



U20

RIYADH 2020
URBAN

Securing Affordable Housing Delivery in Cities

Investing for better outcomes



Inclusive Prosperous Communities

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About Urban 20

Urban20 (U20) is a city diplomacy initiative that brings together cities from G20 member states and observer cities from non-G20 states to discuss and form a common position on climate action, social inclusion and integration, and sustainable economic growth. Recommendations are then issued for consideration by the G20. The initiative is convened by C40 Cities, in collaboration with United Cities and Local Governments, under the leadership of a Chair city that rotates annually. The first U20 Mayors Summit took place in Buenos Aires in 2018, and the second took place in Tokyo in 2019. For 2020, Riyadh City is the Chair city and host of the annual Mayors Summit. The first meeting of U20 Sherpas was convened in Riyadh, Saudi Arabia, on the 5th – 6th February during which the foundations were laid for the U20 2020 Mayors Summit in the Saudi capital later this year.

About the Urban 20 Taskforces

As U20 Chair, Riyadh has introduced taskforces to add additional structure and focus to the U20. These taskforces explore specific priority issues and bring evidence-based solutions to the final Communique.

Each taskforce has commissioned whitepapers led by chair cities, and with input from participating cities and knowledge partners. These whitepapers help us build an evidence-based, credible and achievable set of policy recommendations.

Taskforces activation

The taskforces workstream was an innovative and recent introduction to the three-year-old U20 initiative by the chairmanship of the city of Riyadh this year. Three thematic taskforces, each guided by one of the U20 Riyadh 2020 overarching themes of Circular, Carbon-neutral economy, Inclusive Prosperous Communities, and Nature-based Urban Solutions, were officially launched and activated during the U20 First Sherpa meeting back in February. During the meeting, the U20 priority topics that fell within the three overarching themes and intersecting with the three cross-sectional dimensions of Implementing the Sustainable Development Goals, Urban Innovation and Technology, and Urban Finance and Investment were prioritized and refined through the statements delivered by all attending cities. The top 5 topics were then chosen to be the focus of whitepapers for each taskforce.



The top 5 topics under each of the three taskforces and cross cutting dimensions were then chosen to be the focus of whitepapers for each taskforce:

TF 1 Circular, Carbon-Neutral Economy 	TF 2 Inclusive Prosperous Communities 	TF 3 Nature-Based Urban Solutions 
<ul style="list-style-type: none"> • Increasing energy efficiency & diversification • Zero-carbon mobility & reshaping of mobility • Reducing, reusing, recycling, and recovering materials • Carbon neutral buildings and construction • Sustainable production & consumption 	<ul style="list-style-type: none"> • Affordable housing • Cultural inclusivity • Mainstreaming gender equality • Upskilling for future of work – international and local opportunities • Youth empowerment 	<ul style="list-style-type: none"> • Resilience towards natural disasters and extreme weather events • Green and blue infrastructure • Ecosystem services for health, safety and wellbeing • Sustainable water management, clean air, & healthy soils • City-region food systems & food security
 Implementing the Sustainable Development Goals	<ul style="list-style-type: none"> • SDG mainstreaming in policy and planning • Cross-silo, cross-sector governance 	<ul style="list-style-type: none"> • Institutional capacity & governance mechanisms at local level • SDG Localization
 Urban Innovation and Technology	<ul style="list-style-type: none"> • Smart city and 4IR technologies • Innovation ecosystems 	<ul style="list-style-type: none"> • Agile and economically diverse cities • Social innovation
 Sustainable Urban Finance and Investment	<ul style="list-style-type: none"> • Access to global & local finance sources – public, multilateral, & private • Investment readiness and project bankability 	<ul style="list-style-type: none"> • Innovative finance instruments and value capture models • Impact financing

Cities and Partner Engagement

The vast majority of the twenty-three cities who attended the first Sherpa meeting, representing 12 G20 countries, along with the U20 Conveners, agreed to the importance of having taskforces as interactive platforms to produce knowledge-based and evidence-based outcomes that can effectively feed into an actionable U20 Communique. During and following the meeting, several cities demonstrated interest in volunteering in the capacity of chairs and co-chairs, leading and overseeing the activities of each taskforce. The cities of Rome and Tshwane co-chaired Taskforce 1 on Circular, Carbon-neutral Economy, Izmir

Taskforce 2 on Inclusive Prosperous Communities, and Durban on Nature-based Urban Solutions. Others expressed interest to participate in the taskforces, some in more than one, both during and after the meeting.

Alongside interested U20 cities, several regional and international organizations proffered to engage in the work of the taskforces, in the capacity of knowledge partners, to share their knowledge and experiences with cities in producing whitepapers. Some of the knowledge partners volunteered to play a leading role as Lead Knowledge Partners, supporting the taskforces' co/chairs in review and guidance.



All participants who actively took part of the taskforces were subject matter experts nominated by the cities and knowledge partners and have enriched the taskforces' discussions with their know-how and experiences. In over 3 months, all three taskforces, with great effort and commitment from all their participants, produced a total of 15 evidence-based focused whitepapers, bringing about more than 160

policy recommendations addressing the national governments of the G20 Member States.

The taskforces content development efforts is comprised of 23 U20 cities and 31 U20 knowledge partners. The 100+ experts and city representatives produced 15 whitepapers which widely benefited and informed the development of the first draft of the communique.



Content Development

Under the leadership and guidance of the chair city, Izmir, and the lead knowledge partner, Metropolis, the work of Task Force 2 kicked off with an orientation for all participants in mid-March.

During the period between March and April, the participants of Taskforce 2 presented more than 24 concept ideas and 11 concept notes and developed initial outlines for the whitepapers

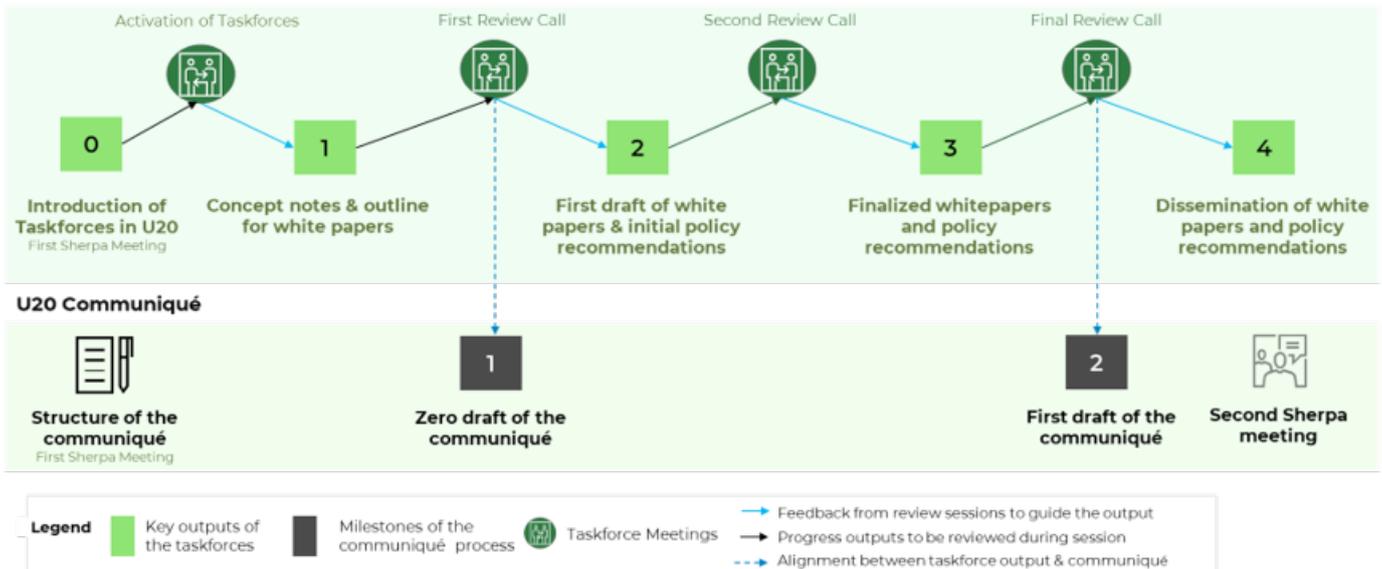
focusing on topics of interest. Teaming up into five author groupings, the cities and knowledge partners developed five outlines of whitepapers. Refined and revised outlines were then developed into draft whitepapers that underwent several iterations for development and finalization, ensuring that each paper delivers a set of concrete and targeted policy recommendations that address the different U20 stakeholders.



The five whitepapers under Taskforce 2 (listed below) explore priority topics on affordable housing, mainstreaming gender equality, socio-cultural inclusion and cohesion, upskilling for the future of work, and youth empowerment, and are titled as follows:

1. “Securing affordable housing delivery in cities: investing for better outcomes”
2. “Removing barriers to mainstreaming gender equality”
3. “Urban inclusiveness, safety nets and social compacts in the time of a pandemic”
4. “Inclusive creative economy and the future of work”
5. “Youth empowerment for prosperous and inclusive cities”

Taskforce Activities



Along the taskforces timeline of activities, three review meetings were held where co/chairs and lead knowledge partners presented and discussed with the U20 Executive Team the progress and findings of the taskforces they represent, leading to the U20 Second Sherpa meeting that took

place during the first week of July. Parallel to the taskforces activities, the first draft of the U20 communiqué was developed by the U20 Executive team incorporating recommendations presented at the third (and final) review meeting.



About the Inclusive Prosperous Communities Taskforce

Cities need to provide indiscriminate access to opportunities and services for all the diverse people that live, work, and play in them to prosper. Cities need to empower all citizens to thrive, by preparing them for the future of work and overcoming the digital divide, ensuring cultural inclusivity and integration, and providing safe public spaces and infrastructure.

The U20 taskforce on Inclusive Prosperous Communities, addresses challenges and priorities covered in global agendas that are faced by cities and these include affordable housing, mainstreaming gender equality, socio-cultural

inclusion and cohesion, upskilling for the future of work and youth empowerment. Cities face daily challenges on the fronts of inclusivity, equality, accessibility, and cohesion and have been the epicenters of the recent COVID-19 pandemic worldwide.

Cities are the melting pots of different social and cultural textures are at the heart of the G20 nations' power. Cities are in constant action to provide and ensure urban social safety nets and social protection to urban residents, far before the pandemic and are today, in a tougher position to prevent potential deterioration and speed up a healthy recovery. The priority topics addressed by this Taskforce are at heart of the cities' battles, where each topic is portrayed in focused whitepapers that describe the situational challenges, present opportunities for change and improvement, and design action-driven sound recommendations.

12 cities

U20 Participating cities

Barcelona Mexico City
Berlin Montréal
Guangzhou Riyadh
Johannesburg Strasbourg
Madrid

Chair city

Izmir

U20 Observer cities

Amman
Damascus

15 knowledge partners

Knowledge partners

- Arab Urban Development Institute (AUDI) and Global Observatory linking Research to Action (GORA Corp.)
- Brookings Institute
- Indonesia Creative Cities Network
- International Finance Corporation
- Lee Kuan Yew Center for Innovative Cities
- Mansueto Institute for Urban Innovation
- National Institute of Urban Affairs
- The Chicago Council on Global Affairs

Lead knowledge partner

Metropolis

- World Economic Forum
- World Enabled
- UN-Habitat
- UCLG - Committee on Social Inclusion, Participatory Democracy and Human Rights
- University of Pennsylvania, Perry World House



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Hazem Galal is an advisor in the U20 Riyadh Team. He is the global leader of PwC's Cities and Local Government network and is a frequent speaker and moderator at a number of global cities conferences. He is a member of the World Economic Forum's Global Future Council on Cities and Urbanization and was also a strategic advisor to their Cities and Urbanization platform providing strategic guidance on over several publications on social, economic and environmental issues. He has also co-authored the book "Delivering Sustainable Competitiveness - Revisiting the organizing capacity of cities".

U20 Knowledge Partners



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Dr Gora Mboup have more than 25 years of international development experience as a coordinator of the Demographic and Health Survey Programme of USAID for ten years, and as the Chief of the Global Urban Observatory of UN-Habitat for another 10 years. He is presently coordinating the Saudi National Urban Observatory, and he is senior advisor of the Madinah Urban Observatory and other urban observatories in the KSA and UAE. With UN-Habitat, Gora co-authored two publications on Monitoring Land Secure Tenure (2011 and 2019). With the World Bank Land Conference in 2017, he authored the article "Land: The Hidden Assets in African Cities". At the International Conference on Cooperative Housing held in Egypt in 2019, he authored the presentation Sustainable Housing: People, Places and Policies. With UN-Habitat between 2006 and 2013, he co-authored four series of the State of World Cities. He also co-authored three books on Smart Economy in Smart Cities, 2016, 2018, 2019 published by Springer. With the Urban Planet Book published by Cambridge Press in 2019, Gora authored the chapter Digital Urbanization and the End of Big Cities.



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Disclaimer Note

The views, opinions, positions and recommendations expressed in this White Paper are developed under the chairmanship of the City of Riyadh as U20 Chair City 2020 and are those of the authors and contributors, including contributing U20 cities and partners. They do not necessarily represent the views of all the U20 cities or any of its chairs, conveners, and partners. Many of the references in this White Paper will direct the reader to sites operated by third parties. Neither the institutions nor the authors of this White Paper have reviewed all the information on these sites or the accuracy or reliability of any information, data, opinions, advice or statements on these sites.



Executive Summary



Executive Summary

Cities are the engines of economic growth, presenting opportunities for the inclusive socioeconomic development and prosperity of nations. A well-functioning housing market, offering decent, affordable, and safe housing for all is essential to maintain or increase this growth. Across the globe, cities are pressed to meet the housing challenge. National governments can assist them meet their housing goals by developing an enabling environment supportive infrastructure, investment and macroeconomic policies targeted towards social and financial inclusion. The COVID 19 pandemic exposed deep weaknesses in the affordable housing market, especially for those living in informal settlements, homeless and underprivileged groups who were disproportionately vulnerable to the hazards of the pandemic.

The challenge of affordability requires immediate interventions and long-term strategies to achieve the structural changes to increase supply and meet the demand sides of the housing market. While cities can learn from some common lessons, they must formulate context-sensitive policies to address the housing challenges informed by a multi stakeholder approach involving the public-sector (at the local and national levels), the private-sector, non-profit organizations and residents.

The global housing affordability challenge spans the supply and demand chains. At one end, ensuring the affordability of housing in expensive or appreciating real estate markets is needed while on the other end, upgrading obsolete or substandard housing units (particularly informal

settlements) is necessary. Responding to these issues involves all spheres of governments (national, state and local), the private sector, and non-profit sector.

National governments can devise regulatory frameworks that enable transparent, fair and equitable access and use of land, alternative ownership models protective of tenants and landlords alike. They can also enable innovative financing models for new construction, upgrading or rehabilitation of dwelling units. Local governments around the world have different competencies related to housing; nevertheless, coordination on how land valuation and taxation and the right division of responsibilities between the different layers of government is essential for the implementation of effective policies since affordable and adequate housing is essential to achieve resilient, sustainable and inclusive cities. Regional and local governments can adapt national plans to fit local circumstances and ensure an adequate housing provision through infrastructure development and land-use planning mechanisms.

The private sector can embrace innovative financing mechanisms and help establish the creditworthiness of those unable to secure finance.

The nonprofit sector can be instrumental in implementing alternative tenure models, while also assisting in advocacy efforts in formulating just policies and creating awareness through technical know-how of developing and maintaining home affordability.



Background



Background

Affordable housing influences every aspect of life. Failure to provide affordable and adequate housing has serious consequences for individuals as well as for the city as whole. The unprecedented rates of urbanization further exacerbate the future challenges related to housing. According to the United Nations World Urbanization Prospects in 2018, by 2050, two out of every three people are likely to be living in cities or other urban centers, highlighting the urgent actions required in urban planning and in the housing sector [1].

Numerous United Nations conventions have recognized the right to housing for all including the Universal Declaration of Human Rights (UDHR), the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the 2030 Agenda. In the latter SDG 11, specifies ensuring “access for all to adequate, safe and affordable housing and basic services and upgrade slums.”

This paper points out the urgency of achieving SDG 11 while emphasizing the importance of shared responsibility from all the stakeholders involved in the housing sector. It builds on the previous U20 deliberations in the Tokyo [i] and the Buenos Aires [ii], communiqués to the head of states. It is in full alignment with the 2020 G20 presidency agenda of empowering people, creating conditions and unleashing equal opportunities for all people to live, work, and thrive.

[i] Ensure that cities have the funding and power to secure access to safe, genuinely affordable housing near community services including clean, efficient and comfortable public transportation, education, and healthcare, in diverse, culturally vibrant neighborhoods where new and long-established residents can live together as neighbors.

[ii] Design and implement housing strategies to ensure access of all populations to adequate housing, paying special attention to the needs of, and in consultation with, specific groups including children, women, ageing populations, people with disabilities, immigrants and all individuals and groups victim of discrimination or hate crimes.

