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Urban Poverty in Islamic Countries

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ASIST AP	Advisory Service, Information Services, and Training – Asia/Pacific
BAZNAS	Badan Amil Zakat National Agency
CASA	Central Asia-South Asia
COVID-19	Coronavirus Disease 2019
CPEC	China-Pakistan Economic Corridor
DHS	Demographic and Health Survey
EIIP	Employment-Intensive Investment Programme
EmpLED	Employment Creation and Peace Building through Local Economic Development
FINTECH	Financial Technology
GDP	Gross Domestic Product
GIS	Geographic Information System
GMPFC	Global Muslim Philanthropy Fund for Children
ICT	Information and Communications Technology
ILCS	Income and Living Conditions Survey
ILO	International Labour Organization
INPRES	Presidential Instruction Primary School Programme
IsDB	Islamic Development Bank
IT	Information Technology
KILM	Key Indicators of the Labour Market
LFP	Labor Force Participation
MENA	Middle East and North Africa
MTO	Moving to Opportunity
NGO	Non-governmental Organizations
NIPA	National Income and Product Accounts
OECD	Organisation for Economic Co-operation and Development
OIC	Organisation of Islamic Cooperation
PDAM	Perusahaan Daerah Air Minum
PKH	Program Keluarga Harapan
PPP	Public Private Partnership Purchasing Power Parity

SDG	Sustainable Development Goal
SESRIC	Statistical, Economic, and Social Research and Training Centre for Islamic Countries
SILC	Survey of Income and Living Conditions
TOKİ	Housing Development Administration of the Republic of Turkey
UN	United Nations
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNRWA	United Nations Relief and Works Agency
UN-Habitat	United Nations Human Settlement Programme
WDI	World Development Indicators
WFP	World Food Programme

Executive Summary

Rapid development of urban areas has been a striking global feature of the past century. Based on the United Nations (UN) statistics, more than half of the world's population (around 55 percent) live in urban areas. Recent forecasts suggest that the share of world population living in urban areas may increase to around 70 percent and the size of urban population is expected to reach 7 billion as of early 2050s. Most of the projected increase in urban population is expected to take place in Africa and Asia, which suggests that the OIC countries will be particularly exposed to the projected urbanization process.

Parallel to the rapid growth in urban population, sustaining the welfare of people living in urban areas has become a significant challenge. Although rural poverty remains as an important policy issue from the perspective of economic development, poverty has rapidly shifted and expected to further shift from rural to urban areas. The rapid rise in urban poverty is expected to pose de novo challenges that need to be addressed urgently. The devastating consequences of the pandemic disease (COVID-19) that the world has experienced and the rapid increase in refugee populations living in urban areas in major host countries especially in the past decade exemplify some of those new challenges.

The UN explicitly includes having more sustainable cities and communities—i.e., the SGD11 aiming "to make cities and human settlements inclusive, safe, resilient, and sustainable" and "ensuring access for all to adequate, safe and affordable housing and basic services, and upgrade slums"—as a separate goal into the updated SDG agenda. Although these issues have long been discussed for decades, rapid urbanization in the developing world, the alarming increase in the number of urban poor, and deteriorating living conditions in slums make viable policy design a top priority. This is a particularly important agenda for the OIC countries. More sustainable and resilient cities not only promote better socio-economic conditions and increase quality of life within cities, but they also strongly support economic development and growth at national level through productivity-enhancing mechanisms.

High population density in slums reduces the capacity of public policy to effectively intervene and respond to urgencies, develop efficient long-term strategies for urban poverty reduction, and improve the living standards for everyone residing in urban areas. Robust institutional/legal framework, stronger governance capacity, increased policy coordination

between national and local authorities, and viable urban planning strategies are needed for effective management of urban poverty challenges that the OIC cities have been experiencing in the face of rapid urbanization. In particular, the rural-urban population movements should be closely monitored, and placements need to be performed in a planned way to prevent uncontrolled growth of existing slums and formation of new ones. The urbanization patterns in the OIC countries have led to malformations in urban areas and proliferated urban poverty. In line with the main objectives and principles of the New Urban Agenda (in particular, the SDG 11), the OIC countries have to develop a feasible/effective policy framework and a long-term urban planning perspective that would address the urban poverty challenges caused by the rapid urbanization process that has been taking place.

This report aims to highlight the key areas of policy interventions for the OIC countries and identify a set of policy recommendations that could be implemented to reduce urban poverty. Chapter 1 presents the recent urbanization trends across the world, discusses the basic concepts and statistical issues, and finally provides a detailed assessment of the urban poverty forecasts. Chapter 2 reviews the current and future urban poverty challenges for the OIC countries, evaluates the existing policies and the relevant institutional framework. Chapter 3 highlights the key areas of policy interventions for the OIC countries and identify a set of policy recommendations that could be implemented to reduce urban poverty. The policy recommendations can be briefly listed as follows:

- Develop more effective urban planning strategies that particularly focus on better management of slums (through dissolving/depopulating slums and preventing formation of new ones).
- Use the relevant ICT tools and techniques more effectively to monitor slums and accurately identify the urban poor.
- Design local labor market policies that would help tackling the informality problem; gradually reduce the share of informal employment over time; and create more and decent jobs.
- Activate the Islamic social finance tools and systematically integrate them into the general urban poverty reduction policy toolbox within a well-crafted “policy-mix”; utilize the related ICT tools (such as blockchain technologies, FINTECH systems,

cashless smart cards, geographical information systems) that facilitate a more effective use of the Islamic social finance tools.

- Improve urban governance capacity by establishing a viable long-term national strategy aiming to effectively tackle urban poverty, strengthening policy coordination between national and local authorities, enhancing legal and institutional capacity, and getting connected to the international policy network in a more effective way.
- Improve resilience to unexpected events—such as natural disasters, large population movements, and health shocks.
- Conceptualize urban poverty to improve our understanding of the main policy issues and to facilitate policymaking; improve data collection practices; and develop new instruments to enhance measurement of urban poverty.

Chapter 1

Urban Poverty: Basics Concepts, Statistical Issues, and Outlook

1.1. Introduction

Rapid development of urban areas has been a striking global feature of the past century. Based on the United Nations (UN) statistics, more than half of the world's population (around 55 percent) live in urban areas. The growth rates of urban population also exhibit a striking trend: the UN figures suggest that the urban population increased more than six-fold from 751 million in 1950 to around 4.2 billion in 2018. This urbanization trend is expected to continue in the coming decades. Recent forecasts conducted by the UN, in collaboration with companion academic work, suggest that the share of world population living in urban areas may increase to around 70 percent and the size of urban population is expected to reach 7 billion as of early 2050s. The ongoing urbanization rates and urban population growth patterns display significant regional heterogeneity across the world. Specifically, most of the projected increase in urban population is expected to take place in Africa and Asia, which suggests that the OIC countries will be particularly exposed to the projected urbanization process.

Parallel to the rapid growth of urban population, sustaining the welfare of people living in urban areas has become a significant challenge. Alkire et al. (2015) report that, in 1980s and 1990s, approximately 80 percent of people living below the poverty line (i.e., less than 1.25 USD per day) lived in rural areas. The most recent figures suggest, however, that around 70 percent of people below the poverty line lived in rural areas as of 2014. Poverty is expected to further shift from rural to urban areas as urban populations rapidly grow. Although rural poverty remains as an important policy issue from the perspective of economic development, the rapid rise in urban poverty is expected to pose *de novo* challenges that need to be addressed urgently. The devastating consequences of the pandemic disease (COVID-19) that the world has experienced exemplify those new challenges.

