Cornerstone of Recovery

How housing can help emerging market economies rebound from COVID-19

2020

Habitat for Humanity®

Terwilliger Center for Innovation in Shelter

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Acknowledgments

AUTHORS

- **Arthur Acolin**, assistant professor, and Bob Filley Endowed Chair in the Runstad Department of Real Estate in the College of Built Environments at the University of Washington
- **Marja Hoek-Smit**, director of the International Housing Finance Program at the Wharton School Zell/Lurie Real Estate Center and an adjunct professor in the Wharton Real Estate Department at the University of Pennsylvania

CONTRIBUTOR

- **Richard Green**, chair, and Lusk Endowed Chair in the Department of Real Estate Development at University of Southern California

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Abbreviations

CLT	Community Land Trust
FCEH	Final Consumption Expenditure of Households
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
HOFINET	Housing Finance Information Network
IMF	International Monetary Fund
OECD	Organization for Economic Co-operation and Development
PPP	Public-Private-Partnership
PPP	Purchasing Power Parity
SNA	System of National Accounts
UN	United Nations

Abstract

The COVID-19 pandemic has caused a major economic contraction, affecting a broad range of economic sectors in countries at all income levels. As of June 2020, the International Monetary Fund (IMF) was projecting that global Gross Domestic Product (GDP) would decline by 4.9 percent in 2020 and be 6.5 percent lower than pre-COVID-19 projections by the end of 2021. This economic crisis and the potential for capital market dislocations could have particularly negative consequences for the housing sector, which requires significant capital investments, particularly in many emerging market economies. Additionally, this comes at a time when emerging evidence shows that communities with poor housing conditions and limited access to fundamental infrastructures such as water and sanitation systems, have worse outcomes with regards to COVID-19 transmission and deaths (Corburn et al. 2020; Patranabis et al. 2020; Sampaio 2020; Shelter Cluster 2020).

In response to the joint economic and health crises, there is an opportunity to develop and implement inclusive housing strategies that stimulate the economy and improve community health outcomes. A robust body of research has established that housing is an economic sector with strong multiplier effects on both employment and consumption, particularly in countries with well-developed credit markets (Pugh 1994; Mayer and Somerville 2000; Adelino et al. 2015; Mian and Sufi 2015). Unfortunately, the design of effective and equitable housing policies in emerging market economies has been hindered by the lack of robust data on housing markets. In particular, the overall contribution of the housing sector to GDP, both through investments that contribute to Gross Fixed Capital Formation (GFCF) and through housing services in the form of rent payments and owner-equivalent rents, is not fully recognized. In addition, existing estimates likely undercount the flow of capital and labor allocated to self-built or incrementally constructed housing, and substantial home-remodeling. After analyzing housing data from 11 emerging market economies, we find that the combined contribution of housing investments and housing services represents between 6.9 percent and 18.5 percent of GDP, averaging 13.1 percent in the countries with information about both. This puts the housing sector roughly on par with other key sectors like manufacturing. In addition, if the informal housing sector has been undercounted in the figures used in this analysis by 50 percent or 100 percent, then the true averages of housing investments and housing services' contribution to GDP would increase to 14.3 percent or 16.1 percent of GDP respectively. As a point of comparison, housing investments and housing services in the US represent 14.6 percent of GDP.

Based on these findings, this report recommends adopting inclusive strategies and stimulus policies directed towards housing markets, including incremental housing markets. These can be an essential part of actions taken by international organizations, governments, nonprofits and the private sector to support community and economic resilience during the COVID-19 pandemic and beyond. Depending on the national context, housing sector investments will contribute to improved community health and economic stimulus and stabilization to varying degrees. In particular, the size of the housing construction sector, the availability of housing finance and serviced land, and the size of housing services in the economy will impact the multiplier effect associated with influxes of capital to the housing sector.

Introduction

As of June 2020, the International Monetary Fund (IMF) was projecting that global Gross Domestic Product (GDP) would decline by 4.9 percent in 2020 and be 6.5 percent lower than pre-COVID-19 projections by the end of 2021. The magnitude of this global decline in economic activity is substantially larger than the experience of the 2008-2010 Global Financial Crisis, when global GDP declined by 1.7 percent in 2009 (IMF 2020a). In addition, a number of emerging markets are expected to perform substantially worse. For example, GDP is expected to decrease by at least 9.4 percent on average for Latin America and by 8.0 percent for South Africa.

Housing is an important sector of the economy and the unfolding economic crisis in the wake of the COVID-19 pandemic may have particularly negative consequences for investments in housing. It is also a capital-intensive sector and without government actions, the availability of private capital is likely to decrease as unemployed households become unable to make their rent and mortgage payments. Service workers engaged in face-to-face professional activities, a group that represents a substantial share of lower-income informal workers and residents of informal settlements, have been particularly hard hit by the restrictions put in place in response to the pandemic, resulting in job and income losses for households with a limited safety net (Joint Center for Housing Studies 2020).

In addition, evidence is emerging that communities with poor housing conditions and overcrowded households have worse outcomes with regards to COVID-19 transmission and deaths (Corburn et al. 2020; Patranabis et al. 2020; Sampaio 2020). Beyond the housing structure itself, limited access to fundamental infrastructures such as water and sanitation can make sanitary conditions worse and further exacerbate the impact of COVID-19, adding to preexisting vulnerabilities (Corburn et al. 2020). Informal settlements throughout the Global South are particularly at risk of worse outcomes as a result of COVID-19 outbreaks (Sampaio 2020).

The extent to which investing support to the housing sector will have positive economic stabilization and stimulus effects and contribute to improved community health will depend on: 1) whether stimulus measures are designed with inclusivity in mind; and 2) the national context. **The likelihood of undertaking well-designed, housing-directed measures rests upon understanding the size and structure of the industry and in developing measures that serve both formal and informal markets, owners and renters, and households within a wide range of income.**

To conduct this analysis, this paper:

- Focuses on the size of the housing sector in 11 emerging market countries and accounts for both housing investments and housing consumption. (In five of the sample countries—India, Kenya, Mexico, Peru and the Philippines—Habitat for Humanity's Terwilliger Center for Innovation has Shelter Venture Labs[1] and partnerships that facilitated access to data.)

- Discusses how much official statistics might underestimate the role of housing in the economy, given the size of the informal sector in many emerging market economies, and develops back-of-the-envelope estimates of the potential undercount. There is only limited evidence on the total size of housing investments in most developing economies and estimates likely undercount the flow of capital and labor allocated to self-built housing (Dasgupta et al. 2014; McKinsey 2014). In addition, the traditional focus on housing investments is only one component and should be expanded to account for the importance of housing services[2] in the economy.

- Places the current size of the housing sector in the context of the need for investment to improve housing conditions in developing countries. It is recognized, that beyond GDP impact, there are other ways that investing in housing contributes to the economy. For example, through positive effects on productivity through savings in the health sector and social services associated with improved housing conditions. These effects are difficult to enumerate and there is limited research and data available. However, improved productivity could easily be equally or even more important than the impact of investment on the economy.

[1] Habitat for Humanity's Terwilliger Center Shelter Venture Labs function like action-oriented think tanks focused on incremental builders and affordable housing. They engage with companies, as well as with research and industry institutes, to positively influence how housing products and services are used by incremental builders.

[2] Housing services represent the value of the services households derive from occupying their units. It is either the rent paid by the renter, or, if they own the unit, the monetary equivalent to the rent they would have to pay to obtain a similar unit.. In the US, housing services were estimated to represent about 12 percent of GDP or US$2.6 trillion in 2018 and owner-equivalent or imputed rental value accounted for about 75 percent of that value. In comparison, residential fixed investments represented about US$785 billion or 3.3 percent of GDP. This means that in the US, the housing sector accounts for about 15 percent of GDP and about one million direct jobs in the construction sector (Congressional Research Services 2019).

