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Inclusive housing programmes to stimulate the economy and improve health outcomes after COVID-19

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Abstract: *Countries around the globe have experienced the health and economic consequences of the COVID-19 pandemic. In many countries in the Global South, interventions in the housing sector can support public and private investments and have large economic stimulus effects. This article develops a series of principles that would ensure investments in housing not only serve as economic stimuli but deliver the basis for long-term improvement in housing conditions and overall community wellbeing and health by being inclusive and sustainable. This article proposes five principles and illustrates how to apply them in core areas that would typically be included in a housing stimulus package: 1) focus on supporting housing for the underserved middle- and lower-income households; 2) inclusion of both ownership and rental markets; 3) inclusion of both formal and informal housing markets; 4) incorporating communities; and 5) avoiding long-term negative effects on housing and housing finance market development.*

Keywords: housing policy, housing economic impact, inclusive economic stimulus

Introduction: including housing in responses to the COVID-19 pandemic

Governments throughout the world have responded to the shock provoked by the COVID-19 pandemic with large economic stimulus packages. Fiscal support through additional spending and forgone revenue is essential to mitigate the economic fallout from the pandemic. The scale of the fiscal response has been unprecedented and as a result, global public debt was projected to reach more than 100 per cent of global GDP (weighted by each country's GDP in US$) by the end of 2020 (IMF, 2020). The scale also demands that policy-makers consider how resources might produce both economic multipliers and high social yields.

Given limited resources, particularly in emerging market economies, governments face difficult trade-offs when developing stimulus packages, in particular the choice between interventions that have immediate effects on economic activity versus those with broader socio-economic outcomes which may take somewhat longer to implement. We argue that the housing sector can provide an important and balanced component of a stimulus programme. Resources allocated to housing can deliver

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both large economic stimulus effects through high employment and consumption multipliers and large social welfare effects by addressing pressing needs to provide adequate and affordable housing. It can do so within an intermediate timeframe if projects are chosen well.

The strong employment and consumption multiplier effects associated with the housing sector are well-established. They come from labour demand associated with new construction and home-improvements as well as the demand stimulated in other sectors for home furnishings, maintenance services, and increased consumption of non-housing goods associated with increased housing wealth for homeowners (Pugh, 1994; Mayer and Somerville, 2000; Mian and Sufi, 2015; Adelino et al., 2015). The high employment and consumption multipliers make housing a potentially appealing sector to include in stimulus packages, even if lags in implementation and the task of coordination across actors can present a challenge for central government eager to have rapid economic impacts.

Housing investment and consumption are a substantial share of any economy, and housing is an important employment sector, which can absorb semi- and unskilled labour relatively quickly. A recent study of eight emerging market economies for Habitat for Humanity's Terwilliger Center for Innovation in Shelter finds that on average, the housing sector's contribution to GDP is 13 per cent (ranging from 7 to 19 per cent), with housing investment contributing an average of 4 per cent and housing consumption an average of 9 per cent (Acolin and Hoek-Smit, 2020). These figures are in line with the housing sector's contribution to GDP of 15 per cent in a developed economy like the US and consistent with previous findings focused on housing investments globally (Burns and Grebler, 1976; Dasgupta et al., 2014).

Long-standing underinvestment in residential units and related infrastructure in the context of rapid population growth and urbanization has contributed to inadequate housing conditions for a substantial share of the world population. In 2017, UN Habitat estimated that 1.6 billion people live in inadequate housing, defined by either lack of formal tenure, non-durable materials of the dwelling unit, lack of access to sanitation, or a combination of these characteristics (UN Habitat, 2020).

The emerging world needs substantial investments in residential infrastructure, both in the housing units themselves and in local public goods that connect the units to physical networks of water, sanitation, transportation, and services such as health care and education. McKinsey in 2014 calculated that up to US$16 tn in investments were needed between 2015 and 2025 to address existing and new housing needs, of which $1 to $3 tn would need to come from public funding. While there are limits to this global estimation exercise, it is clear that the capital needs are immense and that actions taken to date would not be able to reach this target.

Addressing underinvestment in housing would contribute to meeting key Sustainable Development Goals (SDGs) that have been a focus of international development since 2015. Adequate housing is an integral component of Goal 11 to 'make cities and human settlements inclusive, safe, resilient and sustainable' with Target 11.1 that aims to 'ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums' by 2030 (UN Habitat, 2020). Improved housing location and energy efficiency is also essential to achieving several other development goals, including with regard to climate change mitigation.

