the core challenge documented, as planning and site decisions are devolved to the private sector, which is rationally motivated to build on cheap peripheral land. As explored in topic 2, this pattern of localization heightens segregation and reduces access to social and economic opportunity as

well as urban infrastructure, such as transportation and public spaces. Based on these findings, several researchers provide policy proposals to address emergent challenges. While some recommendations are simply modifications to the demand-based subsidy scheme, many suggest alternative housing policies and programs such as rental or neighborhood development, as explored in topics 4d and 4f. Overall, the effectiveness of demand-based subsidy programs certainly merits further research, especially longitudinal evaluations of the outcomes of these programs for beneficiary families.

#### **4D. Rental Housing Policy**

LAC countries have traditionally focused on homeownership in their policies and subsidies (UN-Habitat 2003b; Moya 2011; Gilbert et al. 2011; Baird-Zars et al. 2013; Brain, Mora, and Sabatini 2014). A more recent group of studies is investigating rental housing patterns and benefits for low-income households. This scholarship follows the observation that home rentals are on the rise. Simply put, buying a home has become more difficult as housing prices rise and mortgages are unattainable (Moya 2011). Rental properties are an alternative to help low-income households financially and with access to transportation and urban amenities. A review of rental housing in LAC (Blanco, Fretes, and Muñoz 2014) demonstrates tenants typically include young people, elders, and single-person households, and divorced people in urban environments. Individuals rent for a variety of reasons: transitioning lives, inability to pay for a home, mobility, access to employment, and desirability of location (Parias Durán 2008; Blanco, Fretes, and Muñoz 2014).

There is a large quantitative housing deficit in Latin America, but formal renting is often difficult because tenants need a third-party guarantee that they will not stop paying their rent, which can be especially difficult for mobile workers and other low-income, unbanked populations (Briceño-León 2007; Moya 2011; Calderón 2014; Blanco, Fretes, and Muñoz 2014). Because of these circumstances, most low-income individuals rent housing informally. Informal rentals include units, rooms, and even portions of rooms that are either not regularized housing units or not registered formally as rentals. Currently, middle-low and low-income households provide a large portion of rental properties (UN-Habitat 2003b; Briceño-León 2007; Peppercorn and Taffin 2013).

Rental housing is typically centrally localized. González -Tejeda (2006) shows the cost of the use of the residential stock is identical to the rental supply function from the housing industry. Therefore, the prices are determined by the distance to the center of the city, demonstrating that centrally located rental housing is more desirable. Thus, a prominent rental market coupled with effective urban planning can lead to more accessible and compact cities (Blanco, Fretes, and Muñoz 2014). Since affordable

rental units could be centrally located, communities would benefit from income integration and transportation opportunities (Gilbert et al. 2011).

Scholars of rental housing and housing policy analysts in the region call for increasing the supply of rental housing. A few nations have subsidized rental housing construction (Argentina, Colombia, Jamaica, and Mexico), but their taxes are easily evaded so developers commonly ignore the incentive (Blanco, Fretes, and Muñoz 2014). For example, for the past three decades, Argentina attempted several fiscal incentives to encourage rental housing, but the high level of tax evasion limited the laws' positive effects (Reese et al. 2012). In Mexico, rental property owners can deduct a flat 35 percent of operating costs instead of the real costs. They have a 5 percent depreciation rate for new construction, but 95 percent of housing rentals are under private contracts and never register or pay taxes (Salazar et al. 2014).

LAC nations could incentivize homeownership by creating subsidies for home additions for rental units, creating tax subsidies, or providing legal help. Scholars suggest that governments should attempt to get larger corporations to develop housing; however, they concede that there is not significant information on the impact of large-scale commercial suppliers (Blanco, Fretes, and Muñoz 2014).

Some LAC countries have attempted to create public rental housing. However, they face difficulties managing and maintaining the properties, jeopardizing the major upfront investment. Alternative typologies, such as a rent-to-buy model, have been considered. However, this only works if tenants can afford it. The government can also attempt to sell housing to a nonprofit, but it must be well established (Villoria Siegert 2004; Blanco, Fretes, and Muñoz 2014).