Over 880 million urban residents (approximately 30 percent of developing countries' urban populations) are estimated to live in slum conditions today, compared to 792 million reported in 2000 and 689 million in 1990. This figure is expected to rise to 3 billion or 60 percent by early 2050s [United Nations, 2018]. A simple comparison of median annual incomes clearly suggests,

as expected, that rural income levels are lower than urban income levels. For example, according to the 2015 American Community Survey, the median household income for rural households is $52,386, about 4 percent lower than the median income for urban households in the United States. However, the percentage of people living below the official poverty threshold was 13.3 percent in rural areas, approximately three percentage points lower than the 16 percent share in urban areas, which means that high economic inequality is an inherent feature of urban populations even in the developed world.

The number of urban residents living below the poverty cutoff is expected to rise about four-fold over the next three decades and surpass 3 billion by 2050. Today, the most urbanized regions are Northern America (82 percent), Latin America and the Caribbean (81 percent), Europe (74 percent) and Oceania (68 percent)—see, e.g., United Nations (2018). Although the Asian region hosts around 54 percent of the world's urban population, the urbanization rate in Asia is still around 50 percent. The urbanization rates in Africa is below 50 percent, which suggests that Africa is still considered a region with rural dominance. The UN projections anticipate a large increase in urban populations in Asia and Africa in the coming decades. Therefore, urban poverty and socio-economic inequality are expected to become key policy challenges in Asia and Africa. The UN projections suggest that, by 2030, there will be at least 43 megacities (with population greater than 10 million inhabitants) in the world, and almost all of the newly emerging megacities will be located in Asia and Africa. The increase in urban population in the less developed regions of the world brings together various measurement and other conceptual issues. In particular, new data sources might be needed and new instruments/tools should be developed to measure and quantify urban poverty; the definition of "deprivation" needs to be reconsidered to define basic necessities for urban residents in the least developed regions of the world.

In the urban economics literature, agglomeration of skills and industries around highly populated regions is conceptualized as endogenous formation of cities and urban areas. The agglomeration dynamics typically generate new ideas, spur innovation, attract talent/skills, promote task specialization, and create positive externalities—see, e.g., Glaeser et al., (2018). Demographic diversity, cultural heterogeneity, complex social interactions, and neighborhood/network formation dynamics harbored in large cities are recognized as incubators for innovation and regarded as the main drivers of productivity growth [Johnson, 2010; Hoornweg et al., 2011]. Urban areas are also characterized by large markets with

extensive hinterlands, which also serve rural areas in terms of improved access to goods and services as well as sustainable means for income generation [Satterthwaite, 2016]. Urban areas also promote economies of scale and complementarities in production technologies, which means that a mix of unskilled and skilled labor are needed to produce goods and services. The economic opportunities available in urban areas generate a constant tendency to migrate from rural to urban areas, which typically leads to formation of cultural/ethnic enclaves (or ghettos) and generates socio-economic inequality within urban areas. These malformations exist invariably in all countries and in almost all metropolitan regions, which suggests that the local authorities are usually not well-prepared to address the urban planning challenges posed by internal migration dynamics. Formation of enclaves and/or disadvantaged segregated neighborhoods is regarded as a serious issue by development economists in terms of data collection and measurement of urban poverty. The main reason is that household-based surveys generally under-sample those disadvantaged regions and population groups, which leads to substantial underestimation of urban poverty rates. For example, in their study on Delhi/India, Lucci et al., (2018) argue that the standard survey- or census-based studies may undercount disadvantaged populations by almost 60 percent.

Correct and unbiased measurement of urban poverty is crucial for policy making, design of targeted interventions, and efficient allocation of resources [Mitlin and Satterthwaite, 2012]. The updated UN Sustainable Development Goals (SDGs) agenda now explicitly includes an item on sustainable cities and communities—specifically, the SDG 11—aiming "to make cities and human settlements inclusive, safe, resilient, and sustainable" and "ensuring access for all to adequate, safe and affordable housing and basic services, and upgrade slums." Based on the UN estimates/forecasts that the urban population will keep growing aggressively especially in the least developed regions of the world, new approaches in measuring, monitoring, and analyzing urban poverty issues are urgently needed. With this perspective in mind, the updated UN agenda on sustainable urban development prioritizes smart urban planning, creation of better jobs, superior livelihood opportunities, and improved general life quality in designing urban public policy and strategy.

One of the main disadvantages of the conventional national income accounting is that it mostly relies on aggregated data, and relying on regional decomposition of economic activity to gauge regional growth estimates is often infeasible or largely inaccurate. This problem is more serious in countries or regions with a less reliable national statistics infrastructure—such as

many African countries, where economic production may be miscalculated by as much as 50 percent and spatially disaggregated data, which is necessary to produce small-area statistics, often do not exist [Blumenstock et al., 2015]. Nevertheless, recent developments in the use of new data science techniques enable analysts and statisticians to use various proxies—such as satellite-based estimations, geo-information systems, mobile phone data, firm-level balance sheet and transactions data, digital data on consumer behavior, data on social media platforms, etc.—to address the data availability problems at a fine-grained regional detail [Henderson et al., 2012; Klopp and Petretta, 2017; Glaeser et al., 2018]. These new methods can be used to develop novel instruments in measuring and identifying many sophisticated dimensions of "urban deprivations" especially in developing countries—such as access to jobs, access to affordable housing, food scarcity and nutrition deficiencies, local cost of living, neighborhood amenities, transportation facilities, access to education, environmental quality, socio-economic inequality, and access to health (and other key public) services.

1.2. Economic Growth and Urbanization

Many canonical economic development and growth measures, such as the basic components of the national income and product accounts, feature monetary measures; thus, measurement of poverty using such instruments focuses on the aggregate monetary dimension. However, it is now widely recognized that poverty is a multi-dimensional concept and focusing solely on monetary measures may generate misleading conclusions. Moreover, urban poverty is a distinct concept and fine-grained disaggregated data collection is needed to systematically link urban economic activity to urban poverty.

There is a vast literature on the role of economic growth and development in reducing poverty. For example, Adams (2004) argues that economic growth is a key driver of poverty reduction. Based on simple economic reasoning, higher economic growth is associated with higher per capita income; and, thus, changes in poverty levels should be inversely related to economic growth rates. This simplistic aggregate approach links economic growth to income poverty. Urban poverty, on the other hand, is related to many other aspects of daily life including (but not limited to) health, education, food, shelter, employment, transportation, environment, and cost of living. Therefore, having access to data with (1) multidimensional elements and (2) disaggregated regional information both in terms of economic activity and measurement of poverty would be crucial to link urban economic growth to urban poverty. Although there are

various widely-used measures/indices of multidimensional poverty, the nature of those indices is still "aggregate" and obtaining reliable disaggregated information with cross-country comparability is not an easy task—see, e.g., Alkire and Santos, 2010; Alkire and Foster, 2011; Santos et al., 2019; Sydunnaher et al., 2019. Moreover, the non-monetary dimensions of urban development (such as access to health services, education, security, food, affordable housing, etc.) may affect urban growth through second-round or even third-round effects; thus, unlike monetary measures, it may not be easy to establish a direct and significant statistical link between non-monetary factors and urban economic growth.

Although high-quality disaggregated data is hard to find at country and/or region level, it is still possible to use various indicators to have an idea about the link between urban poverty and urban development. Findings from a basic analysis of main poverty and urban development indicators available in World Development Indicators (WDI) compiled by the World Bank can be summarized as follows:

- While rural areas are still poorer than urban areas, the pace of "urbanization of the poor" suggests that poverty will become an urban phenomenon in the coming decades (see Figure 1.1). The incidence of absolute poverty is appreciably higher in rural areas. The urban share of the poor increased by almost two fold within 20 years from mid 1990s to mid 2010s.