Enhance competencies and resources for local government to face real estate speculation and promote inclusive, resilient, sustainable and adequately served neighborhoods, safeguard publicly accessible spaces, increase funding to improve public housing stocks, and prepare tools to co-produce public-private community-driven alternative housing.



Introduction



Introduction

Access to safe, adequate and affordable housing is a fundamental right of every resident. Most cities around the world are facing major challenges in providing safe and affordable housing due to unprecedented rates of urbanization and population growth. The rise in urban population has been unparalleled. Within the next minute, the global urban population will increase by 145 people. Today more than 55 percent of world population lives in cities and this number is projected to grow further in the coming years. High concentration of economic activity in cities has always attracted people to migrate and settle in cities for better work and quality of life. A flourishing city economy attracts businesses and entrepreneurs, which in turn pulls the workforce. This has created noteworthy demand for the land, that is driving the escalation in housing development costs and its selling or rental price.

In the recent past, house prices have escalated far above the household incomes in multiple cities across the world. In some urban markets house prices have multiplied, tripled, or indeed quadrupled relative to family earnings.

A recent survey conducted by Lincoln Institute of Land Policy revealed that of 200 cities polled around the globe, 90 percent were considered unaffordable when applying the widely used standard of average house prices being more than three-times median income.

Affordable housing has typically failed to keep pace with the rapid urbanization surge and has resulted in increasing the magnitude of the social, economic and environmental challenges already faced by cities.

The housing affordability challenge is affecting the cities in both the advanced and the developing economies alike, however with higher impact being faced by the latter. The urbanization level in advanced economics is higher than the developing economies. However, the urbanization annual growth rate in developing economies is 1.5 percent, which is almost five times higher than the advanced economies annual growth rate of 0.34 percent. Due to lack of affordable housing, a large portion of the population in the developing world cities are forced to live in informal settlements and slums.

As per a recent UN estimates (Figure 1) [2], more than a billion people live in slums or informal settlements, with 80 per cent attributed to three regions: Eastern and South- Eastern Asia (370 million), sub-Saharan Africa (238 million) and Central and Southern Asia (227 million). UN-Habitat estimates that in the next ten years, an additional 3 billion people, about 40 percent of the world's population, will need access to adequate housing. This translates into a demand for 96,000 new affordable and accessible housing units every day for the next ten years. Additionally, an estimated 100 million people worldwide are homeless and one in four people live in harmful conditions, which affect their health, safety and prosperity.



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Figure 1.

Urban population living in slums or informal settlements in 2018, in millions of people



Source: United Nations, 2019

People living in informal settlements and slums are at high risks of exposure to natural disasters and pandemics. The SARS epidemic, Ebola and the recent COVID-19 have proved that informal settlements and slums are hotspots of diseases due to overcrowding, lack of safe drinking water and adequate sanitation, waste management, public transport and access to formal health care facilities. In addition, they do not have secure tenure or housing made from durable materials. With the spread of COVID-19 the seriousness of the pre-existing housing crisis has been exacerbated. While urgent preparations are needed now to enable residents to stay safe and healthy, long term planning for the most vulnerable is essential in order to guarantee the right to housing all times.

Affordable Housing: Concepts & Definitions

Affordable housing is broadly defined as “housing which is adequate in quality and location and does not cost so much that it prohibits its occupants meeting other basic living costs or threatens their enjoyment of basic human rights” [3]. Affordability involves the ability not only to buy or rent a home, but also to afford other basic needs. This definition of affordability goes beyond meeting expenses related to operations and maintenance, taking into consideration transport, infrastructure and services [3].

The *New Urban Agenda* embodies a new vision of urbanization as the engine for sustainable development. This vision cites the realization of the right to housing as a transformative force that can assist in dealing with climate change and eradicating poverty, exclusion, and inequality. It serves as a critical pathway for achieving sustainable urbanization.

Housing is central in the New Urban Agenda with governments committing themselves to stimulate the supply of a variety of adequate housing options that are safe, affordable and accessible for members of different income groups of society, [...] (NUA 33). They further commit themselves to promote equitable and affordable access to affordable serviced land, housing, modern and renewable energy, safe drinking water and sanitation, [...] (NUA 34), and to increased security of tenure for all, recognition of the plurality of



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tenure types, and development of fit-for-purpose and age-, gender- and environment-responsive solutions within the continuum of land and property rights, (NUA 35). With the Sustainable Development Goals (SDGs), they also commit themselves, by 2030, to ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance (SDG 1.4). They further commit themselves, by 2030, to ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums (SDG11.1). However, most of these initiatives are at the early stage of implementation and further efforts are needed to ensure the successful delivery of more affordable projects.

Measuring Affordability

Three conceptual frameworks outline how to measure housing affordability: normative, behavioral and subjective. A normative approach defines a certain threshold value for the limit or norm of housing affordability. A behavioral approach evaluates housing affordability by investigating housing decisions of different household characteristics. A subjective approach rests on large sample surveys, summarizing the subjective evaluations of respondents' feelings about their affordability situations. The normative approach has received much more research attention so far. The normative approach consists in the measurement of affordability according to set standards, a certain threshold value for the limit of what is considered affordable. This normative

standard of affordability usually adopts a ratio approach by measuring the relationship between household incomes and housing costs [4]. Following this logic, affordability is expressed in terms of the households' income in order to assess the variability between housing or household types [5].

Housing affordability measurements document four characteristics. They are:

- Median Multiple: Affordable if financed less than three times household's annual median income.
- Housing Cost Burden: If households pay more than 30 percent of income on housing.
- Residual Income – Uses remaining "residual" income after meeting necessities for household
- Housing Affordability Gap: shortage of affordable homes

Analysts use the median multiple indicator, which is the median house price divided by the median household income, for evaluating housing markets. Typically, housing is considered affordable if its purchase value does not surpass the threshold of 3.0 times the annual median household income. The World Bank and the United Nations endorse this metric, and Harvard University's Joint Center for Housing Studies, the Organization for Economic Cooperation and Development (OECD), International Monetary Fund, *The Economist*, the US Annual Demographia International Housing Affordability Survey and other organizations also use it. This metric measures not only the incidence of housing affordability but also its severity



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assessed as follows: if the multiple median is less or equal to 3.0 the housing is affordable; between 3.1 and 4.0, it is moderately unaffordable; between 4.1 and 5.0, it is seriously unaffordable; and higher than 5.1, it is severely unaffordable [6].

The Housing Cost Burden indicator states that paying no more than 30 percent of income in monthly rents or mortgage servicing marks affordable housing. Several global, regional and national governments and groups use this standard to measure housing affordability and develop housing policies. In a further application, the US based National Low-Income Housing Coalition (NLIHC) uses the indicator to measure housing affordability for different low-income groups to establish Cost Burden (more than 30 percent of income for housing) and Severe Cost Burden (more than 50 percent of income for housing). They consider four categories; a) Extremely low income (ELI) households with income at or below either the poverty guideline or 30 percent of their area median income (AMI), whichever is higher; b) Very Low Income (VLI), households with income between 31 percent and 50 percent of AMI; c) Low Income (LI) households with income between 51 percent and 80 percent of AMI; and d) Middle Income (MI) households with income between 81 percent and 100 percent of AMI. Above Median Income households with income above 100 percent of AMI. Similarly, to determine whether an individual household is cost burdened by the residual income standard, requires three types of information: an estimate for the household's total basic non-housing costs, the household's income, and the household's

total gross rent (including utilities). With this information, we can calculate how much a household can afford to spend on housing given its necessary non-housing expenses and its income and then compare this amount to how much the household actually is spending on housing to determine if it is cost burdened [7,8].

Using Median Multiple to measure housing affordability

In 2018, Asian cities used the median multiple indicator to analyze housing affordability in 211 cities from 27 Asian countries [9]. The results revealed that, only three cities (1.4 percent of the sample) (Hubli Dharwad in India, Khulna in Bangladesh, and Timphu in Bhutan), were affordable (median multiple is 3.0 or less) while the remainder (98.6 percent), were unaffordable. In fact, 93 percent were severely unaffordable (5.1 or more). Also demonstrated was that housing unaffordability affects cities of all sizes, ranging from large cities (with more than 5 million inhabitants) to smaller cities (with less than 1 million inhabitants). On average, the median multiple is at 15.6 in the 211 cities, indicating that housing is severely unaffordable in Asia. Furthermore, it affects all subregions in Asia (Central Asia, East Asia, South East Asia, South Asia, or the Pacific). It extends from West to East, from Karachi, Kathmandu, Dhaka, and Bangkok to Dili (Timor-Leste), and from South to North starting from Jakarta, Hanoi, and Vientiane, to Beijing and Ulaanbaatar. As observed in most developing countries, rapid urbanization and the rise of middle-income groups are the main drivers



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Example: Limitation of Median Multiple to measure housing affordability in Africa [10]

The housing to income ratio used to measure housing affordability has limitations in regions such as sub-Saharan Africa (SSA) and South & Central Asia where the housing sector as well as the labor market is informal. Affordability in sub-Saharan Africa (SSA) differs from affordability in developed economies in many aspects. For the SSA countries, an alternative indicator used by the Centre for Affordable Housing Finance in Africa to measure housing affordability is the percentage of urban households that can afford the cheapest newly built house. According to the data from the Centre for Affordable Housing Finance in Africa, in 2018, less than 25 percent of the urban population in sub-Saharan African cities can afford what is a cheapest newly built house by a private developer.

According to the World Bank (2015) in its Stocktaking of the Housing Sector in Africa report, conventional measures of housing affordability may even under-represent the actual housing demand in the SSA. Due to low incomes, most urban households have very limited resources to spend on housing. Recent research finds that for households in low-income SSA countries, food expenditures alone account for 50-60 percent of total monthly expenditures, which leaves very little for housing or other necessities such as education or health care.

Source: The World Bank, 2015

of housing unaffordability resulting in the demand for housing drastically surpassing the supply.

According to UN-Habitat, 3 billion people or about 40 percent of the world's population, will need access to adequate housing by 2030. This translates into a demand for 96,000 new affordable and accessible housing units every day. However, the number of new rental or sales housing units that enter the market annually - does not meet this level of demand. For developing countries, the gap is especially wide as the current stock of housing units is produced mainly through incremental self-construction with little contribution from government agencies and private developers.

In low income countries, the poor often live in substandard accommodations, on land that is not

well-serviced and has poor infrastructure. They have no access to paved roads, regular and clean water, electricity and sewage disposal facilities. Further, they spend - around 47 percent of their household budgets on food, therefore diminishing their share of income devoted to housing [11]. Recent studies indicate that in urban slum areas, the estimated annualized rent-to-income ratio for a dwelling unit that is fully equipped with amenities (toilet, electric connection) and constructed with permanent building materials is around 20 percent [12]. Other studies also show that even for low-income households that reside in informal housing and that their expenditure on food represents around 60 percent of their overall consumption, housing rents represent almost a third of non-food expenditure [13].



Introduction

Results from the housing affordability survey published by Kallergis et al. in 2018 revealed a wide variation in housing sector performance between and within cities reflecting differences in housing types, in the quantity and quality of housing, in residential amenities and densities, in prices and rents relative to household incomes, in the availability of housing finance, and in the

regulatory regimes governing land and housing. For this purpose, the housing sector was divided into four categories that are generally enough to encompass different types of the housing stock. Identifying estimates of these shares has been a challenging task, particularly in cities where data on the housing stock is lacking, and especially when it comes to informal housing [14].

Case Study: Affordable Housing Gap in the Kingdom of Saudi Arabia [15]

Saudi cities have a surplus of high-rental housing, and a persistent shortage of affordable housing for lower- and middle- income households. Housing that is affordable and in line with the socioeconomic characteristics of the people and that meets the principles of residential sustainability and the Saudi Vision 2030, are needed urgently in almost all Saudi cities, particularly in large cities such as Riyadh, Jeddah and Dammam.

Incompatibility between housing type, socio-economic characteristics of these metropolitan areas, and building regulations on the housing types in the built-up and vacant residential areas are prime contributors to the gap. These housing types which account for a large proportion of the houses in the built-up and vacant residential areas of these metropolitans. For instance, in Dammam, with an average rent of SAR 10,000 (approx. US\$2700) only 29 percent of the local population can afford this type of housing. Saudi households, on average, spend 22 percent of their income on housing and utilities; this could reach 50 percent for low-income households. The houses do not conform to the principle of residential sustainability. To meet the challenge of the provision of affordable housing in Saudi metropolitan areas, building regulations need to be revised to conform with the socioeconomic characteristics of the population; sustainability principles; and Saudi Vision 2030, that aims to increase homeownership among Saudis from 47 percent to 52 percent by 2020.

Source: MOMRA and UN-Habitat, 2019.



Introduction

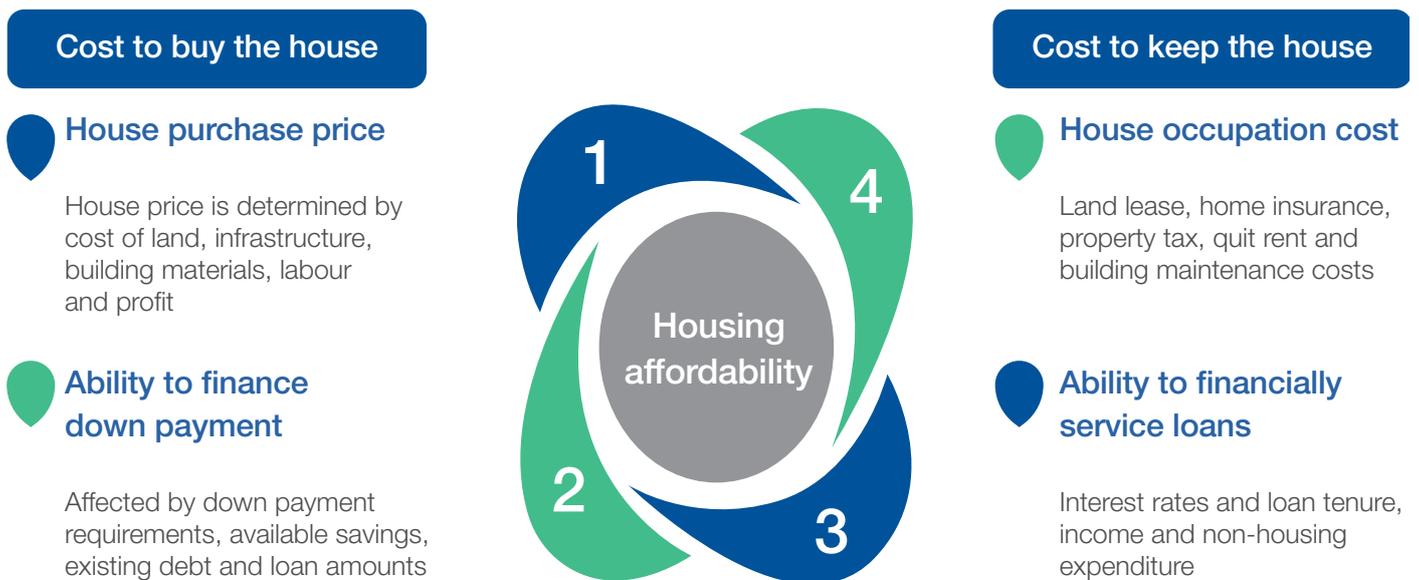
Factors affecting Affordable Housing

Purchase and operating costs directly affect housing affordability. Beyond these costs, location, housing type, access to social infrastructure, and

the legal and regulatory environment and the state of financial markets also influence housing affordability [16]. Figure 2 below elaborates on the idea of financial affordability.

Figure 2.