Since LAC nations have focused on homeownership, there are not significant policies that help individuals rent properties. Uruguay's only rental policy is the Rental Guarantee Fund, which helps tenants who can pay for rent but do not have collateral or a guarantee (Peppercorn and Taffin 2013). In Mexico, FOVIMI-ISSFM only provides financing for rental homes for military personnel, which only accounts for 0.01 percent of the total financing for public housing (Salazar et al. 2014). Several scholars suggest rental housing subsidies for low-income households could increase demand (Reese et al. 2012). However, Moya (2011) argues subsidies would not reach the most vulnerable households because they would be unable to demonstrate formal income. In 2013, Chile was the first LAC country to create a rental subsidy program meant to help mobility (Ross and Pelletiere 2014). The subsidy was viewed as a bridge program until households could become homeowners; the program provided a flat \$140 voucher for five years. Salvi del Pero (2016) analyzed the first two rounds of the pilot program, finding that it generally met the government's goal of bridge support: nearly half of beneficiaries (46 percent) were

previously *allegados*, or living in overcrowded conditions in a friend's or relative's home; for those who were renters previously, proportion of income spent on rent decreased from 40 percent to 16 percent; and 73 percent of recipients were from the lowest income quintile.

Informal renting, by definition, is not regulated. Baird-Zars and colleagues' (2013) case studies on Bogotá, Buenos Aires, Mexico City, Recife, and Santiago demonstrate poor regulation and policies for landlords and tenants. Further, legal procedures can take a long time; UN-Habitat (2003b) suggests community councils or promotion of standard written agreements. When regulations are in place, they create disincentives to enter the formal market. For example, in Mexico laws usually favor tenants and many investors say they create a large barrier that inhibits their desire to build developments (Peppercorn and Taffin 2013). González Tejeda's (2006) policy analysis points out the high transaction rates for rental properties in Mexico, which increases depreciation of the properties.

Despite traditional focus on homeownership, rental housing is emerging in LAC as a viable complement and alternative to existing housing strategies. Due to the relatively infant stage of many rental housing programs and proposals, studies have not yet been able to assess the impact rental housing could have. More research needs to be done on the way different incentives (e.g., subsidies, tax breaks, and legal help) affect the formal and informal rental markets.

#### 4E. Rural and Urban Planning Policy

Literature on rural and urban planning policy in Latin America mostly focuses on urban planning policy likely because 80 percent of Latin America lives in cities (UN-Habitat 2012; Irazábal 2009). A large portion of research—mostly policy analyses and case studies—investigates municipal government action. Of this research, most concludes that municipal actors have failed because of a poor incentive structure (Rolnik, Iacovini, and Klintowitz2014), poor organization, dissonance between policy and action (Maya Sierra 2007), and lack of coordination (Rojas et al. 2006). A related body of work discusses civic participation. According to existing work, some civic participation improvement attempts do work, such as Distrito Federal: Programa de Vivienda en Lote Familiar (Familiar Housing Program) in Mexico City, but the civic/social relation remains diluted (Sánchez-Mejorada Fernández 2004). Moreover, one policy analysis gives a broad overview of civic participation in 45 major cities (Cardoso and Lago do Valle 2000), and another policy analysis concludes that LAC cities must increase democracy and civic participation if they are to successfully navigate future urbanization (CEPAL 2000; Irazábal 2009). In response to this research, another large body of work highlights Bogotá as a city that has succeeded in both realms of municipal governance and civic action. One case study points out Bogotá's policy and management continuity, as well as its civic culture, transportation, and public space interventions, as reasons for improvements in its process of urbanization (Duque 2008). Recognizing that real estate speculation predicated an ill fate for the housing market, Bogotá began in the 1990s to stage interventions in its housing market that were largely successful, including programs like Third Millennium Park and Environmental Axis, although displacement and lack of proper relocation planning contests the narrative of success (Jaramillo 2006, Maya Sierra 2007, Escallón 2014).

In contrast to Bogotá, scholars point to numerous housing and policy challenges in Mexico. While the Mexican government created a commission for housing, real estate pressure interfered with city growth considerations, and thus policy did not properly incorporate city development plans (Maycotte and Sanchez 2010). Mexican cities are currently experiencing an increase in segregation, though they remain less segregated than other cities in the region (Monkkonen 2009, Maycotte and Sánchez 2010, Sánchez and Salazar 2011, Sánchez 2012), in addition to stagnated labor productivity (OECD 2015).

Another large portion of urban and rural planning policy literature focuses on social conditions and social demography, again highlighting mostly cities rather than rural areas (Cardoso and Gonçalves 2012). Research questions how cities might create social value in urban areas where there seems to be a lack of social cohesiveness, concluding that cities should encourage new programs (Pérez-Valecillos et al. 2013) and incorporate sociodemographic variables into the housing sector as a mechanism of integration (Arriagada 2003a). More research references the need to increase civic participation in order to boost social cohesiveness (CEPAL 2000), as well as the importance of addressing segregation (Wojtowicz 2014).