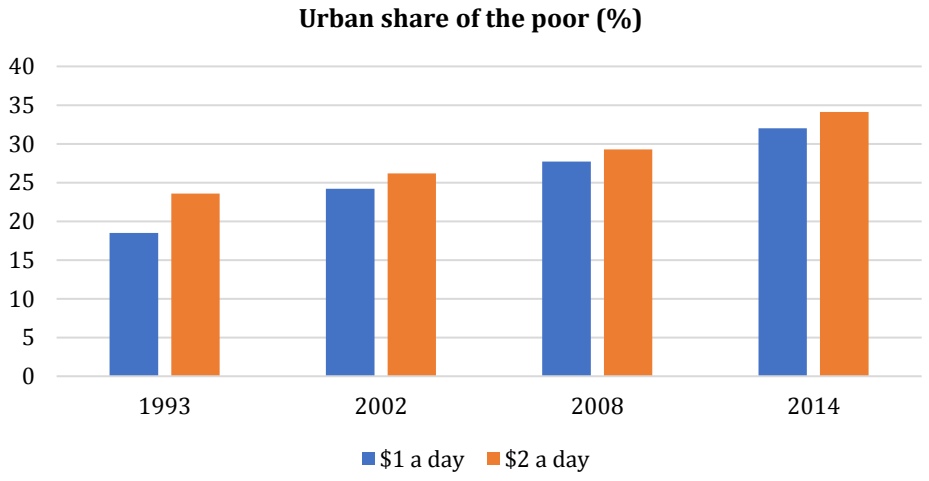

Figure 1.1: *Urban share of the poor.*
Source: *World Bank, World Development Indicators and Ravallion (2007).*

- There is a weakly negative relationship between urbanization and poverty at national level. Figure 1.2 plots the urban population ratio to poverty headcount rate (the percentage of the population living below the national poverty lines) to roughly characterize the relationship between poverty and urbanization—as up-to-date cross-country measures of urban poverty is not readily available for a large set of developing countries.[1] Although the data roughly suggest a negative relationship between national poverty levels and urbanization rates, the relationship is weak and statistically insignificant. This may be due to the fact that "the poor are urbanizing faster than the population as a whole" (Ravallion, 2007). This has further implications in terms of lower pace of poverty reduction in urban areas than at a national level.

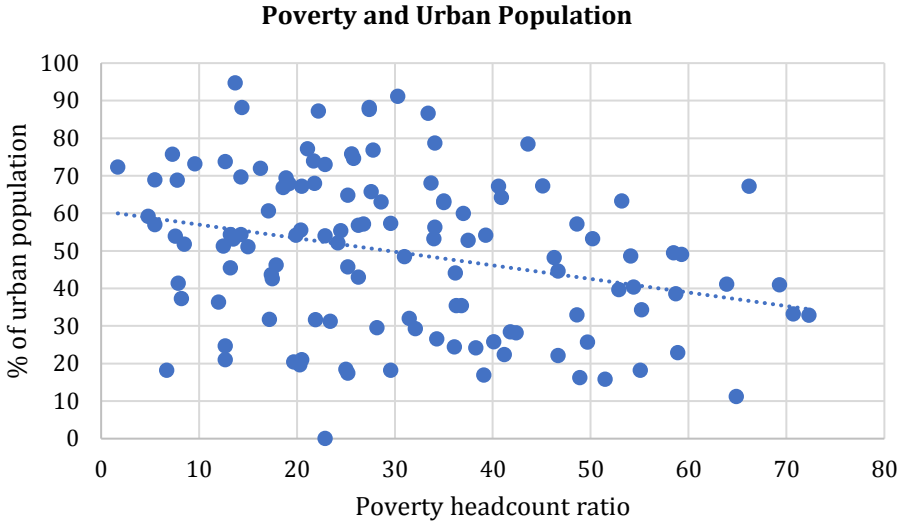

Figure 1.2: *Poverty and urban population.*
Source: *World Bank, World Development Indicators.*

[1] The countries included into this analysis are listed as follows: Afghanistan, Albania, Algeria, Argentina, Armenia, Azerbaijan, Bangladesh, Belarus, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Bulgaria, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Chad, Chile, China, Colombia, Comoros, Congo Dem. Rep., Congo Rep., Costa Rica, Cote D'Ivoire, Croatia, Czech Republic, Djibouti, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Eswatini, Ethiopia, Fiji, Gabon, Gambia, Georgia, Ghana, Guatemala, Guinea, Guinea-Bissau, Haiti, Honduras, Hungary, India, Indonesia, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kosovo, Kyrgyz Republic, Lao PDR, Latvia, Lebanon, Lesotho, Liberia, Lithuania, Madagascar, Malawi, Malaysia, Maldives, Mauritania, Mauritius, Mexico, Micronesia Fed. Sts., Moldova, Mongolia, Montenegro, Morocco, Myanmar, Namibia, Nepal, Nicaragua, Niger, North Macedonia, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Romania, Russian Federation, Rwanda, Samoa, Sao Tome and Principe, Senegal, Serbia, Seychelles, Sierra Leone, Slovak Republic, Slovenia, Solomon Islands, South Africa, South Sudan, Sri Lanka, St. Lucia, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tunisia, Turkey, Tuvalu, Uganda, Ukraine, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, West Bank and Gaza, Yemen, Zambia, Zimbabwe.

- There are substantial regional differences in terms of the share of poor ($1 a day) living in urban areas, although it almost uniformly increased in all regions of the world. Figure 1.3 visualizes the regional differences and also shows how those differences evolved over time from 1993 to 2015 using the approach developed by Ravallion et al., (2007) and the WDI data. Except for the Eastern Europe and Central Asia, the share of poor living in urban areas increased in all regions of the world. Latin American and the Caribbean region has the highest share—above 60 percent as of 2015.

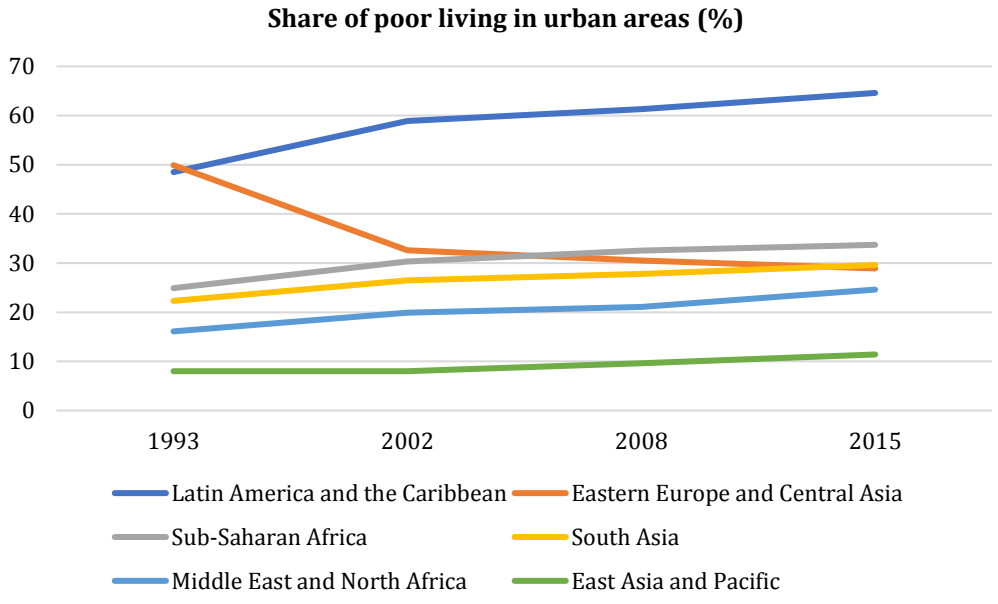

Figure 1.3: *Share of poor living in urban areas.*
Source: *World Development Indicators and Ravallion (2007).*

Contrary to the classical perception that "urbanization is a generally positive factor in overall poverty reduction," the most recent data suggest that this is not entirely true. In fact, the increase in the pace of urbanization in the less developed regions of the world is associated with increased urban poverty. It is undeniable that the overall poverty rates in the world have declined in the past fifty years. Part of this decline has been attributed to increased urbanization rates especially in the Western World. However, urbanization tends to shift toward the less developed regions of the world, which means that issues surrounding the link between urbanization and poverty have changed nature.