Key factors affecting Housing Affordability



Source: World Economic Forum, 2019

Included in the costs of development are land acquisition, permits, planning approvals, infrastructure (streets, electric grids etc.), and environmental remediation if required. The cost of utility infrastructure is typically lower in urban centers than on the periphery because the essential network infrastructure is already

in place. Construction costs including labor and material costs vary across cities depending on labor laws, building standards and choice of raw materials. A study covering 30 African cities found that construction costs constitute between 35 percent and 72 percent of the total, with land and infrastructure ranging from 11 percent to



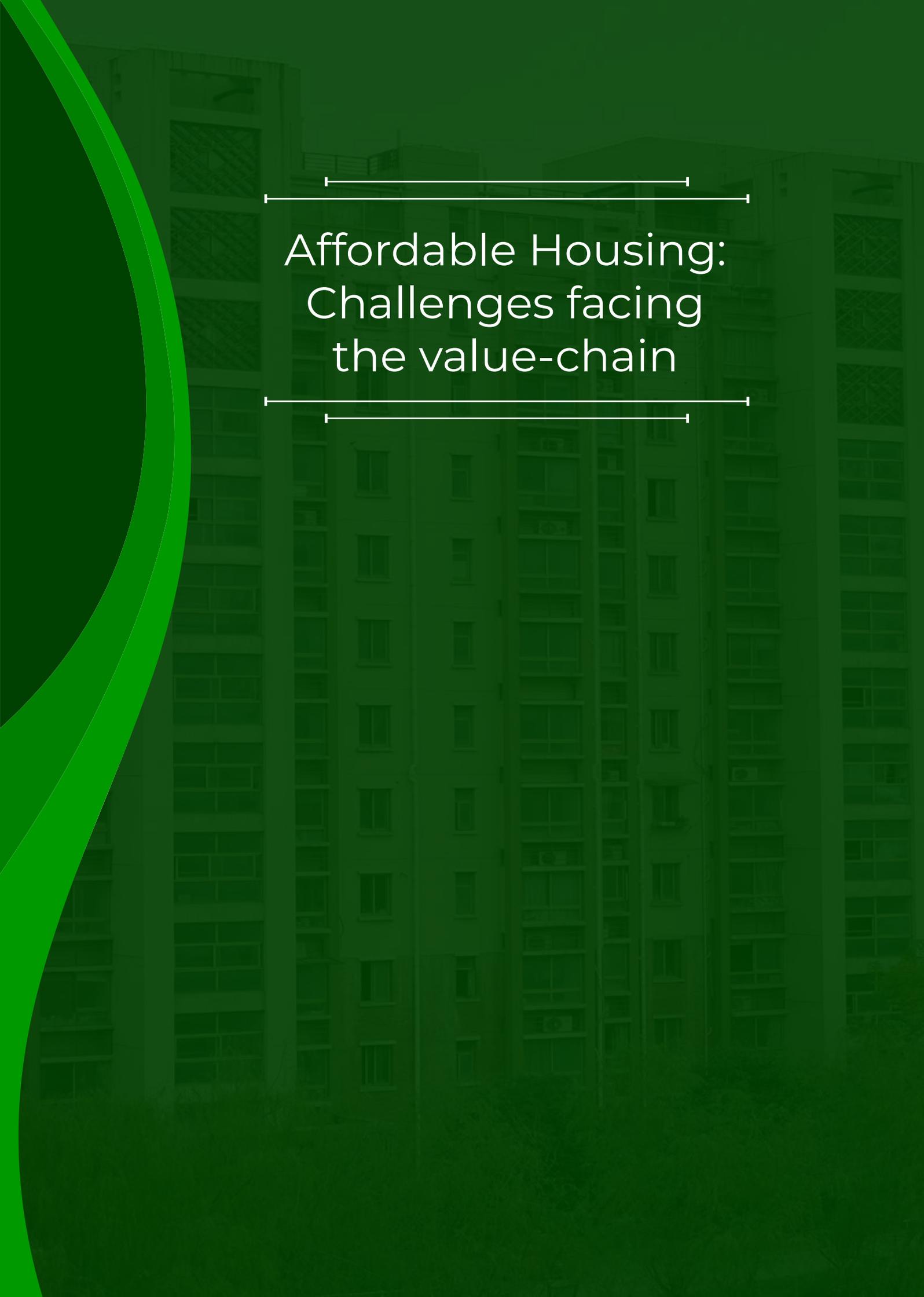
Introduction

45 percent [17]. Prefabrication and automation for housing production allows delivering quality housing swiftly at affordably and at scale. Leveraging smart manufacturing, for procurement, logistics, design and system management may transform the housing sector in the future.

Operating costs, including heating, cooling, electricity and water consumption as well as costs to conduct repairs (plumbing, repainting, landscape gardening etc.) affect housing affordability. Innovation with smart grids may help address the increase in demand for energy in cities.

Other indirect factors impacting housing costs of development are: (a) Site conditions and site locations – adjacency to services and ease of accessing site; (b) housing types or specification – target market, e.g. high-end properties will command higher finishes for building, services and public realm; (c) access to social infrastructure⁽ⁱⁱⁱ⁾; and (d) the legal and regulatory environment – regulation can affect costs by delay, design restriction, or the ease with which court suits can be used to challenge development rights, all without formally banning construction.

[iii] Housing comes with a wide range of services, including access to electricity, sanitation, jobs, health facilities and education. Interconnectivity and accessibility to services, whether physical or virtual, is a central need of contemporary societies and prices are impacted by whether these needs are met or not



Affordable Housing:
Challenges facing
the value-chain



Affordable Housing: Challenges facing the value-chain

Access to decent, affordable housing is so fundamental to the health and well-being of people and the smooth functioning of economies that it is integral to the United Nations Universal Declaration of Human Rights. Nevertheless, economies, both advanced and developing, find themselves struggling with the dual challenges of housing their poorest residents and the marginalized and vulnerable groups and providing housing at a reasonable cost for low- and middle-income populations.

Based on the projected rate of urbanization around the world, the estimated number of people affected by the affordable housing gap could rise to 1.7 billion in 2030 and to 1.8 billion in 2035 [18]. A housing deficit is being experienced across several cities in both advanced and developing countries and is one of the key underlying causes for the global crisis of housing, namely decent and affordable housing. If current trends in urbanization and income growth persist, the affordable housing gap would grow from 330 million urban households to 440 million by 2025, leaving billions of people living in substandard housing or financially stretched by housing costs [18].

The “global urban housing crisis”, as defined by the Lincoln Institute of Land Policy, is characterized by unresponsive housing supply, scarcity of affordable housing, and the proliferation and persistence of precarious dwellings, in rapidly urbanizing low- and middle-income countries [14]. To better assess

the complexities of securing and maintaining housing that is affordable to all in cities, a holistic analysis and interpretation of the economic model of the supply-side and the demand-side chains is deemed an effective way to break down these complexities and understand the challenges they entail. This leads to a better identification of opportunities and tailoring of solutions.

This section of the whitepaper presents the approach to affordable housing in cities using a value-chain framework that can draw a clear conclusion from the present and foreseen universal challenges towards relevant, effective, and concrete recommendations calling on policymakers and global leaders to consider. This framework is based on that developed by the World Economic Forum Cities, Urban Development & Urban Services Platform in collaboration with PwC on the Insight Report: “Making Affordable Housing a Reality in Cities” [16].

Understanding the Supply-side chain of Affordable Housing

The current context of urbanization worldwide adds to the future challenges related to housing let alone affordable housing and decent housing conditions. Nearly all growth in the world’s urban population from 4.0 billion in 2015 to 6.3 billion in 2050 is expected to take place in low- and middle-income countries where cities will need to host close to 2.3 billion people [19]. Considering



Affordable Housing: Challenges facing the value-chain

the current situation and projecting the future, understanding the economic and social elements that construct the supply-side chain of affordable housing is crucial to comprehend and address its challenges. In simple terms, the supply-side of affordable housing entails the process of building affordable homes for people to live in and entails all essential elements that factor into this process. These elements include land, public services, urban planning and policies, and financing infrastructures.

Urban planning and policies and the construction sector

City policies and directives that govern city planning address land use and land planning and management, building codes related to construction best practices, construction materials grades and sourcing, exploitation rate/built-up ratios per allotted land (number of stories and housing units per building, ratio of landscaped land with respect to land area, among others), and building design (e.g. circularity and sustainability of housing unit systems and the building as a whole). Long term urban planning involves long-range comprehensive plans which determines where future growth should occur, and the land-use and transportation strategies necessary to build sustainable cities and regions. It also includes strategies such as transit-oriented development, which focuses development near transit, improves connectivity and increases mobility of tenants, and

improves quality of life, better labor distribution, among others, as well as the planned and existing infrastructure systems and public services.

UN-Habitat supports countries to develop urban planning methods and systems to address current urbanization challenges such as population growth, urban sprawl, poverty, inequality, pollution, congestion, as well as urban biodiversity, urban mobility and energy. The proposed approach is based on 5 principles that support the 3 key features of sustainable neighborhoods and cities: compact, integrated, connected. These principles are:

1. Adequate space for streets and an efficient street network
2. High density
3. Mixed land-use
4. Social mix
5. Limited land-use specialization

Today, urban planning in many cities faces serious challenges in addressing the shortage of affordable housing, the proliferation of slums and informal settlements, and the rising social inequalities and disparities. Urban planning has struggled to keep pace with rapid urbanization and the significantly increasing demand for housing units despite residential land use often occupying most of the area of a city. In the last decades, a series of housing responses have emerged, but they



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have also brought about new challenges. Urban growth in many developing countries has been marked by informal urban development, sprawl, spatial fragmentation and segregation, which in turn engender other forms of social exclusion, inequalities and violation of human rights. Spatial inequalities are a mark of current urbanization processes. Low-income housing areas are commonly located too far away from livelihood opportunities, with limited access to infrastructure, transportation and other services. The lack of appropriate planning mechanisms and regulations including the spatial distribution of investments in services and infrastructure often result in more urban inequalities. Certain neighborhoods benefit from better services and infrastructure than others. Housing segregation, gentrification and unaffordability are often reinforced by lacking or inadequate regulation and planning.

On national and local scales, the challenges posed by affordable housing on the low-to medium-income households are quite broad world-wide. As population growth and urbanization continue to rise and economies grow, the middle-income class exponentially swells leading to an increased demand on affordable and adequate housing in the urban and semi-urban areas. Below are few examples that showcase supply-side challenges to affordable housing, focusing on some existing urban planning schemes and policies and the construction sector, as faced by regions and urban areas across the world.

Struggles for the low- and medium-income populations

Cities across the world face great impediments towards meeting the needs of their residents, namely those whose socio-economic conditions are challenging.

In many developing countries, cities are facing a growing pressure to accommodate the evolving needs of urban dwellers, specifically the low- and medium-income individuals and families, which exerts a major pressure on the real estate industry in the region. The number of new housing units that enter the market annually for rental and purchase for ownership does not meet the demands of the increasingly urbanized population and the growing middle and upper-class population. This includes the supply of housing that is both affordable and adequate for a good quality of life. The critical challenges facing the supply-side of affordable housing sector in, for instance, the SSA region, include the very high construction costs mainly attributed to the cost of construction materials (such as cement) due to the heavy reliance on imported sourcing on one end and a monopoly from local suppliers on another and generally, the absence of a robust construction sector [10], as portrayed in Table 2 below.



Affordable Housing: Challenges facing the value-chain

Table 2.
Stocktaking of the Housing Sector in Sub-Saharan Africa

	Housing Delivery Component	Formal	Common SSA condition
Supply	<i>Land Tenure and Administration</i>	Freehold or leasehold title; title or deed registry	Competing tenure systems and or absence of title: Squatting, land invasions, illicit subdivision and sales
	<i>Planning Standards and Regulations</i>	Compliance with floor area ratio (FAR), plot coverage, site setbacks, heights, building codes	Variation in site density, design and lot coverage
	<i>Construction sector</i>	Sector with professional, licensed contractors/workers	Self-built, or use of informal unlicensed laborers
	<i>Building Materials</i>	Mass produced materials with standardized quality	Variation in type and quality of materials: Scavenged items, traditional manufacturing techniques, some use of manufactured materials where they can be obtained
	<i>Infrastructure</i>	Trunk lines and utility connections	No trunk lines: Illegal wiring, pit latrines, household cisterns
Demand	<i>Formal savings accounts</i>	Savings account deposits used for mortgage lending	Little formal savings: Reduces capital available for lending to consumers or developers
	<i>Underwriting and verification</i>	Assessment of income and creditworthiness to create mortgage terms	Lack of formal income and land or property title for collateral: Reduces eligibility for housing subsidy programs, raises risks profile for commercial mortgage lending
	<i>Mortgage loans</i>	Long term loan for obtaining complete, titled house	Few mortgages: Most households use personal savings, microcredit, savings groups and/or other non-commercial sources

Source: World Bank, 2015

The current stock of housing units in the SSA region is supplied mainly through incremental self-construction (gradually adding additional floors to an existing house or building), government agencies, and private developers. The dominance of small- and medium-sized developers and

artisanal construction methods with low capacity lengthens construction time, lowers quality, increases construction costs, and limits the supply of housing. All these issues are amplified by inadequate institutional and regulatory frameworks and poor governance [10].



Affordable Housing: Challenges facing the value-chain

Mixed-use development initiatives: Advantages and disadvantages

Affordable housing can be secured where there is easy access to basic human services like water, sanitation, education and health care, and to decent employment for all. This is particularly possible in a city which is inclusive at the onset of urban planning and promotes mixed land use where social clustering is discouraged. Having all the poor living together creates slums and fuels instability and insecurity. As developed in the publication “Making Affordable Housing a Reality in Cities” (WEF, 2019), “Affordable housing strategies often aim to create vibrant communities through policies of inclusionary zoning – a government intervention mandating or incentivizing a portion of residential housing to include low and middle income households – and mixed land use, defined as “the co-location or immediate proximity of homes, workplaces and services in buildings, neighborhoods and districts”. Mixed land use and social mix communities are believed to be more diverse and socially cohesive and improve social mobility (Design Buildings, 2017).” Cities are using mandatory inclusionary zoning that requires developers to build a specified number of homes, negotiated with the planning authorities or as a proportion of development value.

An alternative is incentivized inclusionary zoning, where incentives for developers to build affordable housing could include: a) modifying planning standards based on performance criteria (e.g. increasing site yield to encourage low- cost housing such as boarding houses,

student accommodation and retirement homes in designated areas); b) bonus systems that relax development controls such as height, density, building setback or parking controls in exchange for constructing dedicated affordable housing; c) fast-track planning approval, or reduction, exemption or refund of planning application fees, infrastructure charges or rates (WEF, 2019).

In different housing projects promoting mixed land use and social mix, homes are: a) distributed among income brackets of those households involved in development; b) provided according to a spatial strategy for mixing different income groups (e.g. “pepper-potting”); proportionately distributed at different income levels in multiple tenure models (rentals, ownership etc.); subsidized for low-income households through guarantees for a particular time duration (e.g. affordable housing preservation programs); and provided to lower-income households compared to those living in the immediate neighborhood (WEF, 2019).

Promoting mixed land use and social mix reduces travel time and encourages walking and social interactions. It also facilitates the creation of mixed mixed-income groups with a diversity of jobs and housing options, promote mixed-used land development, ensure involvement of marginalized groups, and improve connectivity between neighborhoods. This form of spatial planning enhances infrastructure development, environmental sustainability, economic and social development; makes cities resilient and prepared to overcome natural disasters.



Affordable Housing: Challenges facing the value-chain

Nevertheless, a study in Toronto showed that mixed-use development and aspirations for a better matching affordable housing supply, particularly for the low- to medium-income households might not always meet. Findings showed that housing in mixed-use zones in core areas was less affordable than in the rest of the city due to the improved access to amenities and services that attract certain occupational groups, usually the better-off. The project resulted in an increase in housing affordability for high-income knowledge workers while reducing it for those in lower income occupations such as social and public service, trade and manufacturing. Displaced populations would then move to neighborhoods that are increasingly far-removed from the city Centre, causing reduced access to public services, that may result in a widespread deterioration in quality of life, which is shown in the reduced economic, social and cultural opportunities for those who live in these areas. Based on this example, which is one of many worldwide, it is crucial that cities implement mixed-use zones in tandem with policies supporting inclusionary zoning and affordable housing trusts [16]. Inclusionary zoning is a requirement that new housing developments (and some renovation) to set-aside a certain proportion of units for affordable housing. Housing trust funds are a dedicated funding stream through revenue generated from a variety of sources including, (real estate transaction fees, title transfer fees, impact fees) to support the production and/or preservation of affordable housing.

Another example of the unintentional drawbacks of mixed-use development on the housing supply sector is that of San Francisco. The strong economic growth marked by the creation of hundreds of thousands of new jobs has increased demand for housing that surpassed the capacity of housing construction. Home prices and rents have increased drastically; in 2017, the median price of a home in California was over 2.5 times the median in the U.S., and the housing shortages are greater in California's coastal urban areas such as San Francisco. Several factors have contributed to the constraints on the construction of new housing: higher local tax revenues from commercial development versus residential incentivize cities to permit less residential density restrictions (e.g. single-family zoning); high land cost making housing prices high; higher construction costs due to high impact fees, and the constraint that the approval of developments are often cleared by the union labor. Today less than a third of Californians can afford a median priced home compared to more than half nationwide [20].

Land

The availability of land might be considered the most crucial and critical factor in the supply chain of the housing sector. The availability of land for residential use is tied to existing and planned land use planning restrictions that stipulate certain zones suitable for residential use, mix-use, and others. In other instances, lack of zoning and land planning due to conflicts of land ownership and titling and encroaching of invasive sectors such



Affordable Housing: Challenges facing the value-chain

as industry towards planned residential zones can also impact the availability of land.

Acquisition of land for affordable housing projects is technically and legally the step that activates lands towards utilization. To acquire land for any project, land ownership and securing of land titles, through land tenure and transferring of property rights, is legal must and has time and financial implications, differing from one country to another and in many instances, from one district to another. Three commonly used policy instruments are applied for land acquisition: land pooling, negotiated settlements and formal acquisition as presented in Table 1 below [16].