In addition to these existing needs, emerging evidence shows that poor housing conditions, overcrowding, and lack of access to sanitation play a role in COVID-19 spread and deaths (Altstedter and Pandya, 2020; Corburn et al., 2020; Patranabis et al., 2020; Sampaio, 2020). Underinvestment in housing appears to have exacerbated the health outcomes of the pandemic. This is consistent with existing findings on the role of housing in the spread of other communicable diseases such as tuberculosis and influenza (Lienhardt et al., 2005; Hill et al., 2006; Doshi et al., 2015; Irfan et al., 2017) and illustrates that investment in housing can result in substantial improvements in outcomes for other sectors like health. In addition, the pandemic further reinforced the importance of adequate housing and sufficient space for productive activities as homes became increasingly a place for work and production, which they already were for many lower income households.

Investing in housing and strengthening housing systems can therefore have both short-term benefits in stimulating economic activity and long-term benefits in addressing underlying housing needs and improving living conditions and productivity. However, housing does not currently appear to be a key component of most countries' recovery plans. Even those countries that do have housing interventions do not appear to have a coordinated set of actions to address existing housing needs and instead focus on that part of the housing market that uses mortgage credit and private developer-built houses. In most emerging market countries, that constitutes only a small segment of the housing market, and one which is frequently oversupplied already.

The IMF (2021a) analysed the economic responses undertaken by 196 countries to limit the human and economic impact of the COVID-19 pandemic. As of January 2021, only 14 out of the 196 countries, both with developed and emerging market economies, explicitly include housing initiatives as part of their fiscal response, and 33 countries include some housing initiatives as part of their monetary and macro-financial response. Existing initiatives include interventions such as a US$729 m fund to 'support the housing needs of lower-income households and boost the construction sector' in Bolivia; deep 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 an additional lending facility in Mexico (IMF, 2021a). The fiscal initiatives often aim to support housing as a job-intensive sector, and the monetary and macro-financial initiatives are focused on access to mortgage credit by lowering interest rates.

This article proposes five principles that governments, international funding organizations, and non-profits can use to design inclusive stimulus programmes focused on housing. It then illustrates how these principles can guide interventions in core areas of housing systems that have been shown to be essential to well-functioning housing markets.

Five principles for inclusive housing stimulus actions

Interventions in the housing sector can support public, private, and non-profit investments. Such interventions have large economic stimulus effects while addressing the enormous need for improved housing and services. Housing investments can also have well-documented individual welfare and community health benefits (Shaw, 2004; Bonnefoy, 2007). For such positive outcomes to materialize, stimulus policies need to be inclusive. We propose five principles that can guide investments in housing systems:

1. Focus on segments of the housing market that have a 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 disproportionally affected lower-income groups.
2. Include support for both ownership and rental markets as well as intermediate forms of tenures such as cooperatives and shared equity programmes like community land trusts (CLTs). The balance between rental and ownership programmes and types of stimulus for investment and consumption will be different for countries with different tenure balances in the middle- and low-income market segments.
3. Expand options for investment and consumption in both formal and informal housing markets. Stimulus policies will differ in countries with high levels of informality.
4. Governments should engage communities in the decision-making process by working with local civil society groups, international NGOs, and any other organizations who may already be providing support and resources during the COVID-19 pandemic. Community members need access to project information and research data (both qualitative and quantitative); community organizations need professional, organizational development, and legal support when necessary to fully engage in project design and implementation, particularly in upgrading projects.
5. Ensure stimulus programmes do not have negative effects on future housing and housing finance market development.

The weight particular countries might give to each of these principles depends on their own priorities, the capacity of their public, private, and non-profit housing sectors, and their access to capital. In the next section, we provide examples of core policies and actions to support and stimulate housing production and improvement based on these five principles.

Actions that provide immediate economic stimulus and strengthen housing systems in the long term

During the current combined health and economic crisis, governments face considerable financial and fiscal constraints. Under the circumstances, governments must use their limited resources to leverage the resources of the private and non-profit sectors. A housing stimulus programme is an opportunity to do so. Four core areas of the housing system would typically be included in a housing stimulus package: 1) providing access to developable or serviced land; 2) improving access to housing finance (for construction, purchase, and improvements); 3) offering subsidies for households to consume better housing, and incentives for lenders and producers of housing to participate in the housing stimulus programme in innovative ways; and 4) creating a housing sector data system to facilitate research and investment in housing.