- Develops proposals to incorporate housing as part of the public and private sector response to the COVID-19 pandemic in inclusive ways that provide immediate economic benefits while addressing the pressing needs to improve current public health conditions. Policies that would both stimulate housing construction of new units and improve existing structures, (including both the units themselves and their connection to infrastructure), can offer a large economic stimulus effect in the short term. These policies and investments can also produce long-term, positive impacts on household welfare, energy efficiency, economic activity (by providing collateral) and increased resilience in the face of disasters, (epidemic outbreaks and also hurricanes, earthquake, floods and more).

Housing and the Economy: Investment and Consumption

Accounting for the Role of Housing in the Economy

Efforts to measure the contribution of housing to the economy have largely focused on developed countries (Green 1997; Lacoviello 2005; Davis and Heathcote 2005; Leamer 2007; Ghent and Owyang 2010). Methods to account for investment in and consumption of housing as part of estimating annual GDP figures are developed in the System of National Accounts (SNA) by international organizations—including the United Nations (UN), IMF, the World Bank and the Organization for Economic Co-operation and Development (OECD)—going back to 1953. The SNA aims to create comparable metrics of economic activity to track economic growth and allow for international comparability. Many countries have adopted a version of the SNA with some modifications in compiling their national account figures, since the international standards set by the SNA are voluntary. **The quality and comprehensiveness of national accounts data differ substantially across countries, along with their ability to accurately track changes in economic activity** (World Bank 2008). Two important components of the SNA that are used to calculate GDP include: 1) the production account that shows the output of goods and services in an economy and the various inputs to it; and, 2) the household expenditure account that captures final consumption of goods and services by households (World Bank 2008). Both the 1993 and 2008 revisions to the SNA emphasize the importance of the housing sector in terms of production and consumption (World Bank 2008).

Housing Investments. Housing investments are captured in the value-added section of production estimates of national accounts and in the expenditure section as part of Gross Fixed Capital Formation (GFCF: P51). GFCF is the category that aims to measure investments in capital assets that "increase the value of output over several, possibly many, periods" (World Bank 2008: 62). It is estimated as the net flow of capital represented by the acquisition less disposal of new or existing produced assets. Construction is one of the standard industries for which GFCF is calculated, and GFCF includes investment for construction and improvements with disposal through sale being deducted. A subcategory specifically captures investments in dwellings (P51N1111) distinct from other buildings and structures. We use the dwellings measure reported by the OECD or national accounts when available, or the more aggregated construction measure reported by the UN when not available. As described in World Bank (2008: 62): "the figure for dwellings should include estimates for the construction of new dwellings even if these are traditional dwellings or shanty town dwellings constructed by the occupiers."

Housing Services. Housing services are captured as part of the value-added section of the production estimates and in the consumption section of national accounts as part of the Final Consumption Expenditure of Households (FCEH). Housing services (P31CP040) include expenditures on rents, imputed rents for owners (also called owner-equivalent rents), maintenance and repair of the dwelling, and utility costs.[3] For owners, this category intends to capture the value of the flow of housing services derived from housing assets or services needed to maintain them. **The World Bank (2008) indicates that reliable household expenditure surveys often lack the capture of these consumption expenditures, and that many countries have to rely on approximations to estimate rents and owner-equivalent rents based on construction cost estimates.** Including owner-equivalent rents as part of housing services accounts for the substantial expenditure households would pay to secure a similar dwelling, and ensures that changes in homeownership rates do not affect GDP for temporal and international comparisons.

Housing services are an exception among personal and domestic services in being included as part of the measure of economic activities. Housing services are treated similarly to the production of goods by households for their own-account, such as the value of any agricultural goods, clothing, pottery, or furniture they produce for household consumption. For owners, housing services capture the return on the capital invested in an asset without which the households would have to pay rent in the same amount to secure an equivalent level of housing services. Other domestic services that are excluded are, for example, cleaning, cooking, and caring for children, elderly or disabled members of the households. While such services could also lead to market transactions, these are based on the exchange of labor rather than of an asset, and are not included in measures of GDP based on SNA. **The fact that housing services are an integral part of GDP and represent a substantial share of GDP, generally several orders of magnitude larger than housing investments, is underrecognized by policymakers and the public.**

[3] Subcategories exist, breaking down rent (P31CP041), imputed rent (P31CP042), maintenance and repair (P31CP043), water (P31CP044) and electricity, gas and other fuels (P31CP045) but these are not consistently reported across countries. In Mexico for example, the first three subcategories represent 86 percent of the overall category.

Housing's Contribution to GDP. We compiled data on housing investment and consumption for the most recent year available from the OECD, U.N. Statistics Division, the World Bank, or National Accounts Official Country Data for our 11 emerging market countries. We tried to ensure data comparability by using the same constructed variables that are available for the largest number of countries. For Egypt, India, Peru and Uganda, we do not have sufficient data on investment in residential construction, so we take investments in construction in general as a proxy for investment in residential construction (although how well correlated residential construction is with total construction is an important unknown). In Peru, there is no available data on housing consumption. Table 1 reports our best estimates of the share of GDP contributed by investments in housing and housing services, along with details on the source of the data and the date for which they are available.

Table 1: Housing Investment and Consumption, % GDP

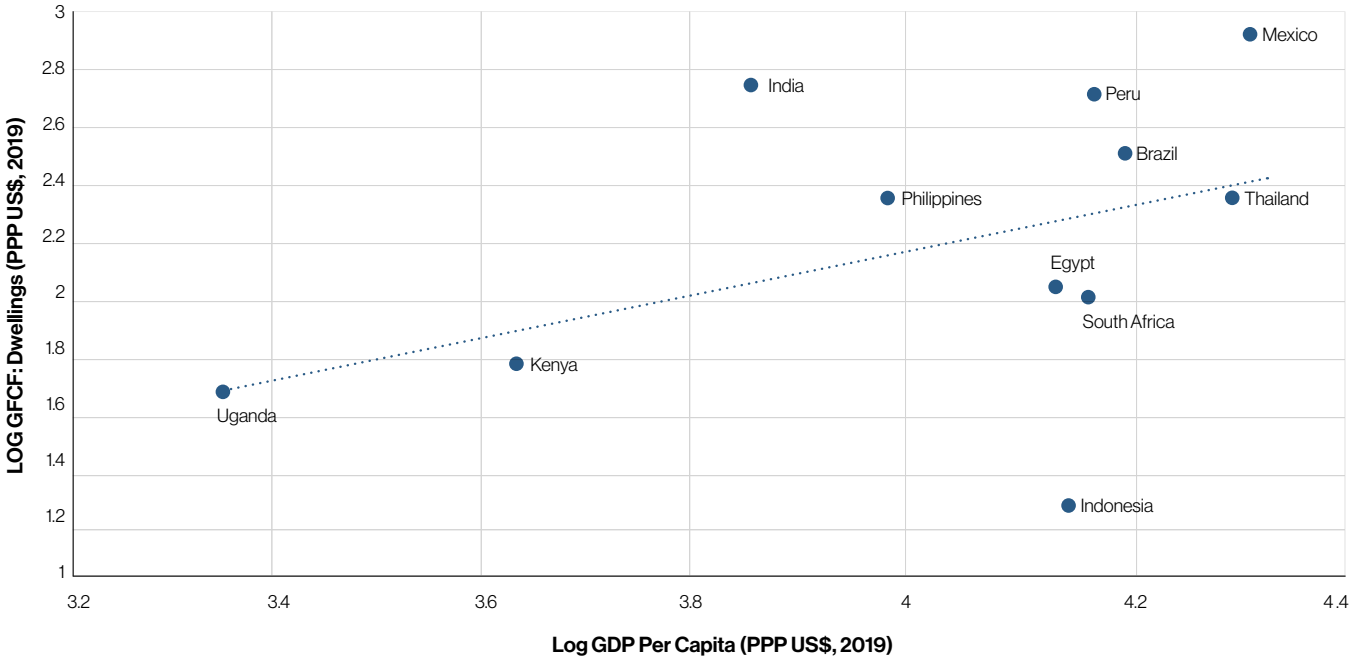
	GFCF: Dwellings (US$ bn)	GFCF: Dwellings (% GDP)	Year	Housing Services (US$ bn)	Housing Services (% GDP)	Year	Residential Fixed Investment Housing Services (% GDP)
Brazil	62.2	3.0%	2017	278.4	15.5%	2016	18.5%
Egypt	*11.0*	*4.7%*	*2017*				
India	*149.4*	*6.5%*	*2018*	193.7	8.4%	2016	15.0%
Indonesia	27.2	2.4%	2019	64.8	7.5%	2015	10.0%
Kenya	3.3	4.2%	2018	6.5	7.4%	2018	11.6%
Mexico	73.6	6.0%	2018	134.6	11.6%	2017	17.7%
Peru	*14.9*	*6.6%*	*2018*				
Philippines	24.5	6.5%	2018	29.3	8.4%	2018	14.9%
South Africa	6.0	1.7%	2019	32.6	8.9%	2018	10.6%
Thailand	10.5	1.9 %	2019	22.6	5.0%	2017	6.9%
Uganda	*2.4*	*6.9%*	*2018*				
Average	35.0	3.7%	N/A	95.3	9.1%	N/A	13.1%
United States	593.8	3.1 %	2019	2,184.3	11.5%	2019	14.6%