One subset of urban housing research focuses on housing layout and organization, pointing out segregation (Wojtowicz 2014)—for example, in Mexican cities—and density concerns (Sánchez and Salazar 2011). Additionally, considering sprawl and organization concerns, it may be important to consolidate regional space (CEPAL 2000) and to address density in housing policy moving forward (Sánchez and Salazar 2011). Housing policy offers one of the strongest ties between urban and rural planning policy, as urban sprawl spills into rural areas. Overall, countries must remember the interaction of rural policy with urbanization and not neglect rural or peri-urban policy (Miranda 2008).

The environment and sustainability concerns are a popular topic for research on Latin American housing—mainly considering cities rather than rural areas. In general, the literature is prescriptive, emphasizing the importance of prioritizing sustainable, environmentally friendly cities in future urban

development policy (Lungo 2004; Sánchez 2012; Lopez et al. 2013; Maycotte 2014). Research points out that even in terms of developing sustainable cities, civic participation is especially important (Díaz et al. 2012). As discussed in section 1e, climate change adaptation and mitigation is a topic of growing importance for urban planning policy in the region, with implications for housing.

#### 4F. Neighborhood Development Programs

Recognizing the proliferation of urban sprawl and inadequate housing in terms of structure and social services, alongside predicted continued urbanization, LAC countries have embarked on various housing revitalization and neighborhood development efforts. Historically, approaches have included physical infrastructure provision, community action planning, or a combination of the two (Trujillo 2012). However, thanks to research indicating that to simply build more houses is to aggravate problems like urban sprawl, dilapidated structures, and lack of social services, national and municipal policy has shifted over the past couple of decades, rather, to improve existing metropolitan settlements with social and infrastructure services (Brakarz, Greene, and Rojas, 2002; Magalhaes 2012; Trujillo 2012).

Research focuses predominantly on infrastructure and social service improvements in urban informal settlements, the relationship between government policy and local actors, and policy institutionalization. Besides an in-depth architecture and development manual that highlights 12 sites in São Paulo, Brazil (Brillembourg et al. 2010), most literature on design and implementation is policy and scholarly analyses that highlight lessons learned (Brakarz, Greene, and Rojas 2002; Magalhaes 2012; da Silva 2013; Leitão and Delecave 2013; Becerril 2015; Rufino 2016). A number of case studies investigate the theory and process behind specific neighborhood improvement programs: a housing project in Cuernavaca, Mexico (Inclan 2013); the Programa de Aceleração do Crescimento— Urbanização de Assentamentos Precários (the Growth Acceleration Program for the Urbanization of Slums) in São Paulo, Brazil (Denaldi et al. 2016); the Guarituba settlement in the metropolitan region of Curitiba, Brazil (Medeiros 2015); Programa Mejoramiento de Barrios (the Neighborhood Improvement Program) in the city of Resistencia, Argentina (Romagnoli 2006); and the Villa 31 in Buenos Aires, Argentina (Trujillo 2012). These case studies generally find that government policy has not aligned with local action to produce results that are satisfactory for residents, or municipal and national policy.

Neighborhood development programs, such as the ones cited above, have improved housing conditions objectively according to reduction in poverty and improvement in health and safety (Galiani, Gertler, and Undurraga, 2014 and 2015; Aduan and Brakarz 2004). However, considering the relatively common disconnect between development policies and other urban features (transportation, health,

education, recreation) (Rojas 2014), research disagrees on whether quality of life actually improved. Galiani, Gertler, and Undurraga (2014; 2015) conclude from their quasi-experimental study of the NGO TECHO program in El Salvador, Mexico, and Uruguay that better houses do improve overall well being. Others question the true impact of slum upgrades on residents' quality of life (Riley, Fiori, and Ramirez 2000; Morim 2003; Galiani, Gertler, and Undurraga 2014 and 2015).