- **Land pooling or readjustment:** applied when scattered and unsuitable allocation of land impedes land development by the private sector which may entail the annexure of sporadic land plots and reconfiguration of older urban structures and a rise in the need for additional provision of infrastructure and services.
- **Negotiated settlements:** applied when the landowner wants to sell and is looking for financial compensation rather than retaining a stake in the land. Using this tool, the government usually prefers to provide an opportunity to negotiate through a market transaction rather than expropriation.
- **Formal acquisition:** applied when negotiated settlements or voluntary land transfer methods are no longer an option with landowners and

access to land is deemed imperative by the local authority. Formal acquisition might include brownfields and greenfields, expropriation of private land for government-funded housing projects, retaining land that has been encroached upon by informal settlements, businesses, or industries, among a few others.

Scarcity of (suitable) land for residential use

Rapid urbanization coupled with demographic changes are major contributors to the increased need for affordable housing in the Gulf Cooperation Council (GCC) region. More than 75 percent of the population of this region live in urban areas, prompting the high demand for housing [21]. Both nationals and expatriates suffer from the housing cost burden in this part of the world. The oil boom has increased youth's aspirations without easing access to essential needs such as housing. For low- and middle-income households, one of the main constraints is the scarcity of residential lands joined by stringent land use regulations that limit the exploitation ratio/built-up area of land plots, number of housing units per building or residential compound, among others, and the behavioral trends of land owners [21].

An important determinant that factors into the supply balance in relation to the affordable housing sector is the type and classification of land. The GCC region experiences the challenge of desert land with extreme climatic conditions; despite the vast spread of countries and cities in this region, particularly Saudi Arabia that occupies four-fifths of



Affordable Housing: Challenges facing the value-chain

the Arabian Peninsula, most of the land is desert. The prevailing harsh climatic conditions, that are exacerbated by climate change and environmental deterioration, depict vast lands that are suffering drought, desertification and degradation [24].

In Saudi Arabia, the housing market suffers from high land and housing prices and a shortage of small houses. Elevated land prices can be attributed to shortages in land suitable for construction and residential use caused by the locking of land by owners and the presence of vast areas of “white land” that are unutilized. Shortages in small houses can be due to the recent increase in demand on this type of housing, mainly by young individuals and families who are inclined towards relatively more affordable and easy to manage houses, as opposed to the social majority who are accustomed to live in large standalone houses and mansions. This scene differs in some Arab countries and cities that are located within different climatic zones. In Amman, for instance, nearly 73 percent of total zoned land in 2019 is intended and suitable for residential use [22].

Social Housing

Social housing is an important instrument to tackle the deficit in affordable housing when land availability is involved; however, it is insufficient by itself to solve the housing crisis. Indeed, in most OECD countries (75 percent of total), less than 10 percent of households live in social housing. Out of 24 OECD countries surveyed, only six countries have more than 10 percent of their households living in social housing with the highest level observed in the Netherlands (34 percent), Austria

(26 percent) and Denmark (23 percent). Since 2011, Germany only built 32 percent of social housing needed and 40 percent of singly houses more than needed in rural areas [24]. It is also found that 10 percent of housing in the USA is two times more expensive due to land regulation (land restriction of housing supply) [25].

Behavioral and attitudinal trends and socio-cultural norms

The high cost of land can be attributed to the idling of vast land property for several years, uninvested. That is due to most landowners observing increases in land value over time before deciding to mobilize their property and invest in it. In Bahrain, the housing crisis is particularly acute in the capital city of Manama where more than 55,000 residents are on the waiting-list for low-cost housing. In Kuwait, the waiting time for a government housing grant is several years. In Qatar as well as in the UAE, the massive influx of foreign labor has led to heavy burden on the property market. In Saudi Arabia, 40 percent of lands in major cities are urban idle land. The Ministry of Housing partnered with private landowners to develop housing on idle land or “white land” as per the Arabic term. The initiative aimed to exploit unused urban land by incentivizing landowners to develop housing projects to achieve housing targets while maintaining profitability for landowners. The Ministry also placed a fee of 2.5 percent of the value of land which generated revenues used on housing and infrastructure projects, increasing the Kingdom’s housing stock [25].



Affordable Housing: Challenges facing the value-chain

Table 1.

Comparative analysis of the three commonly used policy instruments for land acquisition and securing of title

Characteristics	Land pooling/land readjustment	Negotiated settlements	Formal acquisition
Applicability 	When scattered and unsuitable allocation hinders private-sector land development; older urban structures have to be reorganized; there is a recognized need for additional provision of infrastructure and services.	When the seller wants to sell and is looking for financial compensation rather than retaining a stake in the land; when the government wants to provide an opportunity to negotiate through a market transaction rather than expropriation.	When voluntary methods and negotiated settlements are no longer an option with landowners and access to land is deemed imperative by the local authority.
Mechanism of acquisition 	Requires landowners to voluntarily sign ownership rights over to a single agency or government body, which in turn develops the land by building basic infrastructure such as roads, sewage lines, electricity and water connections.	Trading parties have to comply with a framework that details aspects of assessment, negotiation, settlement and implementation. This could also include conducting studies on land for appraisal, loss valuation and assessing impact from events such as flooding.	Entails compelling owners to sell land or involuntary eviction, thereby displacing residents through the enforcement of statutory powers.
Medium of exchange 	The agency returns a smaller portion of the developed land to the original owner, equivalent to the market value of the owner's original land before the added infrastructure investment increased its value.	The agency buying land works towards reaching an agreement: land that has to be transferred, financial compensation and the possibility of continued use of land (e.g. the use of roads) by the selling party post-transfer.	The agency sometimes compensates owners for the value of their plots. Where compensation is low or obtaining consent is difficult, land is acquired by force.
Benefits 	Less cumbersome, as the process is voluntary. Ensures planned development of the land. Provides an opportunity to recover costs incurred in building infrastructure. If administered properly, could increase equity in land distribution.	Affected parties are not forced to accept compensation at the book rate defined by the governing body and can claim higher compensation as negotiated.	Provides immediate compensation for the land at market value instead of the considerable wait times (decades or more in some cases) of recovering land through negotiation.
Limitations 	<p>The intent to pool land, if leaked, can result in cartels being created. Governments would have to regulate buyers to prevent this.</p> <p>Households may have low operating costs, leaving them with little incentive to downsize.</p> <p>Developing infrastructure does not guarantee the development of land. Speculators may choose to keep hold of land rather than develop low-income housing.</p>	Process requires skilled negotiators and valuation surveyors, skills that may be in shortage at the government level, as well as collaboration from current owners.	Costly and unpopular. Requires a social-impact assessment to be carried out, along with a resettlement plan for residents. The high cost will likely be passed on by developers to buyers.

Source: World Economic Forum, 2019



Affordable Housing: Challenges facing the value-chain

Case Study: The Metropolitan Growth plan for Amman along high population growth and high demand for housing [22, 34, 35]

The Greater Amman Municipality has been experiencing a steady increase in its urban population exacerbated by successive movements of refugees, displaced population and migrants from surrounding countries. This rapid population growth results in a wide range of urban challenges such as informal urban expansions, shortage of housing and other basic services. With a population of Amman reached more than 4 million inhabitants in 2015 according to the 2015 census, and projected to 6.5 million by 2025 (GAM, 2008). According to the UN-Habitat diagnosis report for urban development in Jordan, many factors have shaped demographic growth in its cities, including the crises in neighboring countries. Population count nearly doubled between 2004 and 2015 mainly due to influx of Iraqi and Syrian refugees in the periods between 2003-2005 and 2011-2014 respectively. The large influx of refugees brought out urban spatial inequalities in growth patterns and revenue distribution especially in Amman as more than 40 percent of the country's population resides in the capital.

Housing sector in Amman, in general, suffers from many challenges, especially due to the exceptional growth in population resulting, for more than half a century, from the intensified influx of refugees, displaced population and migrants from several countries, particularly of the Middle East. Settlement patterns in Amman follow strict socio-economic lines, with wealthy neighborhoods concentrated in the western areas of the city and poor neighborhoods in the east. The role of Amman municipality in the housing sector focuses mainly on the urban development, regulatory framework and land zoning within Amman district with the absence of a comprehensive approach or strategy to respond to the housing needs. There is a need to integrate increased demand in housing in the Metropolitan Growth Plan.

The Metropolitan Growth Plan for Amman (GAM, 2008) is a guide to more detail for the anticipated Amman population growth from approximately 2,200,000 persons in 2006 to an anticipated 6,500,000 persons in 2025 with a high demand for housing land. The MGP target illustrates the location of existing settlement areas accommodating residential or commercial uses within the Metropolitan Area, as well as the preferred locations for future settlements (residential and employment expansion). It also illustrates the projected locations for the future development of

(continued)



Affordable Housing: Challenges facing the value-chain

Case Study: The Metropolitan Growth plan for Amman along high population growth and high demand for housing [22, 34, 35]

infrastructure, mixed-use development expansion, protected agricultural areas and natural heritage, and cultural heritage (GAM, 2008). The MGP seeks to establish a planning framework that focuses on the following: a) Growth Scenarios: established expansion, infill, and intensification targets; b) Established an Urban Envelope; and c) Established Growth and No-Growth Areas.

The MGP chose the smart growth scenario which limits development in agricultural areas and focuses on expansion, densification and intensification approach since almost 40 percent of zoned lands was vacant at that time 2006 (GAM, 2008). The concept of an urban envelope is a key part of GAM's strategy in combating sprawl. It is an area within which Amman's urban development is to be largely confined, and is spatially defined by the new ADC Ring Road to the east and south, but through the implementation process GAM faced many difficulties that slowed the development process related to land ownership because the densification and intensification strategy depends on providing wider lot area than the existing species in the zoned areas. Many detailed plans were done to achieve the MGP goals, unfortunately, most of them faced the problem of plot consolidation due to malty ownership in one plot, and in order to achieve the urban development goals GAM has to expropriate more lands but that is not viable due to lack of budget.

Source: Eng. Reham Mohammad Jaber Betaineh, and Eng. Rola Qussay Mohammad Khashman, Greater Amman Municipality, 2020.

Funding and finance infrastructure

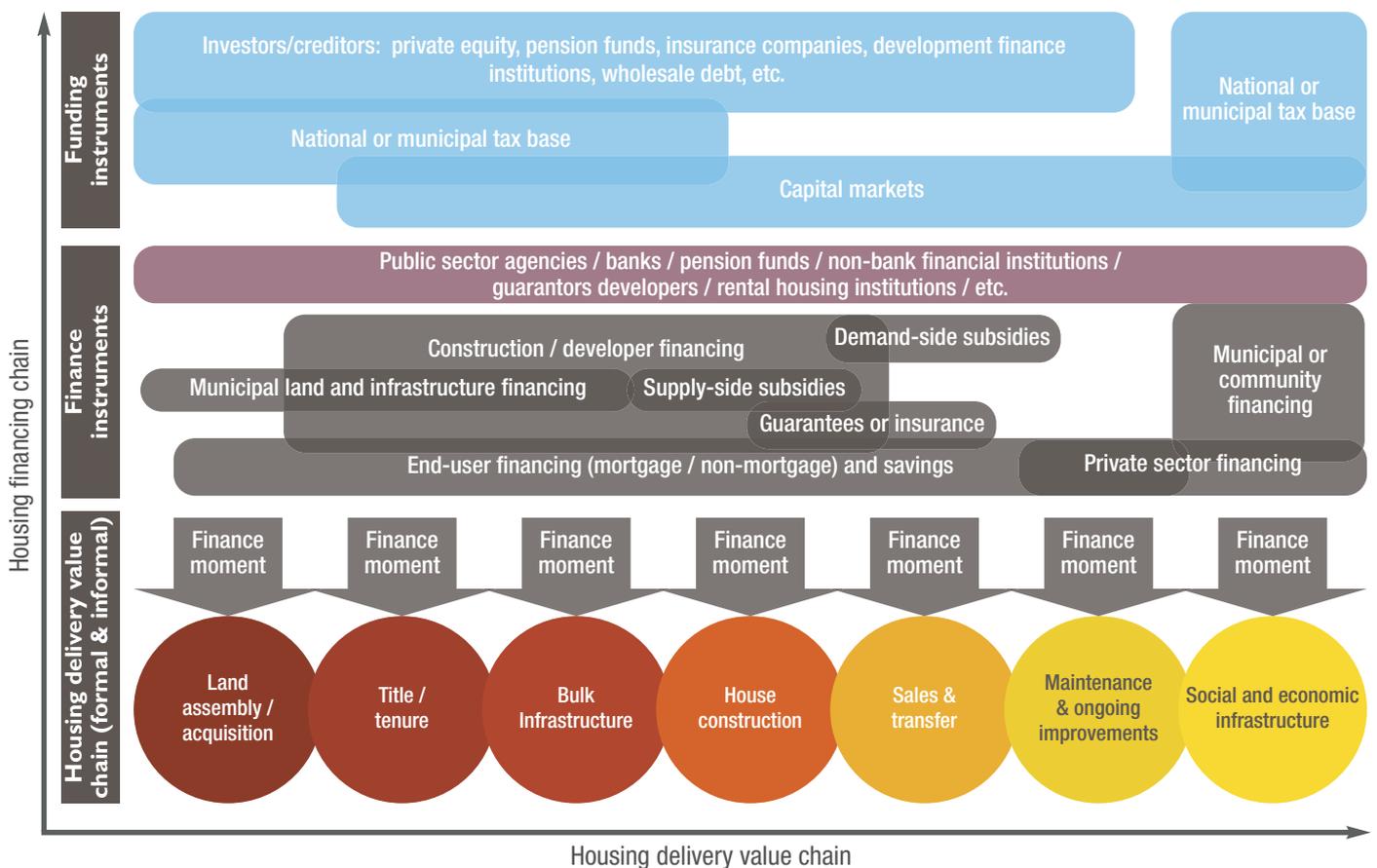
Securing the coverage of costs for planning, design, and construction through a sustainable funding and finance infrastructure is the essential backbone for the realization and continuity of the affordable housing sector. Finance instruments reflect how the different public-sector agencies,

banks, pension funds, non-banking financial institutions (NBFCs), guarantors, developers, rental housing institutions, among others, use funding instruments at each level of the housing supply value chain. Figure 3 below illustrates the synergies between the housing delivery and financing value chains [26].



Affordable Housing: Challenges facing the value-chain

Figure 3.
Housing delivery and financing value chains synergies



*Note: Different market segments will engage in different housing processes involving different value chains and different finance moments – this diagram is purely illustrative.

Source: Centre for Affordable Housing in Africa, 2018

As illustrated with Figure 3, the housing delivery and financing value chains operate at different levels: a) land acquisition, land tenure, infrastructure; b) housing construction; c) sales and transfer; and d) maintenance/improvements,

social and economic infrastructure. At every level, financing requirements and funding sources must be adequately addressed to ensure affordability of housing.



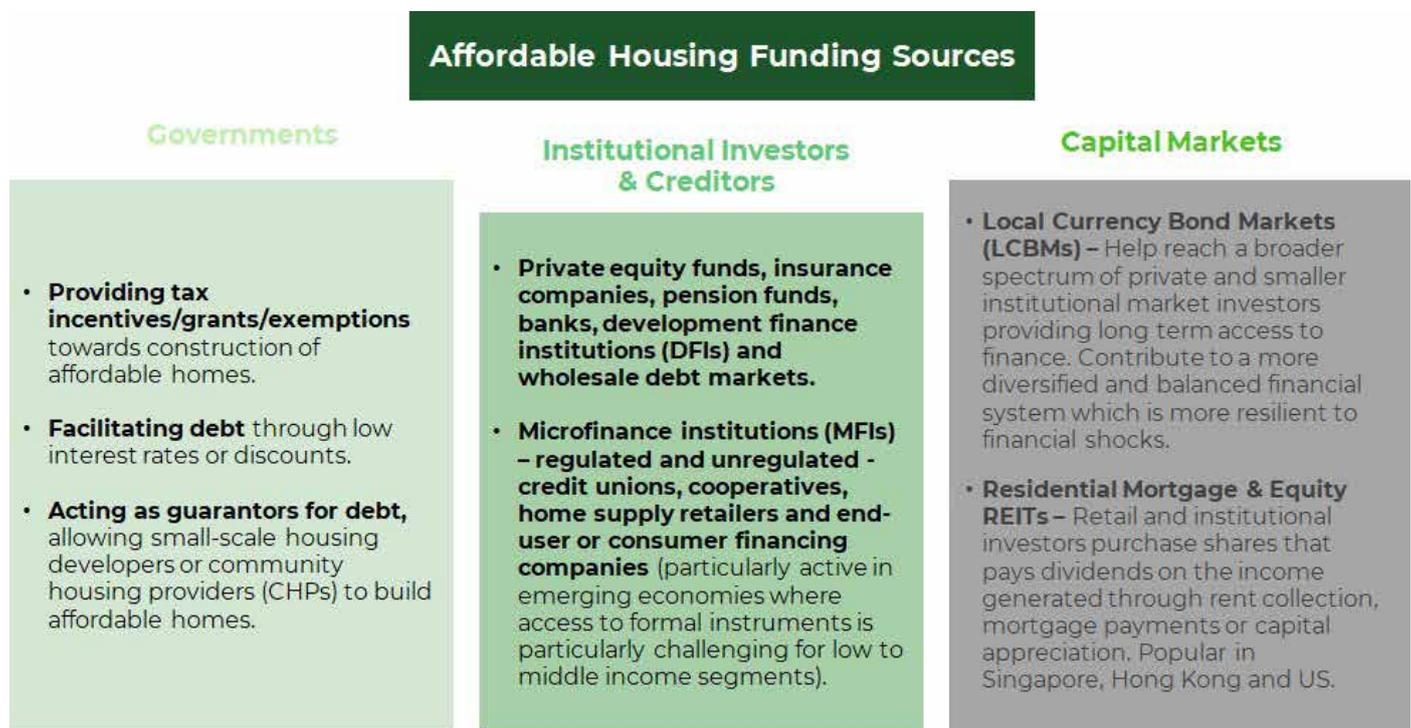
Affordable Housing: Challenges facing the value-chain

According to the McKinsey Global Institute study in 2014, “A Blueprint for Addressing the Global Affordable Housing Challenge”, investments of about \$650 billion per year, representing 1 percent of the global GDP, are needed to fill the housing affordability gap. In cities where housing unaffordability is the highest, investments to fill the

gap may exceed 10 percent of their city product [18]. Figure 4 below presents the three main challenges of funding sources for affordable housing in cities as interpreted by the World Economic Forum-PwC Insight Report: “Making Affordable Housing a Reality in Cities”.