To conclude, there is a well-documented negative relationship between economic growth and poverty; and this negative link is more pronounced when poverty is measured in monetary terms, i.e., in terms of income. One of the main ideas is that urbanization provides new opportunities for poor people who migrate from rural to urban areas. Moreover, movers often send remittances back to rural areas, which helps poverty reduction in rural regions. Even in the absence of migration from rural to urban areas, urbanization indirectly offers new opportunities for rural populations, such as increased access to advanced markets and other welfare-enhancing facilities/amenities. There are also negative effects of urbanization on rural populations. Most importantly, the rapid shift in economic activity from rural to urban areas reduces employment opportunities and the overall quality of infrastructure in rural areas, which may further increase poverty. But, the main consensus in the literature is that, after netting out the positive and negative effects, urbanization reduces rural poverty.

Traditionally, development economists treat poverty as a rural phenomenon and urbanization is frequently associated with reduced rural poverty. Increased urbanization in the less developed regions of the world, such as Asia and Africa, brings together new concepts and ideas. In particular, rising urban poverty raises question marks on the negative relationship between urban-driven economic growth and poverty. As migration from rural to urban areas increases and intensifies, the composition of urban populations changes rapidly, and urban residents tend to become poorer over time. As a consequence, socio-economic inequality also deepens. Access to key public services (such as health, education, security, transportation, recreation, housing, etc.) and other resources gets congested over time, which reduces welfare for everyone in urban areas. Thus, the non-monetary dimensions of poverty have become a much more important topic in the urban context and new tools/datasets are needed to develop a new approach in analyzing the link between economic growth and urban poverty.

Rural areas still experience poverty in the less developed regions of the world and policy prescriptions mostly focus on promoting economic development through subsidizing/micro-crediting agriculture in those areas. Increased urbanization—and the expected further increase in urbanization in the next there decades—forces the policy framework to evolve along various directions. First, well-crafted urban policies can reduce poverty in rural areas by improving access to advanced markets, access to finance, and increased legal protection related to land use and titling. Second, better urban policies can have large positive spillover effects, which may indirectly help reducing rural poverty and support its rural hinterland. Finally, urban policies

can directly target reduction of urban poverty. Unfortunately, the current practices of city planning often increase the pace of migration from rural to urban areas, ignore the needs of the poor both in rural and urban populations, and increases the monetary and non-monetary burden of urbanization on incumbent urban residents.

1.3. Measurement of Urban Poverty and Data Collection

Analysis of urban poverty is a complex procedure as it relies on many different components of poverty in urban areas. Due to this complexity, "partial approaches" have been developed, which focus on a particular aspect of urban poverty. Depending on which aspect of urban poverty is targeted, data collection and analysis efforts typically focus on that specific aspect. As an example; if the focus is to measure the spatial aspects of poverty in slums, then specific household-based surveys are designed for data collection and sampling strategies are developed accordingly. If the focus is to analyze the link between urban violence/crime and poverty, then detailed administrative records could be supplemented with appropriately designed qualitative surveys to better capture the link between crime and poverty in urban areas. If socio-economic segregation is analyzed, then detailed mobile phone data capturing the connections between urban residents can be obtained to perform analysis. Finally, various "partial" tools can be combined to conduct a more detailed analysis of urban poverty. Given the multidimensional nature of urban poverty and new challenges that have been constantly emerging (one example is COVID-19), it is very challenging, and perhaps costly, to construct one large data set or tool and keep it updated it over time.

Analysis of urban poverty necessitates access to fine-grained disaggregated data—preferably both at individual and sub-regional levels. There are various nation-level datasets collecting information at city level such as regional GDP statistics. The main problem with those datasets is that they do not give a sense of what is happening within urban areas and cities. "Within" variation is extremely important to correlate main co-variates or policy variables with outcome variables in urban areas to address questions about urban poverty developments. The lack of standardized datasets featuring within-city variation over time has led institutions and individual researchers to carry out their own data collection studies. Such studies typically have a clear objective in mind, i.e., a given policy or program targeting a specific aspect of urban poverty. The objective shapes the principles of data collection and sampling. Follow-up studies are also typically performed to observe the evolution of outcome variables over time.

Basic monetary variables, such as income, are relatively easy to measure, and they are inarguably among the major elements of poverty analysis.[2] Income levels beyond certain thresholds per day are extensively used as reliable measures of poverty. However, the complexity of urban poverty requires incorporation of certain elements of human capital, financial and physical assets, and social/cultural capital into the measurement of urban poverty. Urban poverty analysis typically relies on quantitative (econometric and statistical) methods with a particular focus on monetary variables. The main reason is that monetary metrics are easy to compare across subjects/households/regions and over time. Moreover, various other robust indicators of poverty—such as prices, consumption of goods/services, consumption baskets, and stock of assets/savings—can be quantified using monetary metrics. Another advantage of monetary metrics is that they are objective variables and can reliably be used to quantify other aspects of poverty such as inter- and intra-household inequalities—if household-level data are available.

Although monetary metrics have various advantages and other practical aspects, they also have serious disadvantages and shortcomings. First of all, analysis of urban poverty requires a certain level of homogeneity/comparability of measures across countries and/or regions. However, surveys implemented in different countries exhibit substantial heterogeneity in terms of design, sampling, variables/questions, and, therefore, interpretation of variables. For example, some surveys use an income-based approach, while others use consumption as the basis of measurement and analysis. Housing prices can be measured in terms of rents, perceived rents, or housing values, depending on the aim and structure of survey. The differences between the definitions and content of variables across surveys severely affect the magnitude and interpretation of urban poverty estimates. Another critical issue is that cost of living is different across different countries, across different cities/provinces within a given country, and even across different sub-regions/neighborhoods in a given city. If the cost of living is not adjusted properly, urban poverty may be overestimated or underestimated depending on the context. Although income and consumption are widely used monetary metrics to measure urban poverty (as cash economies is the main determinant of poverty in many different context and income fluctuations expose individuals and families to inferior living conditions), urban poverty has many other non-monetary components consistent with its multidimensional nature. For

[2] It should be noted, however, that self-reported income is a biased measure of income and individuals tend to underreport their income levels due to various reasons.

example, individuals living in overcrowded areas may be heavily exposed to environmental waste, health hazards, and urban slums. Increased population may also lead to limited access to health, education, and other public services. Quality of health, healthcare, education, water, sanitation, sewage, cleaning, housing, transportation, security, and recreation services are also other important non-monetary aspects of urban poverty and should be appropriately incorporated into surveys of urban life.