A large portion of research focuses on various facets of the government's role in neighborhood development programs: this includes analysis of a government initiative's efficacy, purpose, and function, as well as the limits of policy. Over the past several decades, cities have attempted to include residents in the planning and execution of neighborhood development plans, recognizing that residents are, after all, the experts for the area and will also be the ones living with the outcomes of the policies. Yet, a sizeable body of work questions the effectiveness of government (Siclari 2004; Tonella 2010; da Silva 2013; Medeiros 2015; Denaldi et al. 2016). For instance, two policy analyses—based on personal interviews with residents impacted by the Favela Bairro program in Rio de Janeiro as well as a community analysis of the Chile Barrio—point out the failure of public housing policy to align with residents' desires in order to produce beneficial results (Riley, Fiori, and Ramirez 2001; Siclari 2003). The question remains in debate, however, as some research indicates that government assistance is necessary (Trujillo 2012; Leitão and Delecave 2013), even asserting that local leaders are indispensable (Cities Alliance 2010). This disagreement suggests room for more work on specific tools for improving local public policy in terms of resident satisfaction and participation.

The IDB has played an integral role in financing neighborhood development programs (Magalhães 2012; Rojas 2014), mostly in Chile, Colombia, Brazil, Argentina, and Bolivia. The IDB is most commonly noted for its financing of the Favela Bairro in Rio de Janeiro, a favela urbanization program that marks the genesis of national government involvement in urban slum renewal. Beyond general scholarly investigations into the theoretical approaches underlying the Favela Bairro, research on the Favela Bairro finds that to reduce poverty on a large and long-lasting scale, policies must be based on democratic participation, while also concluding that it is tenuous at best for governments—national or local—to place policy responsibility on poor urban communities and that it is immensely difficult for governments to boost civic participation. This contradiction between democratization and policy success necessitates more work on ways to address the conflict.

Research on the design and execution of slum upgrades generally concludes that a collaborative approach is necessary (Rojas 2014). This includes collaboration between national and local policies, as well as holistic integration—physical, social, and economic—of housing developments within urban areas. However, much research on neighborhood programs remains to be conducted.

### 5. Social Organization

A large pool of documents (107, exactly) was found in the general area of social organization around housing. The subjects under this topic ranged from research on the social dynamic of housing and neighborhood development for low-income communities and whether the development is self-generated by the community members or generated externally (for example, by a national program). The vast majority of studies are focused on the latter—that is, how public housing polices or programs affect social capital in targeted communities. Models for community engagement and participation are also considered under this general topic of social capital and organization.

#### 5A. Community-based Housing Solutions

In this review, community-based housing solutions include the wide range of land, design, construction, allotment of housing, and other actions not constrained by government or policy or reliant on the housing and land markets. Rather, these include housing and land-use actions that come from community organizing or self-empowerment initiatives. As a consequence, we reviewed a variety, though numerically slim number, of studies that focus on these phenomena. The monographs reviewed all are scholarly exploratory or case studies.

Literature on community-based housing solutions is scarce and heavily focused on informal settlements—that is, where public and formal commercial housing activities are absent. As Cubillos (2006) acknowledges, most research on this topic has centered on the transformation of informal settlements and only a handful explores the transformation of formal ones. On the informal side, Lomnitz (2003) focuses on marginalized communities, the actors at the heart of informal settlements, in 20th century Mexico. Reiterating previous findings, Lomnitz argues that the creation of these settlements is a survival mechanism born from the external conditions in the lives of marginalized individuals and is facilitated by their network of peers and mutual assistance in an informal system.

Giraldo (2012) argues, however, that generally, informal settlements lack participatory community building, in part due to their lack of formal or legal status. García (2006) also points out that the inhabitants of these settlements in effect become builders of their habitat through collective actions but adds that diverse social actors, both public and private, take part in this process. This is because the informal market fills the void where public policy and the formal market are not present, and so it complements processes of land provision (Cravino 2006; Bolívar and Erazo 2013; Yory 2015). Murillo et al. (2012) argue that the interactions of these forces tend to legitimize the duality of formal and

informal settlements. In short, a subset of the studies in this field focuses on the psychosocial motivations for community-based housing solutions.

Another subset looks at the processes associated with completed community-driven interventions. Collective slum upgrading is one such solution driven by the participation of these communities (Landaeta 2004; Cravino 2008; Tudino et al. 2014). Di Virgilio (2015) and Florencia et al. (2016) conclude that to achieve housing upgrading—whether in slums or in formal settlements—it is necessary for the community to strengthen links with the local government via community organizations. Furthermore, it is necessary for an involved actor to promote collaboration; the actors must be willing to collaborate, and there must be resources or needs that motivate or that require the linking of the actors (Florencia et al. 2016). Other solutions beyond upgrading exist as well. Community-driven resettlement programs, for example, can be challenging to implement because individuals resist the idea of leaving their homes because of links they have created in their communities or because new social networks are perceived as a major threat (de Santana 2003).