Secure land tenure and equitable access to land for housing

The provision of developable and serviced land for an inclusive stimulus programme is often the responsibility of local governments and they need to incentivize the private and non-profit housing sectors to participate. One major barrier to the development of urban settlements with adequate access to affordable urban services is insufficient investments in trunk infrastructure (McKinsey Global Institute, 2014; Hoek-Smit et al., 2020). Long term, investments in opening new land for urban expansion through the creation of networks of arterial roads, sewers, water, and electricity, with reservations for land for public open spaces, are among the most cost-effective ways for governments to stimulate housing developments by the private sector (Bertaud, 2018; Lamson-Hall et al., 2019).

In the short and medium term, however, cash-strapped local governments can stimulate housing developments for priority sectors through the creative use of serviced, well-located public lands, acting as facilitators through enabling policies and by supporting private and non-profit actors. Several mechanisms may be considered:

1. *Public–private partnerships (PPPs)* in which affordable housing developers, non-profit development corporations or cooperatives can be invited to prepare proposals for (mixed) housing developments for specific parcels of land made available by the government. 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.

   Examples of such affordable housing projects include: PPP agreements in Egypt; Sao Paulo, Brazil; Odisha State in India; and Kenya (World Bank, 2020). In those projects, beyond providing land, governments often have to play a facilitative role in providing access to construction finance (e.g. Brazil) and end-user finance to reach the desired income group (e.g. Egypt, Brazil, and India).
2. *Community land trusts or cooperatives* using long-term lease contracts that will include requirements to hold the land for public beneficial purposes such as affordable housing can be used by local governments to transform public lands into long-term affordable housing areas, working with strong housing NGOs (Basile and Ehlenz, 2020). Restricting some individual land rights will reduce displacement 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 adopt innovative approaches, such as community land trusts, at the local government level.

Many successful examples of CLTs and shared ownership examples exist in US cities including recently formed ones in response to the COVID-19 crisis; for example utilizing tax-delinquent properties owned by the City of Philadelphia. In emerging market economies, the El Cano Martin Pena CLT in San Juan, Puerto Rico has successfully operated for more than a decade and CLTs are emerging in Latin America, including examples in Rio de Janeiro, Brazil (Williamson, 2018; Basile and Ehlenz, 2020; Davis et al., 2020). Further expansion of these alternative tenure models requires strong non-profit community stewards, a legal framework that allows for the separation of the land from the physical improvements, and access to land (either donated or acquired).

3. *Land regularization and the provision of basic infrastructure and security of tenure* can be expanded by local governments in cases where suitably located public land is informally occupied. This, in turn, may stimulate investments by households and small-scale rental landlords if 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 programmes if there is the political will to do so. Some examples are the home-improvement programmes in the Dominican Republic, Colombia ('Casa Digna, Vida Digna' (CDVD), Ministry of Housing, City and Territory, Government), and Mexico (Infonavit et al., 2019), and upgrading and resettlement programmes in Thailand (CODI) and the Philippines (Social Housing Finance Corporation (SHDC)). In order to engage local communities in the design of these projects, resources need to be allocated to capacity building and participatory processes. Indeed, lack of community buy in can be a significant local governance hurdle to the rapid allocation of stimulus funding.
4. *Land value capture mechanisms* can be used in countries in which local governments have the authority (and capacity) to levy taxes based on land and property value. Under that model, '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, and selling 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 Cape Town municipality. A variety of tools are used such as density bonuses, urban development zones with tax privileges, land-leases for affordable housing, and tax incremental financing as discussed in McGaffin (2018).

Well-functioning property tax collection systems and access to capital markets is needed to ensure that funding linked to land value capture mechanisms can be made available to finance the infrastructure needed for affordable housing. However, property taxes in developing countries remain limited by lack of adequate property assessment data and high levels of noncompliance (Brockmeyer et al., 2021).

5. *'Shelter funds'* can be established with local or national governments acting as facilitators. Shelter funds function as non-profit equity funds with the purpose of developing affordable or mixed-use housing for ownership or rental. The government's equity contribution is often in the form of land, but may come in the form of financial risk mitigation as well (see below). Such funds can leverage resources from mainstream private investors, international housing NGOs, and international development finance institutions, and can be catalysts for development of affordable housing at scale under a stimulus programme. These models are still relatively new in emerging market countries but hold great potential. A recent Shelter Fund was established in the state of Tamil Nadu, India where the State, private, and non-profit investors jointly established an equity fund to finance affordable housing projects that would not be feasible under traditional PPP arrangements (World Bank, 2020).