Figure 4.

Global affordable housing funding sources in cities



Source: adapted from WEF, 2019



Affordable Housing: Challenges facing the value-chain

Financing challenges faced by cities towards realizing affordable housing for all reside in three key financing mechanisms: city financing, private sector financing, and community financing [16].

Mechanism 1: city financing

Instrument: using city revenue for developing urban services and infrastructure

Application: planned regulations that favor investment and capture by all stakeholders lead to increase in land value.

Developer instruments:

- Developer extractions (in-kind contributions) to finance part (or all) of infrastructure,
- Land access charges or purchase of development rights, or
- Land re-adjustment

Tax based instruments:

- Property tax
- Betterment tax
- Tax Increment Financing
- Development Impact tax (not based on cost of infrastructure)

Mechanism 2: Private sector Financing

Instrument: Funding from developers and private sectors on real estate investments

Application:

- Across the value chain to recover costs for land, infrastructure, home construction costs as well as operation & maintenance costs (in case of rental housing)

- Used for funding large scale projects, making it commercially more attractive (economies of scale) for developers and encouraging competitiveness.
- For small developers, project financing typically occurs through informal lenders or through partnership or revenue sharing agreements with landowners.
- Helps boost economic activity and increased investment in social and economic infrastructure.

Mechanism 3: Community Financing

Instrument: Pooling funds at community level into housing-related investments

Application: Operates alongside additional government mechanisms to further lower costs via per unit subsidies. Models used include:

- Establishment of community land trusts and non-profit REITs as vehicles.
- Providing debt with the local government as a guarantor for loans.
- Setting up a city level community fund that issues bonds and in turn receives government contributions for supporting infrastructure.

Adequate financing structures and funding are critical for addressing the persisting challenge of affordable housing in cities. Below are a few examples from countries and cities whose housing sector is faced with hurdles from the funding and finance infrastructures in place.



Affordable Housing: Challenges facing the value-chain

Case study: Securing affordable housing with the involvement of private investors in Berlin [27]

Berlin's real estate market has become increasingly tight over the last ten years. The growth in Berlin is considerable and will continue in the foreseeable future. Due to growing demand – the population grew by 30.000 to 50.000 inhabitants p.a. in the last years – the property prices and rents rose quickly, especially for new contracts. Quoted rents rose by 55 percent from 2011 until 2018. This price rally just slowed down in 2019 after years of implementing many measures to expand the housing supply (including a building program of the municipal housing companies). Rising prices and rents are threatening the typical Berlin mix of social groups throughout the city, especially from inner city neighborhoods, where households with lower and medium incomes can barely afford the rising costs for housing anymore. In order to stop these processes of gentrification and segregation, affordable housing should be provided in all neighborhoods.

Contributions from private investors to also provide affordable housing in all neighborhoods are necessary, especially in major residential area developments. Berlin is pursuing this in two ways: Firstly, with financial agreements on the development of land and secondly, with subsidies open to both public and private investors. The subsidization of new housing construction in Berlin depends on the market environment. Due to low population growth the social housing subsidy programs were phased out in the early 2000s. Since 2014, the program continued and has been increasingly expanded. The approach is to reduce capital costs for new housing construction for all types of investors – private, cooperatives and municipal companies - in return for rent-controls and the allocation to specific households through the municipality for a period of currently 30 years. However, the possibilities to design the subsidy programs are limited by European Union law. The regulation on the Services of General Economic Interest (SGEI) limits the possible returns and defines narrow target groups. In Berlin, the narrow conditions on the returns limit the incentive for private investors.

The "Cooperative Land Development" is an additional planning tool. The designation of expanded building rights (zoning plans) is carried out upon an agreement between the city and the investor on a minimum share of affordable housing (at least 30 percent of rent-controlled apartments). The German Building Code ('Baugesetzbuch') allows municipalities to conclude

(continued)



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“urban development contracts” with landowners for the development of areas (§ 11 German Building Code). In 2014, the Berlin model of cooperative land development was introduced. Under the Berlin model, investors bear the larger share of costs for social and technical infrastructure (e.g. kindergartens, schools, utilities) in exchange for additional residential building rights. The extent of the investor's share of the costs is determined by the size of the development and the increase in land value as a result of the new building rights. This is set out transparently in a guideline. In order to include a share of affordable housing in every new development, a minimum of currently 30 percent of the newly built living space is required to be rent-controlled, either with or without taking part in the social housing subsidy program. The minimum share of low-cost housing units makes sure that new or larger socially integrated neighborhoods are created throughout the city. This applies to the conversion of brownfields in or near the city center, which are the focus of residential development in Berlin.

Source: Thomas Thrun, Senate Department for Urban Development and Housing Berlin, 2020.

In Amman, home financing by individuals and households is provided by three main sources: individual sources such as savings, remittance, and selling of property (e.g. land); loans from banks or other financial institutions; and informal and irregular sources such as family support [22].

Understanding the Demand-side chain of Affordable Housing

Compounded by rapid population growth and persistent levels of poverty, cities are struggling to meet housing needs. In developing countries, slums, which currently accommodate close to

1 billion people, are the physical manifestation of urban poverty and inequality. UN-Habitat estimates that an additional 3 billion people, about 40 percent of the world's population, will need access to adequate housing in the next ten years. This translates into a demand for 96,000 new affordable and accessible housing units every day. Additionally, an estimated 100 million people worldwide are homeless and one in four people live in harmful conditions, which affect their health, safety and prosperity.

A house that is affordable to end-users is a house whose costs of purchase, whether by



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ownership / purchase or rent, and of operating and maintaining are not overwhelmingly shouldered by the household income leaving limited room for financing the other daily life expenses. Affordability also extends to the connectivity of the housing unit to the available public services that reflects on an improved quality of life and a balanced distribution of talent and job opportunities. To better understand the demand-side of the affordable housing value chain, we need to recognize the socio-economic standing of households targeted by certain affordable housing projects, which reflects on their purchasing capacity and thus, credit eligibility as per applied regulations. It is also crucial to realize the needs and behavioral and attitudinal preferences of targeted populations towards housing purchase models (own or rent), and credit financing infrastructure that are provided by regulations [16].

The main challenges in the demand-side lie in the enablement of city dwellers to rent or purchase a home and to access the required funds or credit for it. Enabling demand involves offering subsidies, grants or exemptions for eligible end-users; evaluating purchase models, rental and ownership markets, for long-term affordability and unlocking funds to provide those in need with access to credit.

In the KSA, there is a gap between supply and demand with a cumulative demand reaching 1.45 million across Saudi Arabia [25]. Ten (10) of the Saudi cities account for the most pressing demands for housing, accounting for 60 percent of the target for 2020. The remaining 40 percent target accounts for the supply gap in the

remainder of the country. According to the Ministry of Labor and Social Affairs, 300,000 new housing units are needed for socially deprived sectors. What are the challenges the government face to enable the demand-side of affordable housing? The section below explores some of these challenges starting by eligibility to attain subsidies, grants or exemptions, evaluation of the purchase model ending with challenges in the financing schemes.

Below are key components that make up the demand-side of affordable housing and some of the main challenges faced by cities in their implementation, worldwide.

End-user eligibility to home ownership (purchase or rent)

Globally, initiatives that target the eligibility of home seekers apply two approaches: a targeted approach or a universal approach. Targeted approaches assess the eligibility of end-users to housing credit primarily on their household income, among other criteria such as the household size, citizenship status and asset ownership record. Such an approach is designed to target vulnerable populations and those with low or moderate income are targeted for provision of affordable housing. Universal approaches, on the other hand, are generally applied in countries with extremely low levels of poverty that do not demand a targeted approach. In other words, the entire population would be considered eligible for housing. Below are examples illustrating both approaches and the challenges of their implementation.



Affordable Housing: Challenges facing the value-chain

Targeted Eligibility Initiatives

In countries that apply a “targeted approach” to provide affordable housing initiatives, targeting mainly the vulnerable and marginalized groups, and households of low- to medium-income that are likely to be under-privileged to a standard eligibility criteria for home ownership, are faced with several challenges related to ensuring the intended beneficiaries are receiving the benefits of these initiatives. These target groups' eligibility struggle can be attributed to their relatively limited personal funds or assets that can be placed as collateral when applying for housing financing loans. Also, individuals or households that are not in a legal standing with the prevailing laws and regulations (i.e. illegal immigrants, unregistered refugees, etc.) are disadvantaged in terms of their entitlement to financing assistance and access to credit.

Nevertheless, in the absence of monitoring schemes, the targeted group may not necessarily receive affordable and adequate housing. In Austin, Texas, the Rental Housing Development Assistance (RHDA) Program was designed to expand the community's supply of affordable rental housing for low-income households and to provide permanent housing for people experiencing homelessness or low-income households with special needs. In a 2019 survey [28], the RHDA program seems to be serving the poorest households in the city (ones with average median income of 25 percent), although these

units were designed to be serving residents with average median income of less than or equal to 50 percent instead. While in the case of Austin the program ended up serving those that are more in need, lack of monitoring mechanisms can lead to subsidizing housing facilities for brackets of society that are not necessarily the most in need. Well-tailored targeted approaches should be designed to address vulnerable and marginalized groups that are predisposed to under-privileges caused by data inaccessibility, eligibility for credit access, and discriminatory laws and regulations.

Universal Eligibility Initiatives

Other countries, such as Singapore, Sweden, Denmark, and the Netherlands, follow a universal approach rather than a targeted one for supplying affordable houses. Throughout the European Union, for example, the Netherlands has the highest share of social housing which provides nearly 32 percent of its total housing supply and 75 percent of its rental market [16]. Other countries may even consider specific social and demographic factors to prioritize brackets and match with the supplies. For instance, the government in Singapore essentially caters for married couples. With inadequate institutional and regulatory frameworks and poor governance, it would be challenging for governments applying this universal approach to match the needs of different groups of the society with their supply and requirements of housing.



Affordable Housing: Challenges facing the value-chain

End-user behavior and attitude towards housing purchase models

Differences arise in the perceptions and preferences between homeownership and home renting, which are influenced by many factors that primarily include household income, connectivity to workplace and public services, and commercial and entertainment centers. Some of the key reasons end-users may perceive homeownership “better” than home rental is the thought that owning a safe and affordable place can be expected to appreciate and be used as collateral for debt financing. Other “privileges” that are perceived to couple affordable homeownership is a secure tenure, namely for the younger age groups, for as long as needed, guarantees of privacy for personal space, permission to carry out home improvements, and controls on rent increases over time.

Purchase and rental complexes

Both homeownership and rental housing come with several advantages and certain challenges. While homeownership provides more rights and privileges, owning a home is accompanied by restrictions in mobility and limited options for business and economic development. Rental housing may provide greater flexibility to move around as the need may arise for proximity to workplaces, education facilities, social or cultural

institutions etc. Although rental housing comes with less privileges and rights, it also requires lower capital requirements and costs related to operations and maintenance. In different cities, homeownership is not even an option due to lack of down payments or access to mortgages, this only nurtures a stronger case for rental markets. For instance, buyers in the US remained constrained by strict conditions on mortgage a decade after the financial crisis. To ensure affordability, the housing market may offer a combination of tenures from rental, homeownership, and a mix of the two.

Social and cultural considerations pose another critical challenge to the supply of affordable housing. In some cultures, it is socially “appraised” to own a house rather than rent one, where it is considered an indication of wealth and stability. In 2015, the housing statistics of the capital city of Amman showed that 62.6 percent of households were owned while 30 percent were rented [22]. Supporting these inclinations are the ownership of land or houses that is transferred through inheritance, individual sources from savings, remittance, and selling of property, formal sources through loans from banks and other financial institutions, and informal sources through support from family and relatives [22]. Another example is from the GCC region where most native families are accustomed to dwell in large houses



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and mansions, designed to accommodate the extended family (families of their own children), property staff, vast landscaped areas or farms, and the property amenities. The stems back to the socio-cultural fabric of the region where family tribes would dwell in agglomerations over a large piece of land. Additionally, stand-alone homes provide the privacy and inclusion of the family as opposed to living in small apartments in buildings shared by foreign tenants.

Credit financing for ownership (purchase or rent)

Governments and financial institutions have developed two models of credit financing for home ownership for both the purchase and rental of housing. For low- to median-income households and first-time buyers in many cities, home ownership has become a farfetched ambition. Home purchases normally require a down payment or deposit, that can vary considerably that can reach up to 40 percent of the house value, as is the case in the Ethiopian capital city of Addis Ababa, and a mortgage that funds the remainder of the cost while the property is occupied by the owner. Affordable homeownership programs typically aid with both the down payment and mortgage. This eased access to credit, however; can increase the risk of a property price inflation bubble, like what happened when Mongolia applied for a homeownership program that subsidized mortgages in 2012. Several models and platforms were developed by countries to assist prospective homeowners. These include:

- **Fintech lenders** who have captured a growing share of the lending market and offer faster loan

processing compared to traditional financial lenders and a relatively lower default rate. For instance, the Lending Home fintech lender finances today more than 80\$ of loans without any human intervention [16].

- **Government-supported and not-for-profit assistance programs** that provide grants, subsidies, or interest-free or deferred-interest loans recovered at resale for home seekers. Such programs have helped governments in restructuring the debts of those who fell in default to prevent them from losing their homes or have provided transitional support and resell the property as affordable housing, using subsidy recapture and retention mechanisms, which either claim back subsidies when a supported home is resold at a higher price or tie the subsidies to the resale value [16].
 - **Subsidy recapture business model:** where the funder claims back most of the subsidies (and associated appreciation) when supported homes are resold in the market. These funds captured are then invested in new homes. Eligibility to such a program is usually determined using three criteria: the loan amount, income of the buyer and household size.
 - **Subsidy retention business model:** where the funding agency would lock all subsidies (and appreciation) into the resale value, inherently lowering the price for the next qualified buyer.



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- **Shared ownership models** are those where a housing association or community provider owns part of the property and the homebuyer pays rent on it, which is usually relatively low [12]. This model allows the buyer to increase their stake in the property by buying it out until the buyer owns the property outright. This could be in cash or a separate shared ownership mortgage which covers this cost. The flexibility to increase equity stake in one's property at will when it is affordable to the tenant is what makes homebuyers choose this model.
- **Shared-equity ownership models** involves giving up part of the future property appreciation (or depreciation) in exchange for support from the government/private-sector. The buyer pays a small proportion of the down payment topped up by a low or no cost "equity" loan from the government/private program, along with a mortgage paying for the remainder of the property. Loan is repaid in full at the end of the term proportionate to the value (appreciated or depreciated) of the property at sale.

Challenges facing credit financing initiatives

According to the Urban Futures Report 2019 of Knight Frank, the affordable housing gap – as measured by the difference between house prices and income – reached an estimated \$740 billion globally in 2018. In 2014, another study from McKinsey estimated that to fill the housing affordability gap, investments of about

\$650 billion per year, representing 1 percent of the global GDP, are needed [18]. In cities where housing unaffordability is the highest, investments to fill the gap may exceed 10 percent of their city product. According to the MGI estimates, the replacement of substandard housing and the building of additional units by 2025 would require an investment of \$9 trillion to \$11 trillion for construction; with land, the total cost could be \$16 trillion. Of this, \$1 trillion to \$3 trillion may have to be financed from public resources.

In many parts of the world, especially in developed countries, the sources of housing finance are supplied from government, individual savings, life insurance reserves, commercial banks, savings and loans institutions. When the main sources of housing finance are the government, such as in Nigeria, the commercial banks and insurance companies don't usually play a significant role in housing provision efforts. In developing countries, it is particularly challenging to receive loans from commercial banks for long-term lending which is the hallmark of housing construction and insurance companies also can have conservative lending policies as well.