No studies reviewed the outputs or outcomes of community-driven housing solutions beyond the sense of collective action or community capital they reinforce. Yet the significance of that specific factor has been affirmed in these studies as a critical opportunity for public and market-driven solutions.

Social production of habitat has gained support as a needed component of formal settlements. Shimbo and Ino (2005) argue that ideological and cultural dimensions must be incorporated in the production of housing through dialogue between dwellers and architects. In terms of housing upgrading, Cubillos (2006) and Di Virgilio (2008) acknowledge the heterogeneity of cases. Cubillos (2006) concludes that, considering that the needs of individuals are constantly evolving, community residents must have the flexibility and control to make spatial changes so their housing meets their needs. Ultimately, the actors bringing about the change and the length of their involvement during this process determine the level of development in a neighborhood (Prates 2009; Cosacov et al. 2011). These lessons, though exploratory and derived from a handful of studies, have a bearing on other community capital subtopics.

#### 5B. Social Capital Impacts of Housing Programs

Neighborhood and housing characteristics and conditions can influence the social capital of residents. This review examines the literature on how housing programs and government-led initiatives impacting housing conditions influence the social, economic, and cultural networks of communities.

Most of the literature available on this topic encompasses housing programs as part of broader government interventions. Di Virgilio (2009; 2012; 2014) particularly focuses on how these interventions impact mobility and therefore affect the social makeup and dynamics of a neighborhood. In some specific cases, a neighborhood's social makeup can be impacted by an individual development such as a boom in construction incentivized by the state (Cavalcanti 2008), bringing in new residents and displacing others. However, Di Virgilio (2014) finds that residential trajectories and housing strategies are structured in relation to a wide range of state interventions that are not necessarily or exclusively sectorial. This is in part because a family's behavior is influenced by the structure of political opportunities, particularly those defined by policies of habitat. As it develops, this behavior is influenced by social organizations and networks of mutual help (Di Virgilio 2011b). In a case study exploring the history of Manguinhos, Rio de Janeiro, Fernandes and Costa (2012), in concurrence with Di Virgilio's findings, observe that urbanization policies, of which housing programs are part, along other contextual factors such as geographic characteristics and community interactions, consolidate communities and create identity ties and tensions. In short, this literature highlights the importance of considering the context and broader policies under which housing programs take place to gauge how housing programs impact social capital.

Other studies explore a more direct link between housing programs and their impact on social capital. The literature asserts housing policies can have both positive and negative impacts on the social capital of communities. Posner (2012) explores how years of housing policy repressing collective action and the development of social capital in Chile's urban poor exacerbated social stratification, reinforced workers' vulnerability, and undermined social trust, further vitiating social capital and impairing self-agency to repair it.

Other studies find a strong correlation between localities of precarious housing and crime or social tension. With poor housing conditions, educational attainment, and employment rates, slums and similar localities are particularly vulnerable to homicide (Rodrigues 2006). Romaña and Marina (2011) warn of the complexities that should be accounted for when developing housing solutions. For instance, their study finds that mixing different cultures in public housing without proper planning and management can result in issues regarding the beneficiaries' coexistence, such as weakened community relations and overall fragmentation of the social fabric.

However, government interventions intended to assist vulnerable communities through housing programs appear to have positive impacts on their social capital. In a quasi experiement Kast (2009) examines the impact of publicly provided housing units on student achievement in low-income households in Chile and finds that those who received housing units increased the level of education by 0.39 years for the population younger than 25. The literature agrees that, like other forms of government intervention, housing programs can have an important impact on the social and human capital of communities.

#### 5C. Community Participation in Housing Programs

Composed mostly of exploratory and case studies, the literature addressing community participation in housing programs discusses how community capital and engagement are harnessed in formal public housing programs. Often, the literature finds, community capital and engagement are not harnessed efficiently, as existing social capital is complex. Further, community capital and engagement are usually ignored or misinterpreted during the implementation of formal housing or land-use programs (Romero 2003; Saraiva and Marges 2004; Di Virgilio et al. 2010; Ribeiro 2014).