Source: OECD, 2020 or National Accounts Official Country Data - Gross Fixed Capital Formation: Dwellings. Construction for Egypt, India, Peru and Uganda. GDP is based on the data for that year from World Bank - World Development Indicators, 2020a. U.N. Statistics Division, 2020 or National Accounts Official Country Data - Housing, water, electricity, gas and other fuels. GDP is based on the data for that year from World Bank - World Development Indicators, 2020a.

Note: For *italicized* countries (Egypt, India, Peru and Uganda), GFCF figures for construction are used to estimate contribution of the housing sector to GDP because GFCF figures for dwellings were not available. Only figures for countries with both GFCF and Housing Services are included in the average.

In countries with data on housing investments specifically, they represent between 1.7 percent and 6.9 percent of GDP, averaging 3.7 percent, compared to 3.1 percent in the US. Burns and Grebler (1976), in a sample 39 countries, found that investment in residential construction represented on average 4.5 percent of GDP, with a particularly high share in the fastest growing economies where it accounted for more than 6.0 percent. This is broadly consistent with more recent findings from the World Bank that find housing investments averaging 4.4 percent from 2001-2011 for a subset of countries included in Dasgupta et al. (2014). Dasgupta et al. (2014) also provide evidence that as countries' incomes begin to rise beyond a certain level (around US$3,000 GDP per capita in Purchasing Power Parity (PPP) in their measure based on 2005 dollars), housing investments make up a larger share of GDP. Once countries reach middle-income status, housing's GDP share plateaus and then ultimately declines slightly at higher income levels, (although GFCF in construction still represents 7.2 percent of GDP in China, for instance). This S-shaped curve of investments in housing reflects the fact that early in their development, countries are allocating substantial investments to improving their housing conditions, and in most cases, support the rapid urbanization taking place simultaneously. Once population growth slows down, (particularly urban population growth), smaller housing investment shares are required, given the long-lived nature of housing investments. Countries can then be compared based on whether they invest more or less in housing than would be predicted based on their level of GDP per capita (Figure 1).

Figure 1: GDP and Investment in Residential Construction



Source: OECD, 2020; National Accounts Official Country Data, 2020; World Bank - World Development Indicators, 2020

In countries with data on housing services, these represent between 5.0 percent and 15.5 percent of GDP, averaging 9.1 percent, compared to 11.5 percent in the US. A large share of these housing services is in the form of the owner-equivalent rents[4]: what owners would have to pay in order to occupy their dwelling if they were renting it. The rest is mostly in the form of the rent that tenants pay to their landlords. Housing services' substantial share of GDP implies that adverse income shocks that prevent renters from paying their rents can have a particularly large downstream effect on the economy by affecting the consumption and investment decisions of landlords. Conversely, improvements in the housing stock that increase the value of rent payments or owner-equivalent rents have positive effects on the contribution of housing to GDP and can support housing consumption more broadly, (particularly in countries with well-developed credit markets).

Combined, housing investments and housing services represent between 6.9 percent and 18.5 percent of GDP, averaging 13.1 percent in the countries with information about both. This compares to 14.6 percent in the US. This share of GDP places the housing sector on par with sectors of the economy like manufacturing, for which the GDP share in the group of sample countries in this analysis averages 15 percent.

Challenges Accounting for the Informal Housing Sector in National Accounts

It is likely that a substantial share of investment in housing and housing services derived by households in the informal sector are underreported or entirely missed in some developing countries' national accounts, despite efforts by the Central Banks. Thus, the size of the housing sector reported above is likely an undercount of the actual importance of that sector in the countries examined in this paper. More broadly, **the challenge of inadequate and unreliable housing indicators is a long-standing issue that requires substantial and concerted efforts to create and compare housing outcomes across countries and understand what factors lead to better outcomes** (Green 2014).

In theory, national accounts are designed to capture investments in both formal and informal dwellings. However, **it is likely that the methods used to estimate housing investments will miss or undercount those in informal construction, particularly those undertaken by the households themselves, since these are not captured in firm data.** As discussed in World Bank (2008: 61): "Informal construction is very important in almost all countries." A large proportion of households undertake do-it-yourself house maintenance or house extensions, including repairs and quality upgrades. In developing countries, the construction of most rural houses and shantytown dwellings will be

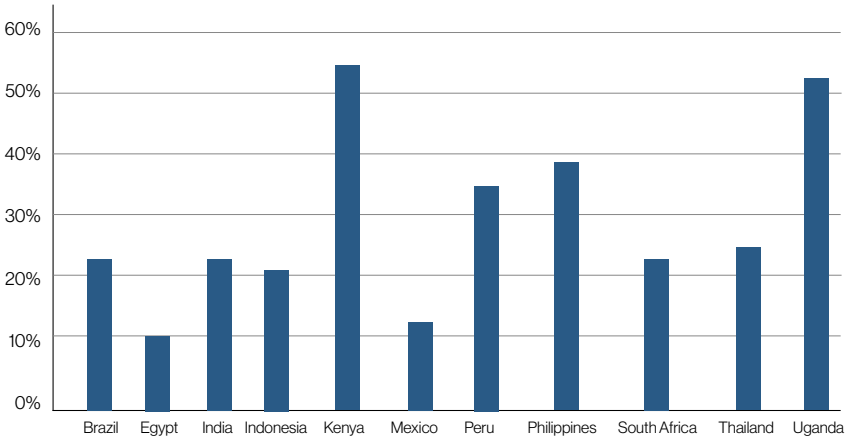
[4] In the US, owner-equivalent rents represents about 72 percent of housing services, and this share can be even greater in countries with very high homeownership rates.

undertaken on an "own account basis," and, as they note, they "are therefore more difficult to capture," especially as they happen in an incremental fashion over decades.

Similarly, with regards to housing services, "the estimate of the imputed rent of owner-occupied dwellings is important but almost always based on very partial data, most of which is not updated every year" (World Bank 2008: 137). Data about the rental value of informal units is particularly difficult to obtain. Regular surveys about rents and housing characteristics are not common, and in many countries, the stocks of rental and owned property are quite segmented, with limited overlap between the owned and rented stock, making estimates of rental values for owner-occupied houses all the more difficult to assess. The alternative method, relying on estimating the construction cost of a dwelling and amortizing it over the expected life of the house, is also challenging to operationalize in the context of informal construction that is often done in an incremental fashion over many years. As a result, **much of the housing services of the informal sectors may be either missed or undercounted in official national accounts. The challenge of undermeasurement of informality as part of GDP is a broader issue that has substantial implications for the measures produced in many countries** (ILO 2013).[5]

For all these reasons, **this paper undertook an exercise to show how much of an impact missing data on the informal sector has on GDP estimates, given the size of both the informal sector and the housing sector in a given country.** Using data on the share of urban residents living in informal housing reported by the UN in the sample countries (Figure 2),[6] we estimate an adjusted share of housing in GDP if housing investment and consumption in the informal sector is entirely missed by national accounts or, for example, is only captured at 50 percent.[7] To calculate an adjusted share of housing in GDP, we multiply the value of housing investments and housing services by the ratio of the share of the population living in informal settlements divided by the share of the population living in formal settlements.[8] We adjust that estimate by 35 percent to account for the fact that informal construction often does not include land acquisition and infrastructure investment and is likely to have lower average construction costs and rent relative to the units accounted for in the SNA housing data.[9] We then add the informal housing sector investment and consumption amounts or half of the amounts to both the numerator and denominator. This approach provides a bounded estimate of how much larger the actual share of housing in the economy might be, given that investments and services in the informal sector are largely undercounted. Given that the share of the population living in informal settlements is likely mis-measured, it might still be an undercount if the size of the informal sector is higher than that used in this back-of-the-envelope estimation.