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 land titles where feasible. However, they generally require less capital than state housing developments and can have large impacts on the way private- and non-profit sectors participate in future development of the affordable housing market.

Housing finance

In most emerging market economies, credit markets – including for builders, rental housing investors, and homebuyers – are still largely underdeveloped. Mortgage debt relative to GDP is mostly below 10 per cent (and less than 3 per cent in Kenya and Uganda), compared to 58 per cent on average in countries with income per capita above $30,000. The size of microfinance lending for housing is even smaller but data on that sector is not systematically collected (Hoek-Smit et al., 2020). The small scale of housing finance 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. Other factors contribute to the small scale of mortgage markets as well, including the fact that 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 consists of predominantly short-term deposits, and access to capital markets is limited (Hoek-Smit et al., 2020).

The building blocks that need to be in place for mortgage markets to expand include the following:

1. Effective property rights and property registration systems that are reliable, transparent, and low cost.
2. Well-functioning land and housing markets that establish reliable prices.

3. Competitive primary mortgage markets with standard long-term mortgage products whose contracts can be enforced.
4. Access to longer-term funding sources to manage interest risk.
5. Insurance or reinsurance entities that can help manage default risk.
6. Rethinking income underwriting for non-salaried workers. For example, many countries have small entrepreneurs, such as autorickshaw drivers who own their vehicles, and have sustained a business for several years. Such people may very well be reliable credit risks.
7. Macroeconomic stability is a necessary condition for the development of a large, reliable mortgage market. Mortgages are not affordable (and therefore not very useful) in countries with high inflation and high sovereign interest rates.

Many of these building blocks are still missing in developing countries, and while key to the development of sustainable mortgage markets, will take time to establish. There are a few examples of emerging countries that have had success in growing their mortgage markets. Thailand has seen a robust development of its mortgage market going back to the 1990s and now has a mortgage debt to GDP ratio above 20 per cent. South Africa also 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.

Developing mortgage finance is indispensable for the expansion of the formal housing market, because 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. Perhaps most important, widely available mortgage credit allows developers to build at scale, and as such allow for more efficient, less expensive housing production.

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 are constrained in increasing the loan amount and term for housing loans while lacking the security of collateral and access to longer term funds.

Microloans and alternative types of construction loans for housing play an important role in the small-scale rental market as well. Renters make up between one-fifth and three-quarters of households in urban areas of emerging markets and developing countries. Small-scale landlords with only one to two units (and generally fewer than 10), are most common and are reliant on the rent payments for their livelihood (Gilbert and Varley, 1990; Ballesteros, 2004). The small-scale rental market, particularly through the expansion of existing homes, provides housing for newcomers and lower-income households in the context of rapidly growing urban areas and can, given access to finance, expand the supply of new affordable rental units in a short period of time (Brueckner et al., 2019).

In order to support the rental sector and ensure the quality of both buildings and services, local government planners need to provide enabling planning regulations and monitoring. At the national level, a mix of 'the right tax incentives, balanced tenant-landlord regulations, access to credit for small- and larger-scale landlords and sustainable rental subsidies for the poorest households' are required for a robust rental sector to develop (Hoek-Smit et al., 2020: 20).

The critical role of housing finance in housing markets, and the fact that low interest rates have a powerful impact on housing demand and investment, is the reason that nearly all housing stimulus programmes 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, landlords, or households directly.

However, the small scale and lack of depth of the housing finance sector in developing countries prevents stimulus programmes based on finance from serving middle- and lower-income markets more broadly. Typically, economic stimulus programmes focus on the part of the market that already has access to mortgage programmes (i.e. the higher middle- and upper-income housing market that in many cases experiences an oversupply of housing).

Moreover, these stimulus programmes are mostly focused on interest rate subsidies which are easy to implement and preferred by private developers. However, interest rate subsidies are by nature regressive (the larger the loan the larger the subsidy), and they often lack transparency since their size depends in most cases on a fluctuating market rate. Lastly, interest rate subsidies often compensate for poor macro-economic and fiscal policies that lead to high inflation and high nominal interest rates, and rather than addressing such inefficiencies, subsidies make it more difficult to address them (Hoek-Smit et al., 2020). This mistargeting of stimulus funds is a common problem and constitutes an economic and welfare loss.