Nevertheless, there exists a wide array of examples, mostly case studies, where housing and landuse programs attempt to or successfully achieve this. Some of the literature explores community participation efforts in housing programs led top down, where either the state or the city is the main catalyst for community participation, as they seek wider democratization of government processes (Denaldi 2008; de Moura 2009; Gondim and Gomes 2012; Klein et al. 2012; Lima 2014; Torrico and Walnicky 2016). Denaldi (2008), for instance, focuses on slum upgrading in the municipality of Santo André, Brazil, where community participation comes in the form of plenary sessions, which are organized by the city government to identify priorities and elect a council that reviews proposals and the city's investment capacity to determine the city's investment priorities. Other studies explore community participation in housing programs with a bottom-up approach, where residents, community organizations, and private entities on site are the main catalysts for community participation, gaining recognition from the government and ultimately becoming engaged in housing programs (Valverde 2006a; Atria 2007; Oliveira 2010; Herzer et al. 2011; Balbim and Krause 2014). Housing cooperatives are a relevant example of this bottom-up approach. In a global scan of housing alternatives, Bredenoord, Van Lindert, and Smets (2014) note that the Uruguay's housing cooperative model—the Federación Uruguaya de Cooperativas de Vivienda por Ayuda Mutua is recognized as a model of mutual assistance. The Uruguayan cooperative system has since been emulated in many other countries, as an example of policy transfer in this space. For example, under the design of the larger Minha Casa Minha Vida program, the Brazilian government included a sub-program Entidade, to targets subsidies to housing cooperatives rather than to individual households. Under this structure all actions regarding organizing residents, acquiring land, and executing development is done by community based-organizations, allowing for greater autonomy over both the product and the process (UN-Habitat 2014).

Lobo et al. (2010) give an overview of how these community actors define their objectives and action plans, create networks, and achieve their goals. Ceballos-Ramos (2012), in turn, looks into community actors' direct role in planning housing programs, arguing that participatory processes allow all actors to learn information they were previously unaware of, helping them create new and better alternatives to address the housing issues at hand. In their research, Rotondaro and Cacopardo (2012) echo this argument but focus on construction technologies for housing in poor urban sectors. Nonetheless, Murillo (2016) provides caution about the implementation of participatory approaches for the production of habitat, warning that top-down participatory planning can have counterintuitive results, such as legitimizing segregation. On the other hand, when driven by the inhabitants themselves, the processes are legitimized and appropriately address the inhabitants' needs (Murillo 2016; Castillo Couve 2014). Despite the rising popularity of participatory processes in formal housing programs, Landaeta (2005) finds that people can have negative attitudes toward them due to poor management and the limited achievements they produce. There remains scarce evidence on the measurable impacts that these processes can have on housing program beneficiaries (Ceballos-Ramos 2012).

There is, however, agreement across various case studies and quasi experiments that show that when community participation does not take place in housing programs, there is discontent among the beneficiaries (Márquez 2004; Hataya 2007; Rangeli and Fonseca da Costa 2013). Though not examining community participation in housing programs specifically, Calderón and Marulanda's 2002 evaluation of the participatory processes in a district of Lima, Peru, shows that when participatory processes do take place as part of government programs, they result in greater legitimacy for the local government and in stronger community organizations that feel strengthened by an authority willing to listen to them. Even though much attention is often given to the participation of beneficiaries during project construction, Lizarralde (2011) concludes that the success of a subsidized housing project is strongly related to the appropriate coordination of formal and informal stakeholders after the occupation of units. Apart from delving into the benefits of community participation, some exploratory studies and advocacy monographs argue that social inclusion in these processes is, above all, a right and that community participation in housing programs should be a widespread practice (Whitaker Ferreira 2003; Earle 2012).

## Conclusion

This literature review provides insight into the state of the overall housing research infrastructure in the Latin America and Caribbean region, in addition to describing the current substance of and gaps in these research topics. First, there is a marked growth in the rate of research, evaluation, and monitoring production in housing, land use, and related subjects for this region over the last two decades. Much of this growth is attributable to the encouragement of national governments in the region's wealthier nations—particularly in Brazil, Chile, and Mexico—and through multilateral aid and development organizations such as the IDB, the World Bank, the United Nations Human Settlements Program, TECHO, and Habitat for Humanity International. The Lincoln Institute of Land Policy has also supported the production of an important body of research. Collectively, these organizations have spurred housing policy and program innovations in the region and instituted accountability measures, such as program evaluation, from which the literature has blossomed. Further, increased emphasis on research and research productivity in fields such as urban planning, architecture, sociology, and economics in universities throughout the region, as well as attention from a growing number of Latin American researchers outside Latin America, have contributed to the growth of research in this field.