The key questions to be answered at this point are "how can urban poverty be measured?" and "what are the tools/approaches that can be used for the measurement of urban poverty?" As emphasized above, regardless of the survey type/methodology chosen, comparability across countries, cities, and sub-regions should be achieved and disaggregation at various levels should be possible in ideal data collection studies. Some of the alternative approaches are summarized below:

- ***Income- or consumption-based monetary measures:*** Studies based on monetary measures of income and/or consumption typically fix a basket of goods/products/services (including a standard set of food, housing amenities, basic garment/clothing, commuting costs, etc.) and then perform an assessment of affordability of the basket. The two major problems about income-based approaches are that (1) income is typically underreported by households especially if informal work is carried out or the family relies on perpetual (conditional) cash transfers, and (2) income may fluctuate substantially depending on employment status of household members and aggregate business cycle conditions; thus, income is typically a less reliable monetary variable than consumption, which is well-known to be reasonably stable over time—since households tend to smooth consumption over the life cycle. An advantage of using monetary metrics is that the cost of living adjustments across regions and over time can be made in a relatively easier way.
- ***Household assets and amenities:*** There are now various standardized surveys—used by a large number of countries—measuring the quantity and quality of assets and amenities that households utilize. Typically, Income and Living Conditions Surveys (ILCS/SILC) and Demographic and Health Surveys (DHS) include detailed modules devoted to measuring household assets and amenities. An important dimension of those surveys is the module measuring home ownership status of households. Typically, home ownership modules include questions on home owner versus renter

status, the amount of rent paid if the dwelling is rented, the value of housing and/or perceived rent of the unit if the dwelling is owned, and the housing tenure. In addition to the home ownership module, there is a wide range of questions on the ownership of other household assets such as TV, washer & dryer, dishwasher, refrigerator, car, computer, etc. Another distinct module measures dwelling characteristics such as the number of toilets/bathrooms, access to centralized heating, the number of rooms, type of the roof, having a balcony/terrace, and type of dwelling (apartment, house, room, etc.). Finally, access to basic needs such as clean water, power, natural gas, and sewage are also reported in the questionnaires. These surveys typically have a micro-level structure at individual and/or household level, their sample sizes are reasonably large to allow for reliable statistical analyses and indicator construction, they allow for regional decomposition (i.e., disaggregation), and they are representative at national level.

- ***Composite indices measuring access to basic needs:*** In this approach, household-level indices are constructed based on various basic needs such as access to school, access to water/sewage/sanitation, access to power, access to adequate housing, daily calorie intake, access to basic health, and access to a baseline social security plan. Households are classified based on their access to the specified basic needs and then composite indices are constructed to identify households who are below a certain threshold in terms of access.
- ***Measures of vulnerabilities:*** Poor households are typically more vulnerable or open to various shocks/conditions than the wealthier ones. For example, shocks to income, consumption, health, and housing may severely affect poor households, which may negatively influence the intensity of human capital investment in their children and may force them to work in "bad jobs." Similarly, they are more exposed to potential negative impacts of natural disasters, violence, and crime. These measures may also have a gender dimension. Domestic violence against women is an important social problem in most countries and there are various surveys aiming to measure the extent of women's exposure to intimate partner violence. These risks and the associated vulnerabilites/susceptibilities are typically measured by specifically designed micro-level standardized surveys. Some studies may prefer to have a panel dimension to be able to follow particular families over time—to control for unobserved heterogeneity. Assessment of vulnerabilities also require the measurement of access to safety nets,

such as access to police services, having established connections with certain social networks, having adequate savings/assets, access to diverse income sources, and access to financing. It should be noted, however, that measurement of vulnerabilities is a complex issue and requires specific survey designs depending on the objectives of the study.

- ***Qualitative studies:*** There are certain aspects of urban poverty that may not be easily captured by pre-coded quantitative surveys. Those aspects typically include the housholds perceptions, subjective evaluations, attitudes, and future plans. The standard qualitative studies typically measure those aspects through various interviewing techniques, round-table discussions, and case/group studies. Although qualitative studies may have specific types of bias—such as much smaller sample sizes than the sample sizes of large-scale quantitative surveys—they may communicate valuable insights to assess various aspects of urban poverty that can be harder to measure with standardized quantitative surveys.

Constructing standardized data sets that can be used to systematically analyze urban poverty requires the identification of a core set of variables, which can be reliably obtained through household surveys or census studies, and administrative data sources [Baker and Schuler, 2004]. Such datasets would not only be used to measure and analyze urban poverty, but can be used to evaluate the impact of various public policies on urban poverty and associated outcome variables.

Household surveys or census studies can include the following information that would allow for analysis with respect to different income groups:

- Household size and family structure;
- Basic demographic information (age, ethnicity, gender, marital status, place of birth);
- Migration status/history of the household;
- Exact location within the city (preferably with sufficient details allowing for a fine-grained regional analysis);
- Detailed questions on education status (including highest educational degree attained, current enrollment status, type of high school such as general versus vocational, private

versus public education, whether pre-school/kindergarten education was taken or not, name of the school and department at tertiary level, etc.);

- Details of household expenditure (how monthly income is spent across goods and services in a typical month; savings);
- Details of employment status (whether the individual is employed, unemployed, or inactive; formal versus informal employment status; hours of work; occupation; industry of current employment; entire employment history);
- Health history of individuals (health is an important component of human capital; some surveys ask detailed questions on health/disease histories of household members, which may provide useful information on the current and future health status of household members);
- Sources of income (labor versus non-labor income; decomposition of labor income between wage, bonus, and other extra payments);
- Housing assets and amenities (characteristics of the dwelling; home ownership; house price/value or housing cost; housing tenure);
- Access to basic services (social security coverage/benefits; health/healthcare access; education; water/sewage/sanitation; energy/power; and other social services);
- Affordability of the basic services;
- General well-being modules (there are standardized surveys designed to measure the general happiness and life-satisfaction levels of respondents; some surveys ask deeper questions about job satisfaction, satisfaction from public services, from national and local governments, and other aspects of life in general; although answers to these questions are mostly subjective, they can be valuable sources of information in the analysis of urban poverty; such modules also allow researchers to assess various political economy aspects of urban life);
- Censuses (although census studies are typically performed once in every ten years, their main advantage is the collection of population level information on a large set of variables that can allow for a highly-detailed disaggregated analysis; by definition, censuses do not include data on income and consumption, but combining censuses with household surveys may improve the locational accuracy and facilitate disaggregation

by providing detailed information on exact street address, building, neighborhood, and municipality level);

- Other targeted sets of questions/modules (for example, specific modules can be designed targeting various aspects of urban life such as local transportation services, commuting distances, traffic congestion, environmental hazard, school quality, etc.).

Administrative data sources can either be used as an alternative to survey-based data or complement survey data along various dimensions. There are several advantages and disadvantages of administrative data sources. The main advantage is that a sampling procedure is not required as it typically includes the entire population. Also, it allows for a highly disaggregated analysis. In terms of disadvantages, confidentiality may be a major concern in terms of access to and coverage of administrative data. Moreover, administrative data provide information on formal sector and informal economic activity, which is crucial in the analysis of urban poverty in developing countries, is not captured by administrative records—whereas survey-based data can reliably collect information on informal employment and economic activity. Another disadvantage of administrative data is that different variables are compiled by different public agencies and it may be difficult to bring together those different pieces as different public institutions may have different data processing, dissemination, and disclosure standards. The way information is gathered, accessed, merged, and disseminated may also make it difficult to standardize administrative data. Once the data are collected, it is important to make it publicly available to facilitate further research and replicability of existing studies. However, confidentiality of administrative data can constitute a significant barrier in front of free availability of data. Some of the key administrative variables that can be used in urban poverty analysis can be listed as follows:

- Individual-level income (social security registries can provide accurate information on formal labor income);
- Education variables (survey-based responses can be complemented with detailed administrative data to supplement the base for human capital information; scores obtained in centralized exams, which are used in the literature as valuable proxies for labor productivity, can also be utilized for cross-sectional comparison purposes);