Figure 2: Proportion of Urban Population Living in Slums, 2018, %



Source: UN Habitat, 2020

[5] More generally, formalizing these settlements has been shown to have the potential to increase the value of these housing assets and government revenues through property, although the conditions needed for residents to benefit from formalization and the costs of formalization must also be recognized (Gilbert 2002; Basile and Ehlenz 2020).

6 We use the U.N. Habitat's informality figures for consistency across countries, but it is important to note that this measure of slum populations differs substantially from some other national measures of housing informality. For example, in the case of Egypt, 70 percent of households are found to be without secure tenure (UN 2017) compared to 11 percent of the urban population living in slums, as reported by U.N. Habitat's data. In addition, rather than the share of the existing stock that is informal, it would be preferable to use the share of units being built that are informal. However, that figure is not available consistently across countries. Initiatives such as the Housing Finance Information Network (HOFINET), with data inputs from country experts, are crucial in order to produce standardized indicators.

[7] There is no direct evidence of the degree to which the informal sector is mis-measured in the SNA. However, given that it is largely poorly captured in the household surveys from which the data is generally derived, it is likely that most informal activity is missed. We use 50 percent as an intermediate example if at least some of that activity is captured.

[8] As an illustration, if informality is estimated to be 25 percent in a country, then the adjustment would be: 25 percent / 75 percent = 33.3 percent.

[9] This adjustment of 35 percent is a rough estimate based on land cost, the cost of providing trunk infrastructure and on-site infrastructures plus related fees. It is based on several Public Private Partnership (PPP) contracts for low-income housing and the Centre for Affordable Housing Finance Africa (CAHF) housing production costs for some Sub-Saharan African countries. Actual adjustments would vary by country and types of construction.

The results of these adjustments show that a housing sector's measured share of GDP rises from 13.1 percent to 14.3 percent if half of informal housing activities are currently captured and to 16.1 percent if none are captured. This would place the size of the housing sector in the sample countries in line with the US (14.6 percent). Since the adjustments are a function of the share of housing in GDP and of the share of the informal sector, the adjustments are particularly large in countries with considerable reported shares of informal residence, (e.g., Kenya and the Philippines). When putting these changes in PPP (US$), the undercount of the contribution of housing to GDP is substantial. In the Philippines for instance, if only 50 percent of informal activity is currently captured, then the contribution of housing to GDP would be undercounted by 2 percentage points or PPP US$23.1 billion as of 2019. In Brazil, it would be undercounted by 1.2 percentage points or about PPP US$48.6 billion.

Table 2: Housing Investment and Consumption Adjusted for Potential Undermeasurement of Informal Sector, % GDP and PPP US$

	Unadjusted		**Assuming Official Statistics Only Measure 50% of Informal Sector**		**Assuming Official Statistics Do Not Measure Informal Sector at all**	
	% GDP	**PPP (in US$ bn)**	**% GDP**	**PPP (in US$ bn)**	**% GDP**	**PPP (in US$ bn)**
Brazil	18.5	596.4	19.7	645.0	21.2	707.7
Egypt						
India	*15.0*	*1,441.8*	*16.1*	*1,569.5*	*17.5*	*1,737.7*
Indonesia	10.0	331.3	10.7	357.7	11.5	391.4
Kenya	11.6	27.5	14.1	34.5	19.4	50.3
Mexico	17.7	459.7	18.2	477.3	18.8	497.0
Peru						
Philippines	14.9	149.8	16.9	172.9	19.8	210.3
South Africa	10.6	80.3	11.3	87.1	12.3	95.9
Thailand	6.9	92.4	7.5	100.9	8.3	112.4
Uganda						
Average	13.1	397.4	14.3	430.6	16.1	475.3

Note: For India (italicized), GFCF figures for construction are used to estimate the contribution of the housing sector to GDP, because GFCF figures for dwellings were not available.

Source: OECD, 2020; U.N. Statistics Division, 2020; National Accounts Official Country Data, 2020; U.N. Habitat, 2020; World Bank - World Development Indicators, 2020a and authors' calculations.

Investing in Housing: Economic Stimulus and Long-term Resilience

A robust body of research has established that housing is an economic sector with strong multiplier effects on both employment and consumption, particularly in countries with well-developed credit markets (Pugh 1994; Mayer and Somerville 2000; Mian and Sufi 2015; Adelino et al. 2015). These multiplier effects are particularly strong in the most constrained segments of the housing market serving middle- and low-income households, for whom providing access to capital allows leveraging individual investments (Arku 2006; Haurin and Rosenthal 2006; Dasgupta et al. 2014; Mian and Sufi 2015).

Housing investments have a strong impact on employment since construction is a labor-intensive industry. Housing also has a direct impact on households' health outcomes, along with other important wellbeing outcomes (e.g., education, employment access, social participation and political participation). Refer to Habitat for Humanity's "The Transformational Impact of Housing" for a recent review of this literature.

Supporting Housing: Employment Implications

The previous section showed that housing investments and housing services represent a substantial share of GDP of the emerging market economies analyzed here. These countries are at different stages of economic development with a range of GDP per capita (from US$2,000 to US$20,000 in PPP) and urbanization levels (24 percent to 87 percent). But in all cases, the housing sector represents an important economic sector. On average, the overall share of the housing sector in the sample countries is also similar to that found in the US, particularly if adjustments for the likely undercount of the informal sector are made. These findings indicate that **financial interventions to the housing sector—through construction, access to housing finance or rental sector assistance—have the potential for significant stimulus effects, if implemented in response to the pandemic-related economic crisis.**

The stimulus effects through employment in the construction sector are particularly important, given the size of the sector. The construction sector is labor-intensive and requires both skilled and unskilled workers, employing an estimated 5 percent of the population in Peru, 7 percent in India and Mexico, and up to 9 percent in the Philippines (ILO 2020). In addition, many of the construction workers are likely to be informally employed (Wells 2007). Housing Finance Information Network (HOFINET) (2020) provides estimates that more than half of construction workers in Indonesia, the Philippines and Thailand are in the informal sector. These workers are also likely to have been particularly vulnerable to the lockdown orders in their respective countries. A survey of migrant workers in India found that about half of them worked in the construction sector and about 65 percent did not receive wages during the lockdown imposed in the country (Terwilliger Center for Innovation in Shelter 2020).

The magnitude of the overall multiplier effect of support to the housing sector on household consumption might be smaller in many emerging economies than in the US, due to the lack of access to mortgage finance that can leverage the value of investment into housing (refer to Table 3). Without access to loan products to finance investments in their dwellings, households are limited by their disposable wealth, which means that if a household saves US$5,000, then it would only be able to invest that amount into building or upgrading its dwelling, while it would be able to invest US$25,000 if it was able to borrow using a mortgage product with a 20 percent down-payment.