Despite the volume of publications the researchers reviewed, there is still a general paucity of rigorously produced evidence around housing issues in the Latin America and Caribbean region. Like housing research in other regions, there are few resources for conducting experimental or quasi-experimental studies at the household level, coupled with the many challenges of designing research at the urban scale where "comparable" cities and metropolises do not exist. There is a critical need to continue observing many of the policy and program interventions of the past three decades to determine whether long-term outcomes persist along with any unintended consequences. These studies also help overcome the challenge of generalizing findings across the region, given the particular national, urban, and policy contexts of their subjects. However, these research designs are by no means the only vehicle for producing evidence on housing in the region, particularly evidence seeking to inform housing policies that require cost- and time-effective feedback. As this review suggests, there is a need to increase research efforts of all kinds and methodologies.

Certain subregions continue to be overlooked with regard to research production. In particular, research and evaluation reports for the Caribbean basin were difficult to find. Briefs on basic housing conditions in Caribbean nations were rare, let alone scholarly reviews and evaluations of housing programs and policies. A corollary has been the comparatively reduced volume of research on housing in nations with smaller populations or economic capacity throughout the region, even when taking their

size into account. The infrastructure required to collect sufficient data and perform rigorous analysis is simply beyond the capacity of institutions within these countries.

Specific topics and themes of research tend to follow trends in policymaking at the national and multilateral levels. For example, growth in slum-upgrading research followed the expansion of property-right legislation in the 1990s, while studies on housing mortgage infrastructure and housing microfinance surfaced in the early 2000s during the implementation of securitization and banking reforms in many Latin American countries. Research agendas, often, are temporal. As such, the observations in key topical areas and noticeable gaps in research that are provided in this document should also be viewed in their contemporary program and policy contexts.

### **Research Gaps and Future Opportunities**

Like the housing conditions, programs, and policies reviewed in the studies, the state of housing research evolves. Ongoing assessments of new policies and programs, as well as the underlying housing conditions in Latin America and the Caribbean, are needed. There are several key opportunities for research that is relevant to current housing needs and practices, as well as gaps in scholarship.

Gaps in individual subtopics are noted in the report and summarized in the executive summary. Among these, the following emerge as core opportunities:

- Rental housing policies and programs. The subtopic of rental housing will clearly increase as a
  policy issue in the future in the LAC region, given urbanization rates and growing spatial
  disparities. However, the paucity of information on this sector and of data about informal rental
  markets must be overcome first.
- Housing tenure policy focus. A corollary to the recommendation for additional rental housing research is the need for research investigating the differences between outcomes from the homeownership policies of the past and the rental housing policies of the present and the future. Outcomes of interest should include those related to individual households in terms of the quality of their housing units, their financial conditions, and their life outcomes.
   Community-level outcomes are also critical, particularly around city planning and segregation. The costs and efficiencies for government coffers of either policy approach should be reviewed.
- Housing affordability. Massive urbanization and decreased land availability will continue to exacerbate housing affordability in both large and mid-sized cities in the LAC region. Policies that focus on filling the gaps in costs for the development of affordable housing and for low-

income households must rely on accurate data on housing conditions and adequate analysis of the effects of different interventions.

- Affordable housing finance. Similarly, the effects of policy efforts that use market-based tools such as mortgage and microfinance products emerge as a significant gap. In some cases, these financial products have produced negative consequences (such as mortgage-induced poverty) as much as positive ones. One area that has not received much attention is the integration of infrastructure finance (typically, bonds) with housing finance to produce slum-upgrade programs that provide housing with services.
- Segregation and spatial mismatch. The combination of homeownership policies and increased urbanization has perpetuated housing segregation, disparities in access to housing-related services like finance, and mismatches between low-income households' communities and urban amenities and opportunities. Some housing programs intended to promote homeownership and provide shelter have increased segregation and burdens on the poor. This area of research is likely to need additional refinement and exploration to understand the condition in the region's largest cities.
- Land and building regulations. Housing qualitative deficits have improved in the region, but there are still gaps in our understanding of whether more stringent and better-enforced building codes and land planning have played a role in that improvement along with the other contributing factors, such as land price and valuation. Similarly, land-use regulations are expanding as the region's homes become more regularized and communities become more formalized. Disparities in the application of rules, their costs, and benefits need to be studied. More research in this area may also help define the architectural design, building materials, and construction technologies that produce the most ideal housing environments.
- Rural and peri-urban housing quality. Much of the literature, and certainly the gaps identified, focuses on the region's growing cities. With the majority of the population living there, both policies and subsequent research projects are increasingly overlooking the rural and peri-urban areas likely to have the most extreme housing quality challenges and persistent poverty.

Additional suggestions for the types of studies and methods for studying the above content areas were provided by the project's contributing researchers and sponsors. These are summarized in box 2.