- Violence and crime variables (crime, violence, and associated vulnerabilities can be assessed using both individual-level registries and region-level disaggregated statistics);
- Health records (administrative health records both at individual and hospital levels can be used to assess access to and quality of health and healthcare services; the number of doctors, other healthcare personnel, and hospital beds in the region of interest can also be used as relevant variables);
- Access to infrastructure (detailed regional data on infrastructure services such as roads, schools, hospitals, marketplaces, and transportation can be used to assess the link between urban poverty and infrastructure; detailed information on the location of public infrastructure can largely benefit spatial analysis of urban poverty; this information can also be combined with survey data);
- Municipal services (the quantity and quality of municipal services; number of staffing in municipal services);
- Tax records (tax revenue by source and region);
- Firm-level datasets (the location of firms and industries; transaction-level details; the nature of economic agglomeration);

Survey-based (both large-scale household surveys and qualitative studies) and administrative datasets may fall short of measuring certain aspects of urban poverty. To remove those data gaps, various data science techniques are now being used to generate new data and supplement the existing datasets. Most importantly, it is crucial to visualize the poverty profiles of cities based on highly disaggregated data with very detailed spatial information. Creating an accurate map of where the poor live and how the distribution of poor within a given city evolves over time would provide a very useful baseline information on how the urban poverty reduction efforts should be allocated within the city. Land use patterns, location of ghettos/slums, access to employment, and access to school/health services can be analyzed using the spatial poverty profiles/maps. The newly emerging data science and other GIS tools enable analysts to bring together fine-grained regional information and build useful maps that can be used in urban poverty analysis. The nature of poverty within an urban area, extent of deprivation, risk factors, vulnerabilities, and rural-urban network links can also be visualized using similar techniques.

The GIS methods can be supplemented via other data-scientific methods. For example, Henderson et al., (2012) use satellite-based data (i.e., night-light analysis) to extract highly-detailed regional information on the level of economic activity in narrowly-defined geographical areas. The night-light intensity is measured over very small pixels on high-resolution photos of earth, which enable measuring the level of economic activity over very small land pieces. Other studies utilize various publicly available tools (such as Google Maps images) to compare the time-series evolution of the boundaries of urban areas and identify poor neighborhoods/slums using several proxies. Glaeser et al., (2018) use crowdsourced granular data obtained from online platforms (i.e., Yelp) to nowcast the level of activity in the local economy. There is also a large body of literature using data from social media platforms to estimate the changes in mood, attitudes, and other socio-economic behavior within narrowly defined neighborhoods. Various big data sources—such as mobile phone data—with highly-detailed regional information have also been used to understand various behavioral outcomes across regions and groups of individuals. These and other novel techniques may also be used to supplement information obtained from household surveys, censuses, and administrative data sources in the analysis of urban poverty.

In the analysis of urban poverty, targeted data collection efforts focusing on certain aspects of urban poverty are particularly useful to produce novel information. One of the main challenges, however, is that specific surveys are more likely to lack representativeness at national level as specific topics are more likely to be specific to certain regions, which may raise external validity concerns. Another potential difficulty is related to the need for performing follow-up studies. Follow-up surveys are needed to assess the impact of various interventions and also to understand the evolution of the outcome variables of interest over time. Without appropriately designed follow-up studies, urban poverty analysis would be forced to rely on cross-sectional snapshots, which would reduce the information value of data collection efforts. Follow-up studies, on the other hand, tend to increase the monetary and time cost of data collection. It should also be noted that data collection studies focusing on specific topics in certain regions would be more productive when partnerships with local academic community, authorities, and other institutions are established.

A key issue in collecting data relevant for urban poverty analysis is that time-intensive surveys are less likely to succeed in terms of the probability of having the respondents complete

the survey and provide accurate information. Therefore, increased time intensity of surveys likely reduces data quality.

Data collection is a costly process. Depending of the sample size, the number of experts employed, and the coverage of the survey, the cost can rapidly rise, and survey projects become unaffordable. Benefits, on the other hand, will likely be seen in longer term—as it takes time for the data to become available and start getting used in research, policy analysis, and policy making. Data should be made publicly available for the use of researchers and policy analysts to maximize the actual and potential benefits. Costs and benefits of data collection should be performed including all potential short- and long-term aspects. Sustainability of data collection is another major challenge, as information should ideally be collected repeatedly over time and the survey coverage may also expand depending on needs.

1.4. Inequalities and Access to Decent Jobs in Urban Areas

With the rapid increase in urban populations, unemployment, underemployment, and lack of access to decent jobs have become major labor market issues in urban areas. The movement of rural poor to urban areas—especially in the developing countries—generates heightened risks of persistent problems predominantly in the lower segment of labor markets.

The number of urban dwellers living under the poverty line, which is close to one billion as of today, is expected to exceed 3 billion by 2050. This suggests that the availability of decent jobs, which is already a serious problem in certain regions, may become a much more serious issue in the future. Asia and Africa, which contain the poorest regions in the world, and which are expected to exhibit the main bulk of the increase in urban population in the next three decades, will likely be affected the worst. The updated UN agenda clearly indicates that the increase in joblessness in urban areas is positively correlated with urbanization trends in all regions of the world—but, the trends are more visible in Asia and Africa. High informal employment rate is another salient feature of urban labor markets in developing countries. With the advancement of new labor-saving technologies—such as automation and digitization—demand for manual and low-skilled labor constantly declines, which also feeds joblessness among the urban poor. Moreover, the problems of hunger, crime, violence, and disease, which are closely related to poverty, are more prevalent in urban areas even in the most developed countries. It is also well-known that the cost of living is very high [Nakamura et al., 2016]; even essentials such as food, water, power; and health are not easily affordable; and

access to basic services is limited especially for the urban poor in all areas of the world. The ILO estimates suggest that the number of new jobs created in cities constantly falls short of new entrants to the urban labor markets, which feeds joblessness and leads to worse employment conditions in urban areas especially for the poor.

Although these problems point out to heightened poverty risks in urban areas, cities continue to be attractive places to live and still regarded as the main engines of economic growth and productivity improvements. Urban areas produce around three fourths of the world's GDP and cities are still the key resources supporting sustainable economic development and growth. However, with the uncontrolled increase in urban population especially in developing countries, costs of urbanization have started to outpace the benefits.

Autor (2019) argues that what has happened in the urban labor markets in the past four decades has significantly contributed to increased earnings inequality—especially in the United States. The main idea is that jobs have been polarized; college-educated workers have experienced significant expansion/growth in their job opportunities and wages, which are mostly high-skill/high-wage jobs; mid-skill/mid-wage jobs have sharply vanished and wage growth has been negative for this type of jobs; and low-skill/low-wage job opportunities have also expanded, but the wage growth have been stagnant for low-skill jobs .

These developments have largely contributed to increased earnings inequality. The decline of mid-skill jobs pushed low-educated individuals toward the lower segment of the labor markets and the higher-educated could find much better/decent jobs. Autor (2019) also extends his analysis focusing on four areas with different population densities: rural areas, suburbs or smaller towns, midsize metropolitan areas, and big cities. He documents that cities and metropolitan areas have accommodated highly productive knowledge-based industries and, thus, they have attracted talent and higher-educated workforce. The picture is quite different for lower-educated workers. In the post-World War II period, cities offered a large number of high paying, mid-skill jobs mainly occupied by non-college educated workers. After 1970s, blue-collar jobs started to disappear in urban areas because of developments in labor-saving technologies and automation. Similarly, mid-skill white-collar jobs, which were mostly administrative in nature, also declined due to increased computerization and other IT advances. So, the urban labor markets currently accommodate high-educated individuals in good jobs and low-educated individuals in the lower segment of the labor market. Access to better jobs has become harder and more limited for lower-educated individuals coming from poor rural

regions. Although David Autor's work focuses on the labor markets in the United States, similar patterns are observed in other countries, too.