In order to build and supply more houses, governments may be able to depend less on public funds and create new sources for financing affordable housing. There is a need for total overhauling of the country's mortgage system with an intent to render that relevant to the country's housing industry.



Affordable Housing: Challenges facing the value-chain

Case study: Land-based Financing Initiatives [17, 29]

Municipalities are exploring various land-based financing initiatives to support their capital requirements for infrastructure investment. The alignment of political forces between national and local government is a major determinant of whether national legal and policy frameworks support city-level land-based financing. Getting progress in the implementation of land-based financing is not just a technical or administrative issue. Regulatory reform alone, for example, will not achieve sustainable land-based financing unless the reforms are aligned with political and economic conditions.

Examples of land-based financing can be found in Ethiopia, Nigeria, Kenya, Côte d'Ivoire, South Africa and elsewhere, where the municipality uses its land asset and leverages the developer's interest in the higher-value housing market, to impose development charges that finance their infrastructure investment in lower-value areas. Kenya legislated land-based financing and developers are charged an infrastructure levy of 0.05 percent of the development cost. Nonetheless, this additional financial resource is not used to finance public investments (e.g. infrastructures and services). According to Nigerian regulatory system, the owner of property in new developments is obliged to pay a land-use charge, which is a "one-off property-based tax levied by Lagos State Government". This is assessed on the capital value of the property. Nonetheless, the Nigerian case study found no evidence that the revenue raised was used to finance public investment projects. The Outoga Onerosa do Direito de Construir (OODC) used in São Paulo (Brazil) is a regulatory tool used to administer building rights within the urban area. The OODC requires those who receive building rights from the government to pay a levy, which is used for public investment. This is adopted where the city government has issued a "certificate of additional development potential" (CEPAC) for a part of the city, a certificate it is entitled to issue in terms of national legislation. This effectively allows city governments to sell development rights by auction, which has raised considerable revenues in many Brazilian cities, especially in the capital city. Land sale is the main mechanism used by Chinese cities, like Shanghai to raise funds for infrastructure development. This was done through prepayments made by future users of the land, as well as the sale of already developed land. China has also successfully used land-based financing methods through its urban highway construction policies, supported by the fact that the respective "municipal governments own all urban land in China". "Community infrastructure levy" is the instrument launched by several local authorities in the UK. This resource is channeled to finance local development and infrastructure. The rates are set in strong consultation with local communities and developers. Therefore, the rate is variable and impacted by the consultations with stakeholders.

Source: UN-Habitat, 2016; Graham N., 2016



Affordable Housing: Challenges facing the value-chain

Housing affordability emerging challenges in the time of COVID-19 pandemic

COVID-19 has tested the capabilities of the cities in unprecedented ways. Its impact has been felt across the globe in a wide range of cities and very different environments. The pandemic has already affected cities in every region, making this a truly global situation where every city must take steps to prepare and respond.

The challenge exacerbated by the pandemic

Housing has become more prominent in the fight against the COVID-19: public spaces, restaurants, school, workplaces, are all closed to the public and globalization grounded where international flights and, in many cases, domestic flights as well inter-urban public transport suspended or limited. Stay Home policies are globally the norms. However, people who do not have houses, the homeless, are sheltered in public places. Some people are trapped in unsafe homes and exposed to multiple diseases associated with poor housing conditions: lack of safe water sources, adequate sanitation facilities, enough living area (overcrowded), lack of ventilation, etc. Slum dwellers live in substandard housing and overcrowded conditions. According to the World Bank blog post “Cities, crowding, and the coronavirus: Predicting contagion risk hotspots” earlier this year, slum residents share taps and public toilets, with as many as 200 people per communal facility. Beyond the health risks, the coronavirus pandemic has seriously limited social interactions, removing one of the vibrant

characteristics of cities. With no vaccine available, prevention through containment and social distancing on one hand, and handwashing on another hand are the only viable protection against the virus.

As cities all over the world suspend daily activities and restrict movement, staying at home is not always possible for those living in inadequate conditions. The urban poor living in low-cost, high-density city housing, as well as the one billion people living in slums or informal settlements around the world must contend with constrained living spaces, poor ventilation, and restricted access to basic needs. Regular hand washing and social distancing measures currently in place to prevent the transmission of the infectious disease are difficult to adhere to in such conditions, particularly where water for basic needs is in short supply.

It becomes clear that the pandemic will hit the world’s most vulnerable people the hardest - especially those living in informal settlements and in inadequate housing conditions, those who are homeless, rural populations, women, children, older persons, people with disabilities, migrants, and refugees.

Finally, the economic impact of COVID-19 is creating income instability, particularly for low-income and informal workers as well as for contractors who are facing job loss and economic hardship which could result in mortgage and rental arrears and forced evictions.



Affordable Housing: Challenges facing the value-chain

The COVID-19 housing conditions, therefore, constitute a wake-up call for city governments, local authorities, people, communities and other stakeholders to put decent houses for all in the center of global, national and local agendas. Governments across the world are putting in place mechanisms to protect those who are most vulnerable to the current emergency. Governors and mayors play a major role in urban areas stopping the pandemic spreading while keeping their cities functioning to support the most vulnerable in accessing adequate shelter and health care services. The emergency response should be decentralized to urban areas and tailored to the urban context by working closely with local governments. The success will depend on the level of preparedness.

The Right to an Adequate Standard of Living which includes the Right to Adequate Housing is central to efforts to combat COVID-19. The right to adequate housing will have to be central in Government's policies in both the short and long-term management of COVID-19, forming the bedrock of a stable recovery. As the immediate impact of COVID-19 dissipates over the next few months, the governments must prepare for the longer-term economic and social impacts. As the situation unfolds, the vulnerable portion of the population is expected to grow, making it crucial to have in place adequate measures.

In Canada, the US, Malaysia and India, the vulnerable and low-income households are targeted for provision of affordable housing. Governments from developed countries must make great efforts to provide financial assistance

to alleviate the economic burden caused by COVID-19, but immigrants and homeless people are not benefitting from this aid. Special target-oriented assistance is urgently needed to protect the rights of people living in informal settlements and partnerships with community-based organizations and international organizations should be sought after.

In tackling the devastating social and economic dimensions of the COVID-19 crisis, Governments should focus on the most vulnerable communities designing policies that support, among other things, access to adequate housing for all by addressing the pre-existing inequalities and structural issues of the housing sector. The recovery must lead to a different society, building more inclusive, sustainable, and resilient housing.

The most affected countries are also providing economic relief plans to households and individuals which include the reduction, suspension, or deferral of mortgage payments during the period of lockdown. With breadwinners facing reduced hours or losing work entirely due to the coronavirus pandemic, keeping up with bills – especially mortgage or rent – may feel like a losing battle. Italy, Spain, France, the United Kingdom and the United States have announced "mortgage holidays" to curb potential defaults among those who are not only losing work but are sick or self-isolating.

This is also the case in many Asian countries. Singapore's central bank for example, has offered loan relief for residential property loans until the 31st of December 2020. In Malaysia too, the



Affordable Housing: Challenges facing the value-chain

central bank has announced a moratorium on the repayment of loans for a period of 6 months from the 1st of April 2020 [30]. The Malaysian federal and state governments have also announced various economic stimulus packages covering measures to ease housing and other related financial burdens for communities at risk.

There are also several international examples that demonstrate the collaboration with the private sector in tackling housing issues during this outbreak period. For example, in Singapore, private firms, with support from the government, are accommodating Malaysian employees who reside in Malaysia and have been commuting to Singapore daily. These highlight that, with assistance from the government, the private sector can be mobilized to improve housing security during this COVID-19 crisis.

This crisis has now become a unique global momentum to demonstrate that it is possible to provide housing and land tenure security, increasing the preparedness of urban areas in responding to extreme events as well as the overall sustainability of the housing sector. This momentum must be leveraged for the aftermath of this crisis. It presents the opportunity in the “Decade of Action” to reach a new milestone in reducing inequalities and poverty levels and move towards access to adequate housing for all.

Alleviating the impact

In advanced economies, like Canada and in the UK, the government is taking measures to find places to house homeless people. Communal

night-shelters and any street encampments are at high risk for spreading of COVID-19 and secure accommodation is needed to ensure proper social distancing and to reduce overcrowding in shelters. In Wales, the government has pledged £10 million to councils to help rough sleepers by block booking B&B or hotel rooms, empty student accommodation and other premises.

In the United States, multiple cities have already suspended eviction proceedings during the COVID-19 crisis. The United States Department of Housing and Urban Development has suspended “all foreclosures and evictions” during the outbreak, acknowledging that residents might have lost income and cannot afford to pay rent. Baltimore, Boston, Denver, Kansas, Miami, New York state, Portland, Sacramento, San Francisco, San Jose and Seattle, are some of the cities that have already adopted this measure among others.

Developing countries are working to increase the provision of water and sanitation in high-density public areas, informal settlements and rural areas in response to the COVID-19 outbreak. Countries such as South Africa and Kenya are increasing access to water for residents living in informal settlements, by providing water tanks, standpipes, and sanitizers in public spaces, including taxi ranks, trains and bus stations, and other areas where people congregate. Building handwashing stations in informal settlements is aimed at safeguarding the hygiene and health of the millions of residents.



Affordable Housing: Challenges facing the value-chain

Learning from past crises and accelerating action

The lessons from the financial crisis can be particularly useful in the aftermath of this pandemic. A steady supply of sustainable and inclusive affordable lending markets will be essential for the overall stability and health of economies globally. Beyond lending, G20 leaders will also have to focus towards meeting demand for new home units that are of the right size and redevelop units where natural obsolescence have rendered those units unusable. Builders are increasingly focusing on larger homes that are more profitable rather than ensure a robust supply for smaller homes that are relatively affordable to middle and low income households. Coupled with the challenges in securing land and construction permits (especially higher density construction) reforms will be required at all levels (national and local level) of government.

There is also a looming threat for the working population of increased unemployment / negative career prospects / pay cuts due to poor business conditions, reducing their chance to own a house in the near future. Lifestyle changes are also expected with more households renting over buying given that it can help them achieve higher liquidity for fulfilling other requirements. Over a longer period, this could trigger reduction in demand for homeownership taking the strain off supply and lead to a drop in house prices, making them relatively more affordable for all. Remote working or tele-working may ask people to re-evaluate what they want from their living environment influencing their decision to buy or rent within the city. As a result, people may choose to reside in more affordable areas and bring down prices in the less affordable areas within cities, re-balancing the housing market.



Enabling Environment:
Setting the right
ecosystem across
the value-chain



Enabling Environment: Setting the right ecosystem across the value chain

Evaluation of current supply side and demand side challenges allows us to break down the complex challenge of housing affordability and identify opportunities at each stage of the value chain. On the supply side, the regulatory landscape in land and real estate markets, design and construction sector, urban planning measures and more importantly the availability of finance to improve housing supply are particularly relevant. On the demand side, strategies that focus on determining eligibility for social housing vis-a-vis creating access to the market rate housing and access to credit are integral to the ability of an individual to afford a housing unit.

Supply-side Chain Opportunities

Starting from the overarching policies and regulations set by national and regional governments' to central and local governments who implement the enforcement and reinforcement of applicable laws and regulations through the planning and execution of urban development initiatives and projects, several players can assume key roles in addressing the affordable housing deficit in cities.

Urban planning and policies and the construction sector

With thoughtful urban planning and zoning, cities must strive to balance their land-use objectives to achieve a healthy, economically and socially vibrant community which is still affordable and suitable for diverse socio-economic groups. Housing development sites can be "infill" or "greenfield". Acquiring greenfield land is typically easier and cheaper, though the cost advantages can be offset by the need to build infrastructure – roads, water, sewers, electricity etc. Decisions on urban expansion can affect overall affordability, as the costs of urban infrastructure are strongly related to population density. Many US cities such as Houston have relaxed their zoning to enable considerable greenfield development which has resulted in low density development and urban sprawl. In contrast, cities such as New York City have limited capacity to expand, so housing developments are primarily infill or on brownfield sites. This can make development – and, in turn, housing – more expensive, but infill sites provide easier access to urban infrastructure and services and encourage the use of public transit systems [16].



Enabling Environment: Setting the right ecosystem across the value chain

Following its relaxation of zoning requirements for enabling considerable greenfield urban development, the city of Houston has today some of the cheapest housing among major US cities. It is worth noting that even though acquiring greenfield land is typically easier and cheaper, the costs from the need to build infrastructure may sometimes offset these cost advantages.

Smart, transit-oriented development, Hong Kong [3] and Los Angeles [16]

Transit-oriented development (TOD) is a densification strategy applied by city planners that involves upgrading urban transit infrastructure and making provisions for additional development rights for affordable housing near transit areas. Nevertheless, the risk of area gentrification without long-term affordability measures put in place TOD areas, can lead to escalation of prices and the displacement of local dwellers outwards.

Access to rapid transit that can get residents to work is particularly important for low-income residents who often face transportation cost burden and long commute times. Over the past four decades, Hong Kong has added 1.4 million homes in the New Territories, across the harbor from Hong Kong Island, most of them oriented to transportation infrastructure: 43 percent of residents and 56 percent of jobs are within 500 meters of rail and metro stations. In cities where

new transit facilities have been built, land values in the surrounding areas have risen by 30 to 60 percent. By capturing a share of that increase (through land sales or “betterment” assessments), governments can pay for the infrastructure investment and the cost of affordable housing.

Another example on TOD and affordable housing synergies is the “Metro Affordable Transit Connected Housing Program (MATCH)” developed by Los Angeles County Metropolitan Transit Authority, which is a public-private lending partnership with a policy that 35 percent of all housing built on its land must be affordable to households earning less than 60 percent of the area’s median income.

Improving urban land-use rules and using inclusionary planning, Seoul [18]

By changing land-use rules, cities can significantly lower the amount of land used per housing unit, usually by adjusting the permitted floor-area ratio. This can be done on a block-by-block basis to consider the impact of higher density on infrastructure capacity. Developers then can construct more square meters of space for each square meter of land and can fill more demand for housing, particularly in areas close to transit stations where the infrastructure can support it. This practice has been used successfully in Seoul to expand housing supply in the South Korean capital.



Enabling Environment: Setting the right ecosystem across the value chain

Case study: The Izmir Regeneration and Redevelopment Model [31]

Like most of the cities in developing countries, Izmir is a city negatively affected by rapid urbanization and population growth. It has been determined that 40 percent of the residential area within the boundaries of the jurisdiction of the Izmir Metropolitan Municipality need to be rehabilitated in terms of technical and social infrastructure, superstructure, and environmental quality. Urban Regeneration and Development Project Areas have been selected as examples that can affect the entire rehabilitation area.

In line with the decisions of the "Upper Scale Plan", Izmir Metropolitan Municipality prepares the Reconstruction Plan and Urban Design Projects without increasing the density defined in the upper plan. Alternatively, the Municipality organizes an "Urban Design and Architectural Idea Project Competition". The Municipality's role is active and intermediary in establishing a healthy relationship between different parties in urban transformation; right/property holders and contractors during the project process. The right holders are offered residential units from the architectural project in equivalence to the sum of the value of their land(s) and/or their building(s) situated in the project area.

Urban regeneration and development studies are carried out within a holistic perspective; interdisciplinary organization scheme, participatory decision process, transparency, and sustainability to create living spaces at the standards of contemporary urban space with healthier and safe residences. The aim of the projects is not only the physical renewal of the residential buildings and the neighborhoods but also the development of social life, the planning of the necessary reinforcement areas for preservation of their cultural characteristics, the provision and development of ongoing commercial activities and employment in the area.

The main objectives in creating Urban Regeneration and Development Projects are; Based on 100 percent agreement with rights holders in the field, it is determined to provide 'in-place regeneration', where existing residents will find a chance to live in their existing neighborhood, to support social regeneration, and to strengthen the social and technical infrastructure. Residents living in the project area at various stages of the project processes are involved in the meetings and can express their ideas in a democratic environment. Also, through the information points in the fields of regeneration and development, information is constantly exchanged.

(continued)



Enabling Environment: Setting the right ecosystem across the value chain

Case study: The Izmir Regeneration and Redevelopment Model [31]

The Regeneration and Development Projects include modern residences designed for the development of the city, with high thermal insulation performance, which will prevent the use of existing coal-based fossil fuels thanks to the natural gas-powered central heating system and hence protect public health. The existing roads in areas requiring rehabilitation have developed quite narrowly and uncontrolled. The lack of social reinforcement areas in the existing situation and the distance to social reinforcement areas in the city are also resolved through projects. The Municipality is renewing all infrastructure constructions in the regeneration areas, and the “Infrastructure Gallery System”, in which electricity, telecom, water, and drainage lines are collected in a single modular gallery system.

Source: Dr. Ç. Ayşe Arkon Ünal, Izmir Metropolitan Municipality, 2020

Lowering the costs associated with construction and increasing the efficiency of operating housing units, which reflects on an optimized use of resources (like energy and water) and a reduced generation of wastes, can significantly impact the housing sector. Three key players can improve the construction productivity, getting cities a

step closer towards a better matching supply of affordable housing: governments representing the public sector, developers representing the private sector, and the construction workforce [16]. Figure 5 below presents some of the main challenges facing these sectors and few success stories from cities around the world on how some were overcome.