Table 3: Country Characteristics

	GDP per Capita (PPP US$ thousand)	Urban Population (%)	Annual Urban Population Growth (% 2000-2019)	Owner Occupied (% dwellings)	Mortgage Debt to GDP (%)
Brazil	15,259	86.8	1.4	69.2	10.1
Egypt	12,251	42.7	2.0	37.0	0.3
India	7,034	56.0	2.8	72.0	3.0
Indonesia	12,302	34.5	2.5	86.6	7.7
Kenya	4,509	27.5	4.4	26.1	2.5
Mexico	20,411	80.4	1.7	68.9	9.7
Peru	13,380	78.1	1.4	74.2	6.1
Philippines	9,277	47.1	1.9	52.7	3.9
South Africa	12,999	66.9	2.3	62.3	21.4
Thailand	19,228	50.7	3.1	80.0	23.9
Uganda	2,272	24.4	6.1	30.0	0.7
Source	World Bank - World Development Indicators, 2020	World Bank - World Development Indicators, 2020	World Bank - World Development Indicators, 2020	HOFINET, 2020	HOFINET, 2020
Year	2019	2019	2019	2013-2018	2013-2018

Investing in Housing: Private and Social Benefits and Community Health

In addition to the economic stimulus value of governments' support to the housing sector, there are potential welfare benefits if these investments are done strategically (Hoek-Smit et al. 2020). Improved housing quality, limited levels of overcrowding, and quality neighborhood amenities have been shown to be associated with positive individual and community level benefits. In particular, housing and its location have been shown to be associated with positive employment, health and education outcomes, as well as with household-reported wellbeing, and community and civic participation outcomes (Duranton 2014; Green 2014; Hoek-Smit et al. 2020).

The substantial private and public investments in housing are insufficient to provide access to adequate dwellings for a large share of the population of low- and lower-middle-income countries (Dasgupta et al. 2014; McKinsey 2014). Many emerging market countries have large, unmet housing needs as a result of rapidly growing urban populations, insufficient investments in infrastructure, low incomes and limited housing finance systems (refer to Table 3). Even countries that have mostly completed their urban transition, which include most Latin American countries, continue to have substantial, unaddressed needs—with many families still living in overcrowded conditions, in dwellings made of non-durable building materials or lacking access to basic services. Beyond the economic benefits, increasing investment in the housing sector has the potential for large social welfare gains by improving physical and mental health conditions along with a broad range of other factors such as worker productivity, children educational outcomes and social capital (Habitat For Humanity 2020; Hoek-Smit et al. 2020).

The effects of the underinvestment in adequate housing and basic services are particularly concerning in the context of the sanitary conditions required to combat the COVID-19 pandemic. Existing studies have shown that overcrowding is a prominent risk factor of rapid transmission of communicable diseases such as tuberculosis (Lienhardt et al. 2005; Hill et al. 2006; Doshi et al. 2015; Irfan et al. 2017) and worse respiratory health outcomes (Cardoso et al. 2004; Kumar et al. 2015). In Mexico, 34 percent of households are estimated to experience overcrowding, as of 2016 by the OECD.[10] The high level of overcrowding may have been a driving factor behind findings that by July 2020, about six in 10 households had antibodies for the coronavirus in informal settlements in Mumbai (Altstedter and Pandya 2020).

The last decades have brought about substantial progress in the share of households with access to basic amenities in many emerging market countries, (notwithstanding issues of data reliability, as discussed above). For example, according to the World Bank's World

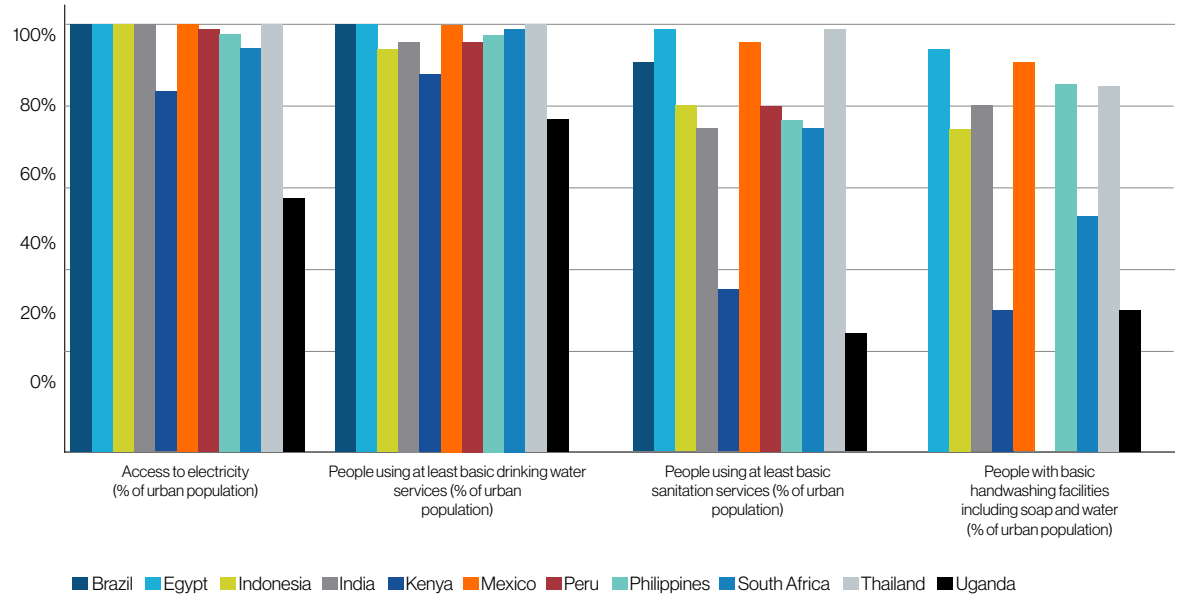
[10] Estimated based on the number of rooms given a household's structure.

Development Indicators in Figure 3 and Table 4, more than 90 percent of the urban residents in nine of the 11 countries included in this paper have access to electricity in their dwelling, with the exception of Kenya (84 percent) and Uganda (58 percent), compared to only six countries in 2000.

However, when looking at access to sanitation services, while there has also been progress in most countries (sometimes rapid), the rate of access to even basic levels remains substantially lower, with major variations across countries. Seventy percent to 80 percent of urban residents in India, Indonesia, Peru, the Philippines, and South Africa reportedly have access to basic sanitation, but only 26 percent in Uganda and 35 percent in Kenya. For access to basic handwashing facilities, particularly important in the response to the COVID-19 pandemic, the rate of access is below 90 percent in all countries (except Egypt), and only 32 percent in Kenya and 34 percent in Uganda.

There is, therefore, an urgent need for continued investments in improving access to sanitation services. Limited access to sanitation and handwashing facilities is particularly pronounced in urban areas of Sub-Saharan Africa, where a high proportion of urban households rent their dwellings. Rental housing typically comes in the form of a single room with very limited access to sanitation and handwashing facilities. It is therefore critical to not only provide solutions for improving housing conditions for households that own their dwellings, but also for renters.

Figure 3: Access to Urban Services (2017-2018), %



Source: World Bank, World Development Indicators, 2020a

Table 4: Access to Urban Services, 2000 vs. 2017-2018, %

	Access to electricity (% of urban population)			People using at least basic drinking water services (% of urban population)			People using at least basic sanitation services (% of urban population)			People with basic handwashing facilities including soap and water (% of urban population)
Year	2000	2018	Percentage point change 2000-2018	2000	2017	Percentage point change 2000-2017	2000	2017	2017	Percentage point change 2000-2018
Brazil	99.6	100.0	0.4	98.2	99.5	1.3	81.4	92.8	11.4	NA
Egypt	99.5	100.0	0.5	99.4	99.5	0.0	95.1	98.3	3.2	92.7
India	95.4	99.9	4.5	89.5	95.5	5.9	62.7	80.3	17.5	71.6
Indonesia	88.9	99.7	10.8	91.4	96.0	4.6	49.3	72.0	22.8	79.8
Kenya	50.2	84.0	33.8	88.0	84.6	-3.4	35.7	34.7	-1.0	31.7
Mexico	99.4	100.0	0.6	94.4	100.0	5.6	82.8	93.4	10.6	89.9
Peru	95.2	99.0	3.8	91.5	95.6	4.1	77.2	79.6	2.4	NA
Philippines	89.7	97.5	7.8	92.9	97.7	4.8	72.2	78.5	6.2	85.1
South Africa	86.1	92.1	6.0	98.4	98.9	0.5	71.1	76.3	5.2	52.6
Thailand	99.9	100.0	0.1	97.9	99.9	1.9	89.2	99.2	10.0	84.6
Uganda	41.5	57.5	16.0	70.4	75.1	4.7	30.6	26.1	-4.5	34.3

Source: World Bank, World Development Indicators, 2020a

Responses to the COVID-19 Pandemic

Governments throughout the world have responded to the shock provoked by the pandemic with large economic stimulus packages and macro-economic facilitation. Fiscal support through additional spending and foregone revenue is essential to mitigate the fallout from the pandemic. The fiscal response has indeed been unprecedented, and as a result, global public debt is projected to reach more than 100 percent of global GDP this year (IMF 2020a). Given the magnitude of this fiscal response, it is essential that fiscal stimulus be allocated effectively and opportunities seek to address areas of current underinvestment (including housing), that might yield high social and economic multiplier effects.