Instead, how can finance based stimulus programmes be reoriented to the middle and low-income segment of the market? For housing stimulus programmes 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 under way in each country. The exact mechanism on how stimulus funding is deployed for the housing finance sector 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 programmes with social value, some incentives may be needed to mitigate interest-rate risk, credit risk, or liquidity risk. Governments should also ensure that the wide range of financial institutions that provide services to households outside of the formal commercial banking system are included in any stimulus packages to the financial sector and that their specific challenges related to higher costs of funds and high transaction costs are accommodated.

Some examples follow:

1. *Mechanisms to extend access to medium-term funds* for lenders serving the middle and low-income market. 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 market. India's National Housing Bank (NHB), Tanzania's Mortgage Refinancing Company (TMRC), and Pakistan's Mortgage Refinancing Company (PMRC) are examples of liquidity

facilities that are extending their operations to both housing microfinance and mortgage lending institutions.

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 programmes. Such programmes, while effective at stimulating lending quickly, have a distortionary effect on the entire housing finance system and should be phased out as soon as possible, being replaced by on-budget subsidies to households if needed. Private debt funds such as Habitat for Humanity Terwilliger Center's MicroBuild Fund are another example of an emerging mechanism than can be deployed flexibly.

2. *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. Morocco's Fogarim is a successful example of a public mortgage insurance programme that has increased bank mortgage lending to the informally employed. India recently established a similar insurance programme through the NHB.
3. *Support for financial innovations* in underwriting that will allow inclusion of lower income customers and informal workers (Omidyar Network and Boston Consulting Group, 2020), and technological innovations in the digitalization of land records and centralized deed management systems have the potential to lower the cost of underwriting and processing mortgages, removing barriers to the issuance of smaller loans. The growth of this sector can be supported by investments and appropriate regulations to provide a clear operating environment and ensure consumer protection.
4. *Finance-linked subsidies to households* are integral to stimulus programmes. However, such subsidies should be well targeted and not distort the mortgage and microfinance markets over the longer term, as outlined below.

In countries with large state-owned housing finance institutions or provident funds (as is the case in several Latin American countries such as Mexico and Brazil), such institutions often play a critical role in housing stimulus programmes. Access to lower cost funds allows them to subsidize mortgage or microloans for housing at scale. The concern with relying on subsidized state institutions to implement stimulus programmes is that it is difficult to leverage private lending resources. Such programmes remain confined to the amount of state funding made available by the administration, and default risk is generally high in such programmes, an outcome reinforced by the lack of market discipline (Acolin et al., 2019).

Housing subsidies and supply-side 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.

As mentioned above, 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 size of the market and subsidies do not contribute to increased investment or consumption of housing, and therefore do not contribute 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 programmes in some countries attest to this.

Even when the targeting of the stimulus programme 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 in terms of social welfare. For example, in Brazil, the Minha Casa, Minha Vida Program (MCMV) was designed as part of an economic stimulus in response to the 2008 Global Financial Crisis, and focused on underserved income segments through deep subsidies (above 80 per cent of cost). However, like many mass-housing programmes, 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 neighbourhoods (Buckley et al., 2016; Acolin et al., 2019). As a result, many developments have been located on the outskirts of urban agglomeration where land is available and cheap, resulting in projects with limited connection to employment centres and urban amenities and contributing to high non-performance rates (Acolin et al., 2019).

The challenge is to design stimulus programmes that are inclusive and expand access to new and existing affordable housing in order to 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 (Hoek-Smit et al., 2020). On the supply-side, incentives to the construction sector need to stimulate innovation, increase the scale of development, and improve cost efficiency. Examples of subsidy incentives to both households and the construction sector, in support of private affordable housing markets include the following:

1. *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 take the form of monthly payment or interest buy-downs, down-payment contributions, and, in the case of mortgage-linked subsidies, payments for titling and mortgage insurance. Egypt is an example of a country that successfully provides transparent down-payment subsidies to households at the margin of the mortgage market and has been able to expand mortgage lending, by both public and private sector banks and mortgage companies, to low-income households and increasingly to informally employed households.

   For incremental or home-improvement programmes, 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 programmes to scale. Some examples of successful programmes are the subsidy programmes to provide cement floors in informal housing areas in Mexico and the Dominican Republic, and the technical assistance work by Habitat for Humanity to accompany loans for incremental construction in many countries in Latin America and Asia.