Ultimately, all of the suggested areas for immediate, rigorous research point to the need for more exploration of the housing needs, behaviors, condition, and contexts of low-income communities in the

Latin America and Caribbean region. An ideal research infrastructure throughout the region will collect accurate data, even in informal settlements, and detect outcomes from public, philanthropic, and private interventions. Only by understanding these outcomes—the lived experiences of the poor—will appropriate policies and programs be created and refined.

#### BOX 2

#### Emerging Research Priorities from the Global Housing Research Initiative Community of Practice

On August 26, 2016, more than 40 housing practitioners and researchers from Latin America and the Caribbean convened to discuss the findings of this report and establish and agenda for future housing research, to fill the gaps and to further evidence-based housing practice in the region. Among the five thematic areas of this report, the following areas were identified as key priorities.

- Topic 1: low-income housing conditions
  - » Comparable data to establish trends in the production and persistence of informal settlements, including information on the producers.
  - » Mapping of informal settlements at the regional level with commonly defined variables and integration into national census processes.
  - » Identify dynamics of land regularization to support improvement in quality of life in informal settlements.
- Topic 2: land use and management
  - » Comparison of regulatory contexts of land management and recuperation instruments and impact on housing affordability.
  - » Functioning of land markets in relation to housing programs, in particular, the impact of localization on the vulnerability of families.
  - » Outcome studies on alternative models of tenure and how those outcomes compare to rental or ownership models.
- Topic 3: housing finance
  - » Feasibility of scaling social sector models, such as remittances or cooperatives.
  - » Impact of microfinance lending on quality of life, family budgets, and housing quality
  - » Links between incentive structures and promotion of equity.
  - » Comparative studies of land-taxation instruments and contribution to equity.
- Topic 4: housing policies
  - » Applicability of international models for rental housing in the LAC context.
  - » Systematic methodologies for impact analysis of housing interventions.
- Topic 5: social organization
  - > Housing program design focused on fostering social capital.
  - » Feasibility of strategies for social integration, such as mixed-income housing in the LAC region.
  - » Mobility considerations of housing programs.

Source: Minutes of the Meeting of the Global Housing Research Initiative in Santiago, Chile, on August, 26, 2016.

# Appendix A. Research Advisory Council Members and Contributing Researchers

#### TABLE A1

Members of the research advisory council

Name	Organization
Anaclaudia Marinheiro Centeno Rossback	Cities Alliance
Marie-Alexandra Kurth	Cities Alliance
Hana Haller Crowe	Habitat for Humanity International
Monica Ramirez	Habitat for Humanity International
Stephen Seidel	Habitat for Humanity International
Jorge Larenas Salas	Instituto de Vivienda, Universidad de Chile
Mariela Gaete Reyes	Instituto de Vivienda, Universidad de Chile
Andrés Blanco	Inter-American Development Bank
Ines Magalhaes	Ministério das Cidades, Brazil
Júnia Santa Rosa	Ministério das Cidades, Brazil
Barbara Richards	Ministerio de Vivienda y Urbanismo, Chile
Claudia Bustas Gallardo	Ministerio de Vivienda y Urbanismo, Chile
Jose Luis Sepúlveda	Ministerio de Vivienda y Urbanismo, Chile
Claudio Acioly	UN-Habitat
Elkin Velásquez	UN-Habitat
#### TABLE A2

### **Contributing Researchers**

Name	Organization
Ana Paula Koury	Universidade de São Paulo
Asad Mohammed	University of the West Indies
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Eduardo Rojas	Indepdent consultant
Edith Jimenez	Universidad de Guadalajara
Elda Margarita Hernández	Universidad Autónoma de Tamaulipas
Fernando Murillo	Universidad de Buenos Aires
Héctor Becerril Miranda	CONACYT-Universidad Autónoma de Guerrero
Juan Pablo Duhalde	Centro de Investigación Social-TECHO
Laura Wainer	Massachusetts Institute of Technology
Leonel Miranda Ruiz	Universidad de Bogotá Jorge Tadeo Lozano
Lucia Zanin Shimbo	Universidade de São Paulo
Luis Renato Bezerra Pequeno	Universidade Federal do Ceará
Mercedes Di Virgilio	Universidad de Buenos Aires
Michael Donovan	Inter-American Development Bank
Paola Siclari	Independent consultant
Paavo Monkkonen	University of California, Los Angeles
Porfirio Guevara	INCAE Business School
Ronald Acre	INCAE Business School
Susana Lastarria-Cornhiel	University of Wisconsin-Madison

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