The IMF analyzed the economic responses undertaken by 196 countries to limit the human and economic impact of the COVID-19 pandemic (2020b). Among these, 22 countries, both developed and emerging market economies, explicitly include housing initiatives, including three of the countries that are part of this study (Egypt, India and Mexico). Existing initiatives include interventions such as a US$729 million fund to "support the housing needs of lower-income households and boost the construction sector" in Bolivia, interest-rate subsidies to provide low-cost financing for housing units in Egypt, special refinance facilities and credit guarantees for housing finance companies in India, and unemployment insurance for borrowers and additional lending facility in Mexico (IMF 2020b). The initiatives often aim to support housing as a job-intensive sector, along with infrastructure and agriculture, but generally do not appear to constitute a coordinated set of actions to address existing needs. Refer to the Appendix for additional information on the IMF analysis.

Interventions in the housing sector can support public and private investments and have large economic stimulus effects while addressing the continued need for improved housing conditions and infrastructure access. They can also have large individual welfare and community health benefits. For such positive outcomes to materialize, stimulus policies need to be designed with inclusivity in mind.

- First, **the focus should be on those segments of the housing market** that have high potential to deliver economic, health and social multiplier effects. Such segments include underserved middle- and lower-income households that have the potential to increase investment in and consumption of better housing, given the right policies. This is particularly important for a COVID-19-related housing stimulus package, as the pandemic has affected lower-income groups disproportionally.

- Second, **housing stimulus policies** should include both ownership and rental markets. The balance and types of stimulus for investment and consumption will be different for countries with high urban ownership rates versus those with low urban ownership rates in the middle- and low-income market segments.

- Third, **the stimulus should include both formal and informal housing markets**, as well as options for expanded investment and consumption in both. Stimulus policies will differ in countries with high levels of informality.

- Fourth, **governments should include communities** in the decision-making process by working with the layered network of actors in policy development, including international NGOs and local civil society groups, which may already be providing support and resources during the COVID-19 pandemic.

Within this context, what specific policies and actions would support and stimulate housing production and improvement by private, public and non-profit sectors in the short and medium term? During the current combined health and economic crisis, governments and particularly local governments, face considerable financial and fiscal constraints. Therefore, a housing stimulus program requires that governments use their limited resources creatively to leverage the resources of the market, the non-profit sector, and for developing countries, international development agencies.

We focus on four core areas of the housing system that would typically be included in a housing stimulus package: a) Providing access to serviced and development-ready land; b) Improving access to housing finance for construction and for homebuyers to access mortgages and housing microfinance loans to purchase and improve their housing, and short- and long-term finance for rental landlords to invest in affordable rental units; c) Offering subsidies for households to invest in and "consume" better housing, and incentives for lenders and

producers of housing to participate in the housing stimulus program in innovative ways; and, d) Creating a housing sector data system to facilitate research and investment in housing.

Secure Land Tenure and Equitable Access to Land for Housing

To provide equitable access to land for housing, the provision of serviced and developable land for an inclusive stimulus program is often the responsibility of central and local governments, and a requirement to allow the private and non-profit housing sector to participate. One major barrier to the development of urban settlements with adequate access to affordable urban services is insufficient investments in trunk infrastructures (McKinsey 2014; Hoek-Smit et al. 2020). Long term, investments in opening new land for urban expansion through the creation of a network of arterial roads and reserving land for public open spaces, is one of the most cost-effective ways for financially constrained governments to stimulate housing development by the private sector (Bertaud 2018; Lamson-Hall et al. 2019).

In the short and medium term, cash-strapped local governments can stimulate housing developments for priority sectors through the creative use of serviced, well located public lands. Several mechanisms may be considered:

- Affordable housing developers, non-profit development corporations or cooperatives can be invited to prepare proposals for (mixed) housing developments. With a facilitative local government regulatory and permitting process, and enabling Public-Private-Partnership (PPP) agreements designed for affordable housing, such projects can produce well-located affordable housing relatively quickly. An increasing number of countries have developed specific regulatory models for affordable housing PPPs involving public land.

- In countries with strong housing NGOs, these institutions may be supported to transform public lands into community land trusts (CLTs) or cooperatives that will hold the land for public beneficial purposes such as the development of affordable housing. Restricting some individual land rights will reduce gentrification pressures and keep house prices from escalating, while providing all the benefits of secure tenure and the right to transfer and bequeath property. The current COVID-19 crisis, which focuses attention on the growing housing inequities in urban areas, would be an opportune time to approve innovative approaches, such as CLTs.

  Many successful examples of CLTs exist in US cities (e.g., New York City Brooklyn Navy Yard, a CLT for commercial and educational development managed by a non-profit development corporation; the 1989 Dudley Neighbors Inc. CLT in Boston; Penn South in Chelsea; and Mitchell Lama in New York, where properties that defaulted on taxes were transformed into limited-equity cooperatives and remained valuable sources of affordable housing for decades). In emerging market economies, the El Cano Martin Pena CLT in San Juan, Puerto Rico has successfully operated for more than one decade (Land Lines 2018, 19).

- In cases where suitably located public land is informally occupied, local government may expand regularization, the provision of basic infrastructure, and security of tenure, which in turn may stimulate investments by households and small-scale rental landlords (combined with access to housing finance, as outlined below). Successful upgrading projects have been widely documented for many countries, and can be quickly brought to scale as part of stimulus programs if there is the political will to do so.

- In countries with fiscal federalism in which local governments have the authority to levy taxes based on land and property value, "municipalities may operate as pro-poor developers or redevelopers themselves and capture gains by using public land (or buying private land) at pre-development values, while selling publicly serviced land at a price that incorporates the cost and value of providing infrastructure" (Hoek-Smit et al. 2020: 12). South Africa is one country that has successfully developed different "land value capture" mechanisms, in particular the Cape Town municipality (McGaffin 2018).

  Similarly, local or national governments may establish "shelter funds," which function as non-profit equity funds with the purpose of developing affordable or mixed-use housing for ownership or rental. Such funds can leverage investments from international housing NGOs and international development finance institutions, and can be catalysts for at-scale development of affordable housing under a stimulus program. This model is still relatively new in emerging market countries but holds great potential. A recent shelter fund was established in the state of Tamil Nadu, India, with support from the World Bank (World Bank 2020b).

Well-functioning property tax collection systems and access to capital markets are needed to ensure that funding linked to land value capture mechanisms can be made available to finance the infrastructure needed for affordable housing.

Some of these actions require funding to modernize or create systems to manage public land, develop PPP guidelines, regulate and provide fit-for-purpose secure tenure, including where feasible and necessary, land titles. Such measures generally require less capital than state housing developments and can have large impacts on the way private and non-profit sectors participate in the development of quality housing.