2. *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 programme targets underserved households. Tax subsidies are often considered, but are much less efficient and effective than direct subsidies and should generally be avoided.

   Rental investors participating in a housing stimulus programme 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 through housing assistance programmes. The tax system needs to treat rental income fairly and tenant regulations need to be fair and balanced. Support may be needed to expand rental management companies that provide professional services and can serve institutional investors.

   Lastly, the housing stimulus programme may provide incentives for *building material suppliers and technology firms* involved in the building process (particularly of small-scale builders and mutual self-help builder/owners) to bring their operations to scale and to realize cost savings, for example through regulatory facilitation, tax incentives, or stimulation of third-party equity investments.

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

Developing sound short-term stimulus programmes depends heavily on the quality of data on the household, housing, and housing finance sectors. The lack of trusted data hampers current attempts to focus economic stimulus programmes on the housing sector with the intent to leverage private, NGO, and development finance institution (DFI) resources. Market actors cannot operate efficiently without timely information on house prices, rents, and incomes; mortgage types and volumes; the quantity and quality of the housing stock across markets; building permit applications, approvals, and new construction; and construction costs (Hoek-Smit et al., 2020). The current dual crisis has shown again the urgent need to invest in accurate and timely data and information collection on 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 is key to the development of robust housing finance systems and to the development and implementation of targeted subsidy schemes.

In this context, a number of initiatives at the global, regional, and national level have made progress in collecting and standardizing housing data including:

1. *At the international level, the Housing Finance Information Network (HOFINET)* provides access to standardized indicators for a range of housing finance, urban development, and demographic indicators for 130 countries (HOFINET, n.d.). These indicators are assembled with inputs from country experts whose domain and local expertise is crucial in ensuring the quality of the data.
2. *At the regional level, the Center for Affordable Housing Finance in Africa (CAHF)* is engaged in developing housing indicators for countries in sub-Saharan Africa which have some of the most limited public data. That effort has already developed estimates of the economic contribution of the housing sector based on the housing economic value chains (HEVC) in six countries, with work in additional countries under way, and by creating housing construction cost benchmarks in 15 countries (Gardner and Pienaar, 2019).

However, efforts by international organizations and non-profits have so far received insufficient resources to produce and maintain consistent national and local housing indicators, and systematically capture, integrate, and disseminate information from alternative housing market sources (e.g. data from the real estate, homebuilder, and lending industries, local government permitting/approval data, property valuation data). These core data can be combined with industry data from listings, satellite imagery, and social media information to support investment and underwriting decisions. In addition, efforts to systematically capture data collected for individual projects, including qualitative data from individual households and community organizations, could be analysed and used to inform the design of new projects and inform practitioners' decisions.

Conclusion

The COVID-19 pandemic and the ensuing massive disruptions to economies in both advanced and developing countries have severe short-and long-term impacts on per capita incomes and poverty levels. The most recent IMF estimates (January 2021 World Economic Outlook) show that by the end of 2022, cumulative per capita income will be 13 per cent below pre-crisis projections in advanced economies – compared with 18 per cent for low-income countries and 22 per cent for emerging and developing countries excluding China. This projected hit to per capita incomes will increase by millions the number of extremely poor people in the developing world.

There remains substantial uncertainty about future economic developments, but to avoid the worst outcomes, many countries put in place substantial economic stimulus plans. In 2020, advanced economies on average deployed about 24 per cent of GDP in fiscal measures, compared with only 6 per cent in emerging markets and less than 2 per cent in low-income countries. Yet, data show that large crisis support was often associated with a smaller loss in employment with some advanced economies potentially experiencing much stronger recovery than initially anticipated (IMF, 2021b).

Data also show that, despite its well-known positive contribution to the domestic economy, the housing sector is largely missing from stimulus plans. Moreover, housing-related actions included in these plans are generally not designed to focus on those parts of the housing sector where the economic, employment, health, and housing benefits would be largest, over both the short and longer term. This constitutes a grave missed opportunity.

This article proposes five principles to guide inclusive stimulus investments in housing. It then discusses concrete actions that may be considered for a housing sector based economic stimulus plan through innovative and complementary land, finance and subsidy policies that together support the development of a robust housing sector that serves *all* residents, including renters and owners and households 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 non-profits, 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 negative economic, welfare, and health consequences.

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