Based on Autor's results, the rural-urban migration in the developing world can be interpreted as a response to increased labor market opportunities for low-skilled individuals in urban areas. Rapid emergence of mega-cities in developing countries can also related to this response. Available jobs with low skill requirements in those countries, however, are mostly informal, with no social security coverage and no job security, and feature high labor market mobility and low pay. As a consequence, job polarization can be linked to the simultaneous increase in urban poverty and income inequality, which jointly feed socio-economic problems and poverty in urban areas. Paradoxically, persistent urban and rural poverty in Asia and Africa lead to generation of mostly informal and "bad" jobs with low skill requirements, which seems to increase urban poverty further.

Urban employment in developing countries can be characterized by the term "underemployment," which suggests that workers are not employed in jobs that match their skills, they are paid poorly, and employed in jobs with inferior amenities (such as no formal training, social security, insurance, and access to other safety nets). Unemployment may be moderate in most urban areas, but underemployment is typically very large especially in urban locations with high poverty rates. Regions such as Sub-Saharan Africa, Latin America and the Caribbean, and various regions in Asia have very high rates of labor market informality in almost all sectors and, therefore, most urban jobs in those regions can be classified as "bad" jobs, which are associated with urban poverty. Disadvantaged groups, such as women and youth, are typically affected more severely from these developments in urban labor markets.

There are several barriers that prevent job seekers from finding good jobs with high pay and better benefits. Specifically, issues such as high commuting costs, discrimination, criminal record, low skills/education, restricted access to job information, and housing instability limit the job seekers' ability to have access to decent jobs especially in developing countries.

1.5. Infrastructure, Public Policy, and Regulation

One of the most important roles of community infrastructure work and public investment in infrastructure projects is the effective creation of permanent employment especially for low-income urban residents; thus, infrastructure policies benefit society through both urban

development and increase in employment opportunities for everyone in the society, particularly for low-income urban dwellers. Local resources, such as labor, raw and manufactured inputs, land, skills, and other human/physical resources are heavily utilized, which are associated with immediate welfare improvements for the residents.

Infrastructure investments can effectively contribute to job creation, reduce poverty particularly in urban areas, and support economic development [Demetriades and Mamuneas, 2000]. Several infrastructure projects were implemented around the world—such as the ILO/EmpLED-funded project in various provinces of Nepal, and others in Philippines, Indonesia, and Thailand—to reduce urban poverty, and create pro-poor and inclusive employment in the Asia-Pacific region. The infrastructure projects also help strengthening safety nets/preparedness in poor areas vulnerable to natural disasters—such as the typhoon-prone areas in the Asia-Pacific region.

The most common forms of infrastructure investments include construction, modernization, and/or maintenance of water/irrigation systems, mobile communication and internet network, bridges, ports/airports, roads/highways, railways, power plants, which directly affect productivity and generate income both nationally and locally. The role of public capital building on productivity and growth has long been appreciated in the economics discipline, although the link between infrastructure investments and urban poverty is an understudied area. One of the earliest papers highlighting the importance of public capital investment is by Aschauer (1989), who argues that underinvestment in public infrastructure generate significant productivity losses—based on evidence from the US in 1970s. After Aaron (1990) reported that the rate of return to infrastructure investment in the US in 1970s was as high as 140 percent based on Aschauer's framework, a heated policy debate was sparked mainly arguing that the rate of return to public investment should even be higher in countries lacking public infrastructure. These debates then led international organizations to fund large infrastructure investment projects to support local development in the underdeveloped regions of the world.

Infrastructure investments can boost employment creation through various direct and indirect channels. The investment projects requiring long-term construction work directly increase local employment by generating jobs and income; by increasing business opportunities for local firms and manufacturers; by increasing the utilization of local resources, inputs, and intermediate goods; and by increasing the demand for related local service sector activities. The

indirect effects kick in after the projects are completed. In particular, improved infrastructure in the region can indirectly boost economic growth by improving access to markets, goods, and services; generating substantial productivity gains and cost reduction; and by increasing income and employment opportunities as second-round effects of improved economic activity. Overall, improved infrastructure can serve as an effective tool for poverty reduction especially in urban settings.

To improve the returns to local infrastructure investments both in terms of achieving increased employment opportunities and higher productivity levels, it is crucial to implement effective strategies that enable a viable cooperation basis between national/foreign governments, local governmental bodies, private sector, international development agencies, community associations, and other local partners. Moreover, using locally available resources as opposed to heavily mechanized imported technologies would be important for several reasons including: (1) enhancing community involvement; (2) absorbing more low-skilled employment through direct and indirect mechanisms; (3) optimizing the use of local labor; (4) directly contributing to household income and consumption; (5) enabling negotiations between local participants; (6) strengthening the roles of local suppliers and small contractors; (7) supporting local capacity development; (8) having access to more environmental-friendly resources and providing incentives for creation of green jobs; and (9) speeding up construction and maintenance operations.

Although the infrastructure investments in less-developed regions were initially directed toward rural areas—mostly in the form of agricultural infrastructure, i.e., the ASIST AP program in the Asia Pacific region—the recent discussions have shifted the focus toward urban infrastructure needs in light of increased urban poverty in Asia and Africa. Given the current urbanization trends, it is essential to develop viable strategies to support sustained employment creation in urban areas through investment projects. In line with this view, several projects have been implemented in African countries to improve job creation in slums—see for example the Employment-Intensive Investment Programs (EIIP) of the ILO aiming at infrastructure upgrading in various countries—and, thus, to reduce urban poverty rates.

More recent policy discussions shift the main focus of infrastructure investments toward local IT infrastructure. Fabritz (2013) argues that investment in broadband infrastructure—that improves access to internet for both firms and consumers—positively affects employment growth in less-developed communities. Falck et al., (2016) find that improved broadband

infrastructure encourages service sector start-up activity again in less-developed urban settings. De Stefano et al., (2014) document that investment in broadband infrastructure increases job creation by new firms rather than incumbent firms, which suggests that a strong technological infrastructure is an incentive for both firm entry and job creation. Canzian et al., (2015) report that improved local broadband access substantially increases sales and turnover for local firms, while the impact on employment is rather limited. Finally, there are also several studies arguing that improved access to internet reduces labor market frictions, improves the productivity of job search activity, and increases match quality [Falck, 2017].

Improved local infrastructure is also associated with strengthened gender roles in less-developed countries. Lei et al., (2019) show that improved road infrastructure in India increases bus frequency and therefore women's access to public transportation services, which leads to a rise in female labor force participation and non-farm employment. This has strong second-round effects in terms of increased investment in children's human capital—see, e.g., Schultz (2001), Chant (2013), Koolwal and Van de Walle (2013), and Fluckiger and Ludwig (2017).

The African cities chronically suffer from lack of physical capital of all sorts [Collier and Venables, 2016]. Around 80 percent of urban population reside in informal housing with extremely inadequate access to standard housing services and amenities—such as water, sanitation, and power [Das et al., 2017]. Informal settlement is fragile and can be dissolved if detected by authorities. There are also modern and spacious houses serving the elite, which suggests that there are very large gaps in terms of living standards of rich and poor in African cities. The lack of access to decent low-cost housing in those cities is an important factor feeding poverty. Large infrastructure projects aiming to construct affordable housing for the poor can both increase economic activity and local employment, and improve the living standards of the poor.

In addition to the lack of low-cost housing, power and road infrastructures are also inadequate in African countries. Various reports suggest that the underdeveloped regions in Asia now have access to much more developed power and transportation infrastructure than those in Africa thanks to the implementation of intensive infrastructure investment projects in poor Asian countries in the past two decades [Foster and Briceño-Garmendia, 2010].