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Figure 5.

Challenges and opportunities faced by the key players of the construction sector worldwide

Governments	Developers	Construction Workforce
Challenges		
<p>Factors affecting productivity and raising construction costs include</p> <ul style="list-style-type: none"> • Bureaucracy; • Corruption; • Complicated building codes and permitting processes; and • Highly fragmented construction markets. 	<p>Factors contributing to low productivity include:</p> <ul style="list-style-type: none"> • Inefficient project management practices; • Lack of investment in technology, research and development; and • Lack of focus on skill improvement and training. 	<p>Factors contributing to low productivity include:</p> <ul style="list-style-type: none"> • Shortage of skilled labor and • High levels of cost inflation
Opportunities		
<p><u>Portland, the US:</u></p> <p>Portland had “government fees” that added approx. 13% of the total development cost of housing. The city waived development charges on construction of Accessory Dwelling Units (ADUs) which had been preventing many homeowners from starting their development. Post the waiver, ADU applications shot up from 50 in 2009 to 200 in 2013.</p>	<p><u>Barcelona, Spain:</u></p> <p>The Barcelona Housing Systems designed a modular and standardized manufacturing system where pre-fabricated housing components manufactured offsite are assembled by non-skilled workers onsite in half the time of the traditional construction process.</p> <p><u>California, the US:</u></p> <p>TraceAir, a California based start-up, developed a software that analyzes photos from the construction site and compares them with photos from the previous week along with the original blueprints to determine work progress.</p>	<p><u>London, UK:</u></p> <p>London has established the Mayor’s Construction Academy (MCA) to address for skill shortages and training of construction project managers in the city while also focusing on involving communities currently underrepresented in the construction workforce. It is also establishing a ‘Quality Mark’ to identify and accredit high-quality construction skills training providers in the city.</p>

Source: adapted from WEF, 2019



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Several innovative approaches in construction planning and design have proven robust and effective, especially in lowering the capital investment expenditures associated with construction of housing. Many cities that still heavily rely on conventional construction practices, some on self-construction using “artisanal” methods as the case in several sub-Saharan African cities, are faced with the high construction costs from material outsourcing, inefficiencies in construction methods (longer construction periods and more manpower), and even substandard housing as final products, making affordable housing a farfetched goal. On innovative design, the paper will touch upon two aspects: space optimization and green rooftops, and will present a few options on innovative construction models, techniques and materials.

On space optimization, below are a few examples on how space can be optimized when designing affordable houses.

- **Designing efficient interiors/corridors and using smaller spaces that require less energy or resources.** Low-rise multifamily units (three to four storeys) could save space by being situated as row houses and connected through passages having two lifts (one at each end of the row) shared between these buildings instead of having a staircase and lift for each building that incurs more costs. This would, however, require cities to change building codes.
- **The Massachusetts Institute of Technology Media Lab** developed a 200 square foot prototype apartment using sensors and IoT

to perform like a structure three times its size by using hand-gestures/voice commands to flip, move and stow the home's transformable furniture [16].

- **Shared Living or Co-living** offers a profitable solution to increasing real estate values, pressure of maximizing profit per-square foot, shortage of affordable housing supply and increased disconnection in society.
- **Common and We Live** are two examples of this model. It also provides for multi-generational, multi-family and community-based housing for homeless, low-income and middle-income households/individuals [16].
- **Tiny Homes or micro-housing** are small, yet exquisitely designed dwellings compressed with essentials of a home into a compact space (not larger than 500 square foot in the US). Backyard houses implement this concept by converting little spaces like attics and garages into living spaces.
- **Boston runs a “Build-it-yourself”** campaign on the “Plug-in house” where homeowners can build in their backyards and rent to low income tenants [16].

Green Roofs are another innovation in construction design that can bring financial, environmental, and aesthetic advantages to the construction sector. This is a concept of having a roof of a building or home covered with vegetation, soil, drainage layers, roof barriers and irrigation systems that can have cost-saving benefits from reduced need to



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air conditioning or heating (works as an insulating layer) and environmental benefits by creating microclimates that can, if in clusters, can help reduce high temperatures, clarify the ambient air, and bring in aesthetic and ecological features.

- **The “Green Roof initiative”** passed by Denver in 2017 is a legislation that would require buildings (including upcoming affordable housing projects) bigger than 25,000 square feet to have green roofs or solar panels. While projects would witness increase in upfront costs, lower-income communities would benefit in the long term as they usually experience more air and water pollution given the location of their neighborhoods. It could also bring down energy bills [16].

On innovative construction models and techniques, tools like *“Building information Modelling (BIM)”* can help identify issues early on without having to physically construct the structure. Also, *“Buildings as Material Banks (BAMB)”* can ensure building materials are tagged and monitored and advanced automated equipment like *“self-driving bulldozers”* and *“bricklaying robots”* can impact productivity levels as well. 3-D printing is an innovative technique that can insure affordability through reduced costs of construction materials and labor. Beijing has built a 3D printed house that can withstand an 8.0 magnitude earthquake [16]. Nevertheless, one of the crucial underlying challenges here is the missing regulatory landscape that permits multi-

story construction of 3D printed homes and this itself, is a challenge on the economies of scale and thus, the supply of affordable housing.

On alternative construction materials that can help reduce construction costs, nearly 35 percent of cement can be replaced with fly ash (or Pozzolana material) as a blending material for structural considerations. In Nigeria, a Pozzolana Cement plant has been piloted for cement production and could save developers as much as 30 percent than using imported materials. Cement-coated expanded polystyrene (EPS) panels are being experimented in Kenya for construction of homes reducing construction costs for a developer by 25 percent while cutting construction time by half. Cross Laminated Timber is now being adopted in countries like US, Canada, Sweden, UK and Australia respectively who have changed their building codes to allow construction of timber framed structures. In India, the government has approved structural designs of buildings using Glass Fiber Reinforced Gypsum (GFRG) – which has been confirmed as a green material by the United Nations Framework on Climate Change. Uniform and rectangular Compressed Earth Blocks and Interlocking Stabilized Soil (earth) Blocks (SSB or ISSB) are used with traditional building materials like clay, loam and sand minimizing the use of cement. Interlocking bricks use the principle of “Lego-blocks” that can be clicked onto each other, minimizing the need for cement or mortar.



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Land

As mentioned earlier in this document, the constraints imposed by land availability are commonly related to the lack of suitable land for residential use, or land use restrictions, or conflicts over land ownership and titling, exacerbate the somehow chronic challenge of a sufficient and matching supply in the affordable housing sector in many cities throughout the world.

Securing land title is a crucial step to settle disputes on land ownership, secure tenure, and encourage investments in property; however, this process might not be accessible to marginalized groups and households of limited income due to the relatively high costs associated with the process that is experienced in many countries. Land pooling, negotiated settlements, and formal acquisition are three most commonly used policy instruments related to the securing of land. In this section, we present a few takeaways from the application of viable measures in terms of land management and the affordable housing supply challenge.

In the Indian city of Amaravati, for instance, the state government used land as a primary mode of exchange to reduce the pressure on its finances. Successful negotiations with 22 villages resulted in a transfer of their land (totaling to nearly 34,000 acres) to the state in return for a smaller plot per owner that will be relatively more developed in the future [16].

In China, the cities of Chongqing and Chengdu are experimenting with tradeable land quotas. Local governments have limited authority to expropriate rural land for new housing due to the central government policies on grain self-sufficiency and quotas placed on agricultural land that can be converted to urban use. Such a mechanism enables the use of peripheral land because additional land is turned over for cultivation beyond the city boundaries. Here we zoom into the specific cases of each city. In Chongqing, the process of converting from rural agricultural to construction land is carried out by the city government in collaboration with village committees where developers are asked to purchase a quota before bidding for a parcel of land. In Chengdu, by consolidating land in rural areas, developers can create a construction land quota that is valid for two years and can be sold once during this period. In cases where land is not utilized, the city buys the land back at a specified minimum price. Some 10 percent of the value goes to the city to improve infrastructure in the consolidated areas [16].

The existence of legal titles through land tenure and property rights encourages investment in land, as does improving its access to infrastructure. Nevertheless, attempts to convert informal settlements into titled land can risk widening inequality; e.g. by privileging groups with better access to information. Formal titles are less useful for groups such as those too poor to be able to service long-term loans, highly mobile youth



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populations or ageing populations looking for short-term security. Alternatively, providing rights of use without full land-tenure legalization might be a relatively better step for the inclusion of the underprivileged who lack access to finance and funds.

Informal land can be formalized through legal structures that facilitate individual or collective ownership. Simply establishing who owns land can make it accessible to the market. Often in developing economies, land-registration systems have not evolved; upwards of 70 percent of land in developing economies is unregistered, according to UN-Habitat. An efficient land-registration system establishes clear ownership rights that enable transactions to move ahead without risk that another party will later assert ownership rights.

As cities grow rapidly, local governments in the developing countries need to take rapid measures to reduce indiscriminate growth and control urban growth scenarios by preparing comprehensive master plans for the cities, but sometimes these governments face multiple difficulties in the implementation phase of these master plans with some of the implementation tools. One of these

challenges is the application of land readjustment method in a manner commensurate with the outcomes of the master plan of the city. Land readjustment tools can solve many problems related to ownership in the city and distribute the burden of expenses between government and local people [22].

Public land ownership also holds the key to affordability in cities where middle- and lower-income families are unable to compete with corporate investors, but community housing providers and city governments could collectively purchase or repurchase large quantities of housing stock [16]. Collective tenure mechanisms such as community land trusts (CLTs) and housing cooperatives have been highly effective in establishing tenure security with non-formal titles in many countries, including “right to the city” (in Brazil), temporary occupation licenses (in Kenya and Uganda), certificate of rights (in Botswana), anticrético (in Bolivia), and ten-year leases (In India) [16]. Collective land tenure refers to a community sharing land access rights to benefit from economies of scale during production, spread risk and avoid the costs of enforcing individual property rights.



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Case study: Partnership with real estate for the provision of affordable housing in Saudi Arabia [15]

Under the National Transformation Program (NTP), the Ministry of Housing seeks to improve performance of the real estate sector and by 2020, double the sector's current 5 per cent baseline contribution to the GDP. The Green Paper for the National Spatial Planning Act outlines enabling suitable homeownership among Saudi families as one of the keyways of achieving the strategic objectives (offering a fulfilling and healthy life). Based on Vision 2030, the Ministry of Housing aims to increase the ownership rate by at least 70 per cent by 2030, whereas the housing goal set forth as part of the NTP objectives is to increase homeownership to 52 per cent by the end of 2020.

The Government has decided to invest SAR 250 billion (US\$67 billion) to construct 500,000 units in a bid to erase the deficit in affordable housing for nationals. Therefore, under the NTP, some of the housing will be delivered through public-private-partnerships and build- operate-transfer projects. Under the NTP, the Government strives to reduce the cost of housing from an estimated 10 times gross salaries to five times by 2020, and to increase by tenfold the number of proper housing units provided to needy families benefiting from social security to 101,700 by the same year. In terms of the operations of the real estate sector, the Government plans to reduce the average time required to approve and license new residential real estate development projects from a baseline of 760 days to 60 days by 2020.

Recent Government policies strived to diversify financing sources. The demand for real estate financing is expected to increase to SAR 500 billion (US\$133 billion) by 2026, from SAR 280 billion (US\$75 billion) in 2017. To this end, the Public Investment Fund has created the Real Estate Refinance Company (RERC) to improve the liquidity and performance of the real estate market and increase its contribution to the GDP. The refinance company is expected to provide up to SAR 75 billion (US\$20 billion) of housing loans over the next five years and SAR 170 billion (US\$45 billion) by 2026. Launched as a partnership with the Ministry of Housing, the RERC will finance some of its activities by issuing bonds on the private market, a new initiative for the nation's housing sector. The introduction of Real Estate Investment Funds (REITs) in the Saudi stock market is expected to spur growth in the sector given by encouraging real estate investments. Further, under the NTP 2020, the Government plans to provide housing subsidies to enable Saudis take out mortgages as well as to reduce waiting times for housing finance from an average of 15 years to 5 years by 2020.

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Case study: Partnership with real estate for the provision of affordable housing in Saudi Arabia [15]

The Saudi Arabian Monetary Authority, the nation's central bank, has also undertaken to stimulate the real estate market and ease the housing shortage by taking measures to make mortgage financing more accessible. It has not only allowed banks to supply a bigger share of funding for purchases of homes, it has also scrapped administrative fees for mortgage holders. In addition to the above measures that are largely driven by the central government, all cities must develop proactive policies to engage the participation of the private sector to cover their shortage of affordable housing.

Source: MoMRA Saudi Cities Report, 2019

Funding and finance infrastructure

With reference to the three financing sources (governments, developers, and construction workforce) for affordable housing presented Figure 5 above, a few funding models have been successfully implemented by cities and are presented below.

Urban Wealth Funds: are funds guided by long term vision of the city and designed to improve housing supply and optimizing housing production and streamlining complex infrastructure development projects in cities. Urban Wealth Funds are designed to promote the collaboration of the private with the city governments on housing development projects as a way of risk and benefit sharing [16]. Such Funds have been applied in the Hafencity GmbH in Hamburg Germany and in parts of Copenhagen, revitalized by the City & Port Development Company, have improved housing supply by pooling publicly owned assets into an Urban Wealth Fund [16].

Microbuild Funds: These are housing-specific microfinance investment vehicles, controlled by Habitat for Humanity International with Triple Jump, Omidyar Network and MetLife Foundation as partners and co-owners. Microbuild funds provide technical and capital support to microfinance institutions (MFIs) who, in return, provide microloans for households to build or renovate their houses. Since 2012, forty-two institutions in 25 countries have lent microloans supported by Microbuild funds, projected to assist up to 600,000 by 2026.

Housing Partnership Equity Trusts: This Trust model acquires multifamily properties in order to support low- and middle-income households across the country by preserving affordable housing while yielding good risk-adjusted returns. A Trust of 14 high-performing housing providers with an investment of \$100 million from Citibank, Morgan Stanley, Prudential Financial Inc., the John D. and Catherine T. MacArthur Foundation, and the Ford Foundation.



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Case study: Opportunity Zones (O-Zones) - Incentivized Investments by Tax Breaks [16; 32]

Created by the US Tax Cut and Jobs Act of 2017, O-zones are designated low-income areas where investors whose projects fulfill a specified criterion, such as constructing affordable housing, can get various tax breaks from projects which meet specified criteria. O-zones, as the Economic Innovation Group puts it, are “a new national community investment tool that connects private capital with low-income communities across America”.

Criteria for areas to be tagged as O-Zones: In the US, a census tract qualifies as an O-Zone if it has a poverty rate of 20 percent or greater, or if its median household income is less than 80 percent of the surrounding neighborhood. The tax breaks encourage investment for at least a ten-year period.

According to the US Economic Development Administration, more than 8,760 designated Qualified O-Zones are distributed across the US, the District of Columbia, and the five US territories.

What are the gains of the O-Zone innovative investment tool?

- O-zones stimulate economic development and job creation, by incentivizing long-term investments in low-income neighborhoods.
- City governments can invest property tax revenues to improve basic urban services and infrastructure incentivizing developers towards investing in building affordable residential units.
- O-Zones could also help fight gentrification where investors offer cheap loans and subsidized mortgages for locals to reap benefits from rising property values and getting priced out.

Source: World Economic Forum, 2019; US Economic Development Agency, 2020

Demand-side Chain Opportunities

Worldwide, several groups of different socio-economic and age characteristics are concerned with the struggle and burden of owning an affordable and adequate home within the city. Those predisposed to these complexities struggle on three main fronts: eligibility for affordable

housing subsidy and support and securing funds to access credit. This section will present examples and cases on how the urban challenges faced by the demand-side of the affordable housing value chain were addressed by national and local governments and key takeaways from the experience.



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End-user eligibility to home ownership (purchase or rent)

As mentioned earlier, the eligibility of home seekers to public or private-source funding and financial support is commonly measured either using targeted or universal approaches, depending on a set of factors. Below are cases on how some cities handle the challenge of end-user eligibility to own or rent a home.

In Dupnitsa, Bulgaria, the city stipulated a first level ranking whereby home seekers of 150 newly-constructed housing units should be Bulgarian residents living at least 5 years in the city, do not own any vehicles or property that have a market value greater than an average suitable permanent dwelling would cost in the city. Other criteria used for the second level ranking included age, education, health, employment, and family status.

In Poznan, Poland, for retaining recent university graduates in the city, the government offered them affordable rental for up to 10 years with the conditions of not owning another apartment in the city, worked and paid taxes within the city, and that their income was within the lower and upper income bracket.

End-user behavior and attitude towards housing purchase models

For the housing market to be affordable, it requires a mix of tenures – rental, homeownership and a combination of the two. Nevertheless, for many city dwellers worldwide, homeownership can be

a farfetched ambition due to the usually large amounts of money needed for down payment or mortgages.