Housing Finance

In most of the countries included in this study, credit markets—including for builders, rental housing investors and homebuyers—are still largely underdeveloped. Mortgage debt relative to GDP is mostly below 10 percent, (and less than 3 percent in Kenya and Uganda), compared to 58 percent on average in countries with income per capita above US$30,000 (Hoek-Smit et al. 2020).[11] This reflects the fact that a **large proportion of the population does not have the required income to pay for a house in the formal sector or does not hold a formal-sector job, which is often a requirement to obtain a mortgage loan**. Credit institutions are conservative in their lending practices in most developing countries, given the history of macro-economic volatility, and face real constraints in expanding long-term credit while their funding base is predominantly short-term deposits and access to capital markets is limited (Hoek-Smit et al. 2020).

The buildings blocks that need to be in place for mortgage markets to expand include:

- Working property rights and property registration systems that are reliable, transparent and low cost;
- Well-functioning land and housing markets;
- Competitive primary mortgage markets with standard long-term mortgage products whose contracts can be enforced;
- Access to longer-term funding sources to price and manage interest risk; and,
- Insurance or reinsurance entities that can manage default risk.

Many of these requirements are still missing in developing countries. Establishing these building blocks is key to the development of sustainable mortgage markets, but takes time.[12]

Yet mortgage finance is indispensable for the expansion of the formal housing market, since developers will not build housing for market segments that are not served by the mortgage market. Mortgage loans are also the cheapest form of credit and housing affordability is entirely dependent on access to reasonably priced long-term mortgage finance.

Similarly, the incremental housing and home-improvement market functions more efficiently and can reach a critical scale when households have access to medium-term microloans. However, providers of microloans for housing face constraints of increasing the loan amount and term for housing loans while lacking the security of collateral and access to longer term funds. Of particular interest in African urban settings is a focus on small-scale landlords who, given access to finance, can expand their existing homes with new rental units in a short period of time and improve access to better housing and services for many low-income households.[13]

Even though some of the sample countries have high rates of owner-occupation, renters make up between one-fifth and three-quarters of households. Moreover, small-scale landlords with only one to two units, and generally less than 10, are most common in these markets and are reliant on the rent payments for their livelihood (Gilbert and Varley 1990; Ballesteros 2004). An increased focus on the rental sector recognizes its importance in providing housing for newcomers and lower-income households in the context of rapidly growing urban areas (Brueckner et al. 2019). To support the growth of a robust rental sector that provides access to adequate housing, countries need to implement a mix of "the right tax incentives, balanced tenant-landlord regulations, access to credit for small- and larger-scale landlords, practical development regulations, and sustainable rental subsidies for the poorest households" (Hoek-Smit et al. 2020: 20). In particular,

[11] Data on the size of the microfinance for housing markets is not systematically collected.

[12] Thailand is an example of an emerging economy that has seen a robust development of its mortgage market going back to the 1990s and has a mortgage debt to GDP ratio above 20 percent. South Africa has a well-developed mortgage system, but high credit risk has made banks reluctant to enter the lower-middle housing market, and the scale of the sector has decreased relative to GDP in recent years.

[13] Local government planners have to provide enabling planning regulations and monitoring for such developments in order to secure building and services quality.

access to capital is critical for the rental sector to grow.

The critical role of housing finance in housing markets is the reason that nearly all housing stimulus programs have housing finance at their core. Finance, unlike land, is relatively easy to mobilize and can be distributed through banks and other financial institutions. Loans can be provided to builders, banks, or households directly.

However, the small scale and lack of depth of the housing finance sector in developing countries prevents stimulus programs based on finance from serving middle- and lower-income markets more broadly. Typically, economic stimulus programs focus on the part of the market that has access to mortgage programs already, (i.e., the higher middle- and upper-income housing market that in many countries, already experiences an oversupply of housing). This mistargeting of stimulus funds is a common problem and constitutes an economic and welfare loss. Thus, governments should ensure that the wide range of financial institutions that provide services to households outside of the formal commercial banking system are accorded assistance, by ensuring that they are included in any stimulus packages to the financial sector.

What can be done? For housing stimulus programs to be inclusive in emerging market countries, they need to build on and expedite some of the structural improvements in the housing finance sector already underway in each country. The exact mechanism on how housing finance is deployed for a housing stimulus program depends on the structure and size of the housing finance system, bank liquidity, interest rates and risk appetite of banks. For banks to play a positive role in housing stimulus programs, some incentives may be needed to mitigate interest-rate risk, credit risk or liquidity risk.

Some examples include:

- Mechanisms to extend access to medium-term funds, such as the Terwilliger Center's MicroBuild Fund for microfinance institutions. And, refinancing facilities for the mortgage and microfinance sector can be expanded with urgency to expedite lending for housing in both the formal and informal housing markets.

- In countries where such institutions do not operate, Central Banks often make long-term funds available to banks at heavily subsidized rates to qualified customers as part of stimulus programs. Such programs have a distortive effect on the entire housing finance market, and should be phased out as soon as possible and replaced by on-budget subsidies to households if needed.

- Guarantees and credit insurance mechanisms can be expedited or designed to make it possible for lenders to extend loans to more risky borrowers, particularly the informally employed. Guarantees may also be deployed to incentivize lending to private small- and medium-size landlords in the formal and semi-formal housing sector.

- In most cases, finance-linked subsidies to households will need to be integral to stimulus programs. However, such subsidies should be well targeted and not distort the mortgage and microfinance market over the longer term (as outlined below).

In countries with large state-owned housing finance institutions or provident funds, these institutions often play a critical role in housing stimulus programs. Access to lower costs funds allows them to subsidize mortgages or microloans for housing at scale. The concerns with relying on subsidized state institutions to implement stimulus programs is that private lenders will not participate in that part of the market and the programs remain confined to the amount of state funding made available by the administration.

Housing Subsidies and Incentives

A large proportion of households, particularly in developing nations, cannot pay for a house in the formal urban housing market. House prices or rents are too high relative to household incomes, access to housing finance is limited and interest rates are often very high, limiting affordability.

In inefficient markets, it is common for stimulus incentives to be focused on those market segments that are already working well, which in

emerging market countries are only a small proportion of the market. Such stimulus incentives do not expand the overall scale of the market and subsidies are often not contributing to increased investment or consumption of housing, (i.e., to economic growth). Rather, they often contribute to an oversupply of houses in the upper-income market, leading to bubbles and vacancies. Signs of such outcomes in recent stimulus programs in some countries attest to this.

Even if the targeting of the stimulus program focuses on the broad underserved population, it may result in high construction costs (developer capture) or poor location of projects with little benefit to the economy or social welfare. For example, in Brazil, the *Minha Casa, Minha Vida* housing program was designed as part of an economic stimulus in response to the 2008-2010 global financial crisis, and focused on the right income segments. However, like many mass-housing programs, it did not take into account broader locational and urban considerations to ensure that funding allocated towards building houses for owner-occupation by low- and very low-income households would produce attractive urban neighborhoods (Buckley et al. 2016; Acolin et al. 2019).

The difficulty is to design stimulus programs that are inclusive and expand access to new and existing affordable housing for the broad underserved population, and unleash longer-term investment in the middle- and lower-income housing markets; not just for home-ownership but also for much needed rental housing. And, not just for new construction but also for substantial improvement in existing poor-quality housing.

Different subsidy types and levels are needed to address the needs of households at various income levels from the lowest income to middle-income households (Hoek-Smit et al. 2020). On the supply-side, incentives to the construction sector need to stimulate innovation, at-scale development, and cost efficiency. We discuss some examples of subsidy incentives to both households and the construction sector, in support of private affordable housing markets:

- **Subsidies to help households obtain housing in the formal market, access housing finance or pay for home improvements and connections to services.**
  Household subsidies can be in the form of monthly payment or interest buy-downs, down-payment contributions, and payments for titling and mortgage insurance, in the case of mortgage-linked subsidies.

  For incremental or home-improvement programs, subsidies can be provided to households and market actors in the form of grants for building material purchases, support to obtain secure tenure or title (through NGOs), or technical assistance with incremental construction to bring such programs to scale.