For cities, there is a case for nurturing strong rental markets. Renting makes it easier for young people to move around inside the city as their needs change in terms of proximity to educational institutions, workplaces, public transit, and social and cultural amenities. High homeownership is correlated with restricted labor mobility, with impacts on business creation and economic development.

Affordable housing requires a mix of multiple tenures – rental or homeownership or a set of tenures in between leading from rental to ownership. On emerging solutions for affordable housing, targeting middle-income households in cities, the multi-family rental housing is the largest real estate class in the United States, compared to the retail and commercial property. BTR properties are designed to be rented rather than purchased, offering lower risks and lower returns at the same time. In 2017, more than 11,000 BTR housing units were being constructed making around 17 percent of the private rental market in London city. This model however; does not seem very appealing to investors of developing economies, due to the elevated land taxation and lack of governmental incentives [16].



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Credit financing for homeownership (purchase or rental)

Many credit financing tools for homeownership have been designed and implemented throughout cities. For purchase models, these include government-supported financing and not-for-profit assistance, such as subsidy recapture and subsidy retention as described in Section 3.2.3 above.

On rental models, a few cities in Western Europe adopted private rent controls, in the period between the 70's and 80's permitting annual percentage increments (below market rates) where units were decontrolled after tenant evacuation. Tenants can benefit from such "second generation"

rent controls by keeping rent below market rates; a control which can backfire by disincentivizing the supply of new rental housing. As such, a robust rental regulatory framework can mandate inclusionary zoning through a specified share of affordable units (e.g. through inclusionary zoning), prevent social segregation, minimize vacancy, and protect both suppliers and home seekers. Other rental models include social rental, where tenants are supported by government-granted loans, operational subsidies, interest subsidies, guarantees, supplemental income support or tax reductions; cost-price rental housing rents that are based on constructing and maintaining housing units rather than their market value; among others.

Case study: The 2020 Housing Program: towards realization of the Saudi Vision 2030 [25]

A holistic Housing Program was initiated as part of the Saudi Vision 2030. It aims to enable the Saudi population to own or benefit from housing based on their needs and finances for all generations and increase the supply of affordable housing units in a timely manner. It will enhance access to subsidized and appropriate funding. The Housing Program targets particularly the most vulnerable segments in the Kingdom. It will also further support the improvement of the legislative and regulatory environment that increase the housing sector attractiveness to the private sector, develop local content, create more business opportunities and strengthen the economic foundations of the Kingdom.

The scope of the Housing Program is to increase supply, enable demand and regulate the sector. To increase supply of suitable homes pathways, the program aims to: regulate population density

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Case study: The 2020 Housing Program: towards realization of the Saudi Vision 2030 [25]

and redevelop city centers to reduce the land required; provide suitable plots and exchange land with government for establishment of new housing projects; construct housing units in record time by incentivizing the real estate development sector to employ advanced building and construction technologies and develop the sector's capabilities; and promote Public Private Partnership (PPP) programs.

The Program also aims to enable beneficiaries to acquire appropriate housing through: serving segments that need cooperative initiatives for free housing as usufruct right; activating institutional housing programs to cover the needs of beneficiaries working in the public sector; and providing financing for the various segments through transforming the Real Estate Development Fund into a financial organization and establish the Saudi Real Estate Refinance Company (SRC).

The Program plans to regulate the Housing Sector through several pathways including: regulate the real estate development environment through the enablement and regulation of off-plan sale; Regulate the relationship between the owners and residents of the housing units under joint ownership; and reduce the time to acquire real estate development permits through the activation of Developers Services Centre (Etmam).

Source: The Housing Program Delivery Plan, 2020

The United Nations Agenda 2030 recognizes cooperative enterprises as important players within the private sector to achieve the SDGs, creating an opportunity for cooperatives to position themselves as partners with global, national, regional and local institutions to achieve sustainable development. Housing cooperatives

offer secure and affordable housing to citizens who participate in the management of the property through the democratic governance structure that all cooperatives uphold. The box below presents the blueprint for a Cooperative Decade - A Co-operative Housing Perspective.



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Case study: Blueprint for a Cooperative Decade: A Cooperative Housing Perspective [33]

The Blueprint have five elements to:

- **PARTICIPATION** – the active engagement of the member-owners in the life of the co-operative.
- **SUSTAINABILITY** – the co-op's long-term economic, social and environmental viability
- **IDENTITY** – the fundamental principles and values that are unique to co-operative enterprise.
- **LEGAL FRAMEWORKS** – the supporting laws and regulations that enable co-operative development.
- **CAPITAL** – the necessary access to financial capital that fosters co-operative growth and strength.

“Participation Housing” co-ops recognize participation as member engagement in the democratic and community life of the co-op. They embrace democratic involvement at the governance and membership levels. They encourage the sharing of the good governance principles. They support and encourage models of participatory governance and member service. Housing co-ops foster a welcoming, inclusive co-operative culture that creates strong, diverse co-operative communities.

Sustainability: Housing co-operatives place a priority on long-term economic success over short-term, unsustainable financial benefit through comprehensive asset management and long-term financial planning. In this way, housing co-ops contribute to the sustained social well-being of the citizens whose housing needs are met through cooperation. Housing co-ops aim for a superior level of environmental sustainability as they add energy savings measures and green technologies to their assets.

Identity: What sets housing co-ops apart from other forms of housing is a unique co-operative identity, as defined by the core values of co-operation and the international co-op principles. Identity is fundamental to housing co-op members as they live, work and interact daily within a co-operative community. Housing co-ops actively communicate their co-op identity, both internally among members and within the broader community. They apply co-operative values to their role as good co-operative corporate citizens.

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Case study: The 2020 Housing Program: towards realization of the Saudi Vision 2030 [25]

Legal Frameworks: The success of co-operative housing enterprises depends on enabling legal and regulatory frameworks. For housing co-ops that means legislation for their founding, development, continuity and corporate good-standing, legal standards for governance structures, the rights and responsibilities of members, and all other legal frameworks governing the co-op's finances, property and membership. National co-op housing organizations look to their international network to help them safeguard enabling legal frameworks and to seek their enhancement where necessary, through representation to government and policy advocacy.

Financial Capital: Housing co-operatives are capital-intensive forms of enterprise. They need access to financial capital so they can invest in the sustainable development, regeneration and expansion of their co-operative housing assets. Housing co-ops accumulate financial capital through member contributions and the financing and refinancing of their property. Where possible housing co-operatives meet their financing and banking needs through partnerships with the financial co-operatives and by accessing co-operative lending arrangements, in the spirit of cooperation among cooperatives.

Through self-help and empowerment, reinvesting in their communities and concern for the well-being of people and the world in which we live, co-operatives nurture a long-term vision for sustainable economic growth, social development and environmental responsibility.”

Source: International Cooperative Alliance, 2012.



Recommendations





Recommendations

Solving the housing affordability challenge requires policymakers to address critical challenges across the supply chain that range from maintaining affordability in expensive or appreciating real estate markets to improving or upgrading obsolete dwellings or substandard units in informal settlements and requires participation of public, private, and non-profit sectors. This section of the paper presents a set of recommendations that address the supply-side, taking into consideration urban planning and policies and the construction sector, land, and demand-side of the affordable housing value chain.

General recommendations for each sector follow, where each one has become even more critical during the pandemic:

All entities within governments (national, state and local), the private sector, and non-profit sector have an important role to play. ensure regulatory frameworks that enable transparent, fair and equitable access and use of land, alternative ownership models, protect tenants as well as landlords, and enable more innovative financing models in developing new homes or rehabilitating existing units.

Regional and local governments are in the forefront to address urgent housing needs. They are called upon adapting national plans to fit local circumstances and ensure an adequate housing provision through infrastructure development and land-use planning mechanisms. However, too often, local governments are being allocated responsibilities without a commensurate allocation of resources, knowledge, and capacity and accountability mechanisms.

The private sector must embrace innovative mechanisms to finance development and help establish the creditworthiness of those unable to secure finance through conventional routes, invest in sustainable design concepts to create energy-efficient housing, mainstreaming innovative methods (e.g. 3D Printing, prefabrication, etc.) and using alternative building materials and advanced automated equipment among others.

The non-profit sector can implement alternative tenure models, assist in advocacy efforts in formulating just policies creating awareness through technical know-how of developing and maintaining home affordability.

The COVID-19 crisis has further drawn widespread attention to the existing inequalities of affordable housing, including disparate racial health impacts and the financial fragility of low-wage workers in cities. To address long-standing gaps in the safety net, addressing this will require more thoughtful interactions with public agencies and the private and nonprofit sectors.

The pandemic crisis triggered a shift in the way housing is perceived both for its social function as well as for its connection to the full enjoyment of the right to the city. Ensuring the right to adequate housing for all is key for disaster preparedness and beyond. Therefore, housing must play a central role in post-COVID-19 reconstruction conversations - including the global agendas 2030 and sustainable urban development.



Recommendations

Supply-side policy recommendations

On urban planning and policies, the construction sector, funding and finance infrastructure, and land, governments should:

- Develop relevant rights-based frameworks for housing strategies.
- Integrate housing policies within the framework of urban planning and urban policies in order to avoid sectoral and disconnected approaches.
- Encourage implementation of urban regeneration and development projects to provide 'in-place regeneration', wherein existing residents find a chance to live in their existing neighborhood, to support social regeneration, and to strengthen the social and technical infrastructure.
- Incentivize development of smaller, more affordable units, i.e. for entry-level home buyers or young tenants
- Conduct benchmarking of good practices of sustainable, affordable housing markets and baselining those for adoption in the local housing market.
- Support technological innovation that connects the links in the housing supply chain to support more effective, household-level home improvements
- Promote cooperative land development/urban planning contracts: where expanded building rights is made possible upon an agreement between the city and the investor on a minimum share of affordable housing (e.g. a sizable percentage of rent-controlled apartments).
- Empower the local governments to address substandard housing units and vacant housing in the city.
- Implement participatory and integrated strategies in upgrading of informal settlements and neighborhood infrastructure into decent and well-serviced parts of the urban fabric.
- Establish safeguard policies at all levels of government to mitigate and remedy the adverse impacts of upgrading or relocation processes over vulnerable communities and the environment.
- Minimize the effects of “climate gentrification” wherein vulnerable residents staying in properties of high risk (that have depreciated in value) are pushed towards environmentally safe urban areas (that have appreciated in value)
- Minimize the impact of climate change, particularly in informal settlements, where housing construction materials are often not robust enough to withstand surging seas, windstorms, and flooding caused by climate change.
- Develop Public-Private Partnerships schemes and guidelines specifically for building rehabilitation, management, and maintenance of housing.
- Increase government investment that improves public/social housing stock by structuring public funds that leverage philanthropic or private funds without adding unnecessary complexity.



Recommendations

- Involve investors of all types in expanding the supply of affordable housing legally and financially. Strengthen multi-level and multi-stakeholder cooperation to advance financially sound strategies on social, non-speculative housing and upgrading.
- Reduce capital costs for new affordable housing construction for all types of investors (interest-free loans, waivers of repayment and other subsidies) in return for rent caps and the allocation to specific households through the local government.
- Support the private sector in protecting existing managed properties and ensuring financial viability of housing projects currently under development but not completed or delayed for reasons attributable to the COVID-19 pandemic.
- Build capacities within local governments to support as long term property managers or ensure transfer of ownership to the nonprofit sector to manage social housing stock.
- Acknowledge the nonprofit sector as a dynamic actor in building and contributing to urban community development.
- Explore innovative public-private partnership (PPP) tools, particularly based on non-profit organizations (NPOs), and their effects on urban regeneration strategies, to improve the affordable housing stock in cities.
- Develop policies and frameworks that improve the management of land markets (increasing supply of land and regulate land consumption), especially in urban and peri-urban areas where demand far outstrips supply, causing inflationary spirals.
- Improve land supply in areas that are already accessible and do not require heavy investment in developing bulk infrastructure.
- Implement innovative land readjustment strategies and mechanisms that facilitate land titling and focus on value capture from land.
- Utilize innovative technological tools, such as Blockchain, for record retention and archiving that can have positive implications on reducing time and costs of information processing, retrieval, and transfer.
- Support the development of mixed-use, compact, connected, and transit friendly neighborhoods
- Adopt policies and frameworks that support mixed-income, inclusive, equitable and sustainable communities

On the supply-side of the value chain, the private sector is encouraged to:

- Develop local construction materials and use appropriate construction techniques to reduce costs.
- Use simple shapes and configurations when designing housing units to reduce height and area to a suitable minimum by reworking plan-space ratio and reducing non-used space (e.g. formal reception and dining areas) that are rarely used despite their cultural value.



Recommendations

- Construct mixed-use, mixed income housing projects which ensure financial stability and provide greater economic opportunity to different income classes.
- Improve supply of affordable housing units triggered by a decreasing demand of short-term rental accommodation (mainly touristic apartments) and the transformation of many office spaces into affordable houses in line with the rise of teleworking observed in context of COVID-19 pandemic.
- Implement and maintain extraordinary measures that ensure housing affordability for vulnerable tenants (e.g. those at risk for marginalization, older persons, persons with disabilities, women, children, migrants, etc.) preventing evictions, addressing homelessness and those staying in informal settlements exacerbated by the COVID-19 pandemic. (e.g. rental assistance programs)
- Develop programs targeting groups at risk of marginalization, including persons living in situation of homelessness and residents of informal settlements

The nonprofit sector, which is a vital actor in the supply-side of affordable housing, should co-produce community-driven housing solutions be including housing cooperatives and community land trusts, as well as collaborative design or assisted self-construction practices.

Demand-side policy recommendations

On eligibility for homeownership, purchase models of home seekers, and financing, governments should:

- Implement measures to prevent housing financialization i.e. shift from housing as a place to live in relationship with a community to a place to park and grow capital.
- Ensure balanced distribution of affordable housing in the city, combating socio-spatial segregation and alleviating tensions between centers and peripheries.
- Agree on a common definition of homelessness to collect comparable data between cities and countries for providing support on housing.
- Increase gender-based data collection of affordable housing occupants and consider adding selection criteria that give priority to poor female heads of household.
- Ensure all young people have an equal opportunity to leave the family home and live independently.
- Improve the suitability and availability of housing for young people. Innovative policy solutions for youth should point towards an improved rented sector and further provision of shared housing, as new forms of shared living and co-housing are emerging as a response to affordability issues.
- Ensure access to adequate and affordable housing for migrant groups living in cities tend experiencing more difficulties in accessing housing compared to native-born populations. Create awareness of the rights of migrants in destination countries, as well as supporting networks.



Recommendations

- Promote fair housing by addressing discrimination through the implementation and socialization of regulations to protect vulnerable populations.
- Implement measures for rent regulation systems and measures to curb speculation, with a view to protect tenants from speculative bubbles and giving them the right to greater security of tenure.
- Collaborate with the private sector in setting a social rent price for private property developments, with regulation for the private sector.
- Encouraging the shared social ownership of property alongside cooperatives and third sector organizations.
- Utilize alternative ownership models, such as community land trusts and limited equity cooperatives to secure long-term affordability and provide greater community voice.
- Revise housing regulations to accommodate possibilities presented by the sharing economy, regulate short-term rental housing in order to protect their neighborhoods while balancing home-owners property rights while also increasing the city's revenue through taxes, permits and business licenses.
- Create women's credit funds and adopt credit instruments that do not exclude women who are disadvantaged by lower rates of employment and pay.
- Develop and promote innovative and easily accessible financial solutions and products, including digital tools and microfinance, in partnership with public and private financial institutions to increase women's access to finance.
- Promote growth and development of mortgage loan products that recognize market niches: incremental housing construction, borrowers with informal incomes, green housing, and entry-level resale.
- Include granting subsidies or low-interest loans to low-income households.
- Offer grants or subsidized loans to current owners in exchange for accepting or extending existing affordability requirements. This may be particularly useful for smaller landlords protecting and preserving existing affordable housing from physical deterioration and financial instability.
- Facilitate procedures in commercial banks (e.g. payback period, interest rates, guarantees, amount and type of loans) to encourage people to borrow for housing purposes.

Pandemic-response for housing policy recommendations

Governments, in partnership with central and local governments, should align and gather forces to:

- Provide temporary and emergency accommodation to people without secure housing to self-isolate when their current reality does not allow to do so, by leveraging the use of underutilized spaces and repurposing of buildings for an increased supply of shelters.



Recommendations

- Put in place emergency safe drinking water and handwashing facilities for communities at risk by providing water tanks, standpipes, handwashing facilities and sanitizers along with hygiene messages in relevant languages with social distancing instructions.
- Take extraordinary measures to secure the right to housing for all through moratoriums on evictions due to rental and mortgage arrears; deferrals of mortgage payments; introduction of rental stabilization or reduction measures; and suspension of utility costs and surcharges for the duration of the pandemic.
- Harmonize and extend short-term emergency measures to all vulnerable groups, regardless of status.
- Strengthen collaborations with private sector and civil society groups in rolling out needs-based solutions, leveraging their resources, and inherent community and technical knowledge.



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