- **Incentives to existing and new market actors to plan, build and finance affordable housing for the ownership or rental market.**
  Developers often need access to serviced land, access to construction finance (by way of a special fund or through the application of guarantees), support with permitting, and facilitative planning regulations, particularly on the various measures of density and market risk mitigation in case the program targets underserved households. Tax subsidies are often considered, but are frequently a dead-weight loss to government. Rental investors participating in a housing stimulus program may require a similar incentive package (access to land, finance and supportive planning regulations), but may also benefit from an arrangement where government provides support to low-income tenants. The tax system needs to treat rental income fairly and tenant regulations need to be fair and balanced.

  Lastly, the housing stimulus program may provide incentives for building material suppliers and technology firms involved in the building process to bring their operations to scale and to realize cost savings.

Strict monitoring systems need to be put in place to ensure that the expenditures are targeted to address the highest needs and accountability measures are needed to prevent misallocation of subsidies.

Information and Data

There is a general need to invest in solutions that produce and make available up-to-date, accurate information about housing markets. Many emerging economies currently lack data at the national and local levels to capture supply and demand dynamics. In particular, reliable data and information are key to the development of robust housing finance systems and to the development and implementation of targeted subsidy schemes.

Efforts by international organizations and nonprofits have so far received insufficient resources to produce and maintain consistent national and local housing indicators. Market actors cannot operate efficiently without information on house prices, rents and incomes; mortgage types and volumes; the quantity and quality of the housing stock; building permit applications, approvals and new construction; and construction costs (Hoek-Smit et al. 2020).

Information from alternative sources to traditional surveys have the potential to provide scalable ways to establish and maintain data systems such as titling and registration systems, credit scoring, or property valuation. Private sector companies that analyze satellite imagery, rental and for-sale listings, consumer activity, or social media signals represent promising avenues to improve the quality of mortgage underwriting, mitigate risk, and lower transaction costs in ways that may make small loans more financially attractive for lenders.

Conclusion

This paper shows the importance of housing as an economic sector in emerging market economies in terms of both production and consumption. Looking at national accounts, we find that combined housing investments and housing services represent between 6.9 percent and 18.5 percent of GDP, averaging 13.1 percent in the countries with information about both. This compares to 14.6 percent in the US. This share of GDP places the housing sector on par with sectors of the economy like manufacturing.

The housing sector is an important source of employment, with many construction workers working informally, with limited employment protection, making them particularly vulnerable to the fallout from the economic recession that is affecting most countries in the aftermath of the COVID-19 pandemic.

In addition, housing needs remain high in many countries, with a substantial share of the population living in informal settlements lacking access to basic urban services, with negative implications for household welfare, as well as for community health. The level of overcrowding and lack of access to sanitation services and handwashing services is of particular concern in the context of the COVID-19 pandemic.

Including housing policies and investments as part of stimulus plans has the potential for economic and social welfare impact, as well as improved community health outcomes over the short and long term. We discuss a number of proposals that are needed to support the development of robust housing sectors that serve *all* residents, including those living and working in the informal sector.

Policies that can stimulate housing investments through public and private market actors require a mix of regulatory actions, infrastructure investments (into both physical and financial infrastructures), reliable data and direct funding. Without concerted efforts by international organizations, national and local governments, private companies and nonprofits, there is a risk that the housing sector will slow considerably in the aftermath of the pandemic, with many households continuing to experience inadequate and worsening housing conditions with major economic, welfare, and health consequences.

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Appendix: Countries with Housing Policies

Out of 196 countries analyzed by the IMF, 22 countries explicitly included housing initiatives:

#	Country	Policy
1	Austria	On the expenditure side, measures include investment in climate protection, **affordable housing**, health, digitalization and one-off support for the unemployed and families.
2	Bangladesh	Prime Minister announced allocation of **Tk. 21.3 billion under a housing scheme for the homeless.**
3	Bolivia	Fondo de garantía de vivienda social y solidaria (FOGAVISS): **Aims to finance housing needs of lower-income sectors and boost the construction sector**, within the framework of the social housing program. Amount: Bs. 5,000 million (US$ 729 million).
4	Canada	Under the Insured Mortgage Purchase Program, **government will purchase up to US$150 billion of insured mortgage pools** through the Canada Mortgage and Housing Corp. (CMHC).
5	China	**Local governments are easing housing policies.**
6	Cyprus	**Interest subsidy for new business and housing loans for four years**, which benefits both businesses and households.
7	Egypt	The **preferential interest rate reduced from 10 percent to 8 percent on loans to sectors including construction, as well as for housing for low-income and middle-class families**. A housing initiative has been announced to provide **low-cost financing for housing units**.
8	Guatamela	**Fostering low-income housing.**
9	Guyana	Received **pre-manufactured housing units from the United Nations High Commissioner for Refugees (UNHCR).** The international organization handed over 48 housing units to the Ministry of Public Health through the Civil Defense Commission (CDC) to boost the regional capacity of the COVID-19 response in the country.
10	India	**Special refinance facilities for rural banks, housing finance companies**, and small and medium-sized enterprises.
11	Israel	**Eliminating the additional one percent capital requirement on housing loans.**
12	Jamaica	**Authorities encouraging the banking sector** to conserve capital by postponing dividends payments to shareholders; **reschedule loans and mortgages**, in addition to the mortgage rate cuts already announced by the National Housing Trust.
13	Mexico	Government is implementing measures including **housing credits for government workers** with low-interest rates (ISSSTE' loans for a total amount of 35 billion pesos), personal loans at a low rate (3 billion pesos) and a deferral program of monthly payments (0.5 billion pesos) by the National Fund Institute for Workers' Consumption (FONACOT).

#	Country	Policy
14	New Zealand	**Government housing program** (NZ$0.7 billion or 0.2 percent of GDP).
15	Nigeria	Unveiled a **2.3 trillion naira stimulus package which focuses on job-intensive projects in sectors that include housing**—a bulk of which is to be financed from Central Bank of Nigeria-supported credit facilities and from sovereign wealth and other savings funds.
16	Pakistan	Housing package to subsidize mortgages (PKR 30 billion).
17	Panama	Expansion of the Housing Solidarity Fund program managed by the Ministry of Housing and Land Management **provides US$10,000 towards a down payment to the families in need of homes of up to US$70,000** (reinforced with US$80 million from the Panama Savings Fund). And in August 2020, the **World Bank Group's Multilateral Investment Guarantee Agency (MIGA) issued a guarantee on loans received by Caja de Ahorros de Panamá amounting to US$400 million to support affordable housing and loans to SMEs.**
18	Serbia	In August 2020, the National Bank of Serbia adopted a new set of temporary measures through 2021 intended to provide easier access to housing loans for individuals. These **measures included the earlier approval of mortgages before construction is completed, the possibility of extending mortgage repayment periods**, and a temporary relaxation of the approval procedure for short-term dinar loans up to a certain amount.
19	Spain	**New rental assistance programs for vulnerable renters and additional state contribution to the State Housing Plan 2018-21** (€400 million); budget flexibility to enable transfers between budget lines and for local governments to use the budget **surplus from the previous years for supporting measures in the area of housing; a line of guarantees to provide financial assistance on housing expenses for vulnerable households** (€1.2 billion); **moratorium on rent payments for vulnerable tenants** whose landlord is a large public or private housing holder.
20	Sweden	Providing **supplementary housing allowances to families with children.**
21	Trinidad and Tobago	Government **housing institutions have provided relief to their customers with 2 to 6 months payment deferrals.**
22	Turkey	The minimum payment for individual credit cards was reduced to 20 percent, and **banks postponed repayments on credit card loans for housing**, consumer and vehicle purchases.

Source: IMF 2020b

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285 Peachtree Center Ave. NE, Suite 2700, Atlanta, GA 30303-1220 (229) 924-6935
TCIS@habitat.org habitat.org/tcis

HABITAT FOR HUMANITY INTERNATIONAL
322 W. Lamar St., Americus, GA 31709-3543 USA (800) 422-4828 publicinfo@habitat.org habitat.org