The major challenge associated with infrastructure investments in less developed regions is financing. Without sustainable and low-cost financing, less developed areas may not undertake the necessary investments that would improve the life standards of the poor living in those regions. Various financing models are proposed in the literature [Alm, 2015]: (1) municipal borrowing; (2) capital grants in the form of inter-governmental transfers; (3) project-based financing by international organizations with the support of donor countries and/or institutions; (4) public-private partnerships; (5) privatization; (6) land- and/or asset-based models; and (7) direct public investments. The choice of the ideal and most appropriate model depends on the type of the investment project and the scale/scope of investment. Legal background should also be conducive of externally and/or privately financed local investment projects.

1.6. Future Trajectories

There is a declining trend in global extreme poverty. The World Bank estimates suggest that, over the last three decades, the share of population below the extreme poverty line—which is roughly taken as $1.90 per day in the World Bank (2018) study—is around 10 percent as of 2015 as opposed to a share around 35 percent in late 1980s, which suggests a considerable decline. The SDGs agreed upon by international organizations, development agencies, and governments aim to "end" extreme poverty by 2030—the quantitative target is to reduce the share of world's population living in extreme poverty below 3 percent. Accordingly, many international development agencies have made "eradicating extreme poverty" their main mission and mandate. It is also well-known that, in addition to the population shares living below certain poverty lines, inequality indicators are also important to detect distributional dimensions of poverty; thus, policy makers have been paying particular attention to the degree of inequality around the world [Ravallion, 2001; World Bank, 2016]. In line with this view, the SDGs include both ending extreme poverty globally and reducing socio-economic inequality within economies as co-interacting goals—SDG1 and SDG10, respectively. As urban poverty is identified as a key source of persistence in poverty—i.e., an important factor slowing down poverty reduction—SDG11 explicitly sets reducing urban poverty in rapidly urbanizing areas especially in developing countries as a separate goal.

Lakner et al., (2020) perform a detailed simulation exercise to estimate the evolution of global extreme poverty until 2030 by studying different scenarios on economic growth and inequality levels in each country. Such a simulation exercise not only tests whether the SDGs are achievable by 2030, but it also sheds light on the mechanisms through which economic growth and inequality affect poverty reduction in different countries. The simulation exercise is performed using micro-level data for a large set of countries and reaches a coverage of around 98 percent of the world's population, which is a novel aspect in the literature. The main measure of inequality used in the simulation exercises is the Gini index, which is a widely used and also an easily-interpreted indicator in studying the distributional aspects of economic inequality for both academic and policy-making purposes.[3] Recent studies argue that national micro-level survey data sets are somewhat disconnected from the national income and product accounts (NIPA) as the income and consumption measures developed using those surveys are rather poor proxies for economic growth [Deaton, 2005; Pinkovskiy and Sala-i-Martin, 2016]. To address this criticism, the simulation exercise uses a machine learning algorithm to calculate the pass-through rate from survey-based income and consumption indicators to NIPA growth.

Based on the likely scenario that the country-level growth rates and economic inequality levels will remain around their historical levels, the simulation exercise yields the result that the global extreme poverty rate will remain around 7-8 percent by 2030, which is not much lower than its current levels. Under the alternative scenario that the Gini index for each country decreases by one-percent every year, the global poverty rate falls to around 6.5 percent by 2030, which suggests that the number of people living in extreme poverty declines by approximately 90 million.[4] It is also noted in the study that a one percentage-point per year reduction in inequality in each country reduces poverty rates to a larger extent than a one-percent per year increase in economic growth rates. In other words, poverty reduction is more sensitive to declines in economic inequality than to increases in economic growth. The estimates also suggest that under more optimistic scenarios, the official target of reducing the share of world's population living in extreme poverty below 3 percent is hard to meet.

[3] Note that the Gini index also has some disadvantages. Most importantly, the same Gini index imply infinitely many distributional changes that give the same inequality level. This suggests that whether the change in the Gini index comes from the upper or lower portion of the distribution does not matter for the numerical value of the Gini index, but the economic consequences of the distributional differences can vary widely.

[4] The simulations regarding the changes in Gini indices are performed at national level. It is well-known that within-country inequality and global inequality are related but distinct concepts. A change in within-country inequality may correspond to a smaller change in global inequality, which may be a relevant concern under alternative modeling options [Anand and Segal, 2008].

These results are extremely relevant for urban poverty discussions, as the urbanization rates are expected to increase rapidly especially in developing countries; the share of urban poor is expected to rise; and rural poverty may, at least partially, be imported to urban areas through various mechanisms in the coming decades based on the UN estimates. Increased urbanization rates has a potential to improve economic growth performances in developing economies, however it is widely agreed that the rise of urban poor is strongly associated with increased economic inequalities. Thinking in terms of the results of the simulation exercise presented in Lakner et al., (2020), targeting economic inequalities among urban population in rapidly urbanizing areas in developing countries—especially in Asia and Africa—can be a potential policy focus in achieving the SDGs. It should also be noted that policies targeting inequality reduction may be harder to implement than policies targeting economic growth due to political economy considerations.

COVID-19 has had a substantial impact on every country in the world in various ways; as a result, the potential impact of COVID-19 on poverty dynamics should also be considered in performing projections for the future. By its nature, COVID-19 is mostly an urban phenomenon and it affects urban populations more severely than rural ones. Baseline estimates presented by Lakner et al., (2020) suggest that the global pandemic operates in their model through its impact on the Gini index and it is expected to drive an additional 60 million people worldwide into extreme poverty in 2020. Under alternative scenarios, a 2 percent increase in the Gini index in each country and a 2-percentage point decline in growth rates separately increase the number of global poor by 94 million and 82 million in 2020, respectively.[5] These estimates imply that, under slightly more pessimistic assumptions and scenarios, the negative impact of COVID-19 on the number of people living under extreme poverty tend to outweigh the improvements in poverty rates expected to take place until 2030. Considering the risks that COVID-19 may keep its effectiveness for several more years, these estimates should be interpreted as lower bounds.

[5] There are other papers trying to estimate the long-term impact COVID-19 on future poverty rates in the world. Sumner et al., (2020) estimate the impact of a fixed and transitory decline of economic growth rates on poverty, while Laborde et al., (2020) develop a general equilibrium model to endogenize the link between COVID-19 and economic growth in projecting poverty rates.

There are alternative methods and approaches used in the literature to forecast global poverty rates and model distributional aspects of poverty dynamics under various assumptions and scenarios. There is strand of literature assuming that growth is distribution-neutral, which implies that inequality is constant while growth varies over time—see, e.g., Birdsall et al., (2014) and Hellebrandt and Mauro (2015). Another set of papers relax this strong assumption and instead assume that growth is distribution-neutral (i.e., inequality does not evolve over time), but there are initial and time-invariant differences in economic inequality across countries [Ravallion, 2013]. Finally, other papers let inequality vary over time using various different indicators and data sets. For example, Edward and Sumner (2014) use the Q5/Q1 ratio, Ncube et al., (2014) use the income share of the bottom 40 percent, Chandy et al., (2013) utilize the Palma ratio, and Hoy and Samman (2015) employ the income growth rates of the bottom 40 percent. Although how inequality is modeled in estimating poverty trajectories may change the results, a key finding in all of those papers is that increased economic inequality is associated with substantial increases in poverty rates both at a country level and globally.

Assumptions about the growth rates imputed into simulations may also matter and have a potential to change the poverty trajectories. Economic growth projections are derived using various tools and measures in the literature including survey-based projections [Yoshida et al., 2014], projections obtained from growth models based on NIPA [Hillebrand, 2008], and econometric growth forecasts [Karver et al., 2012]. The poverty simulations presented by Lakner et al., (2020) use official World Bank forecasts corrected for the survey and NIPA differences. The role of urban economic growth in reducing urban poverty, however, is not as mechanical as the simulation studies suggest. It is well-known that urban poverty is multidimensional and non-monetary factors largely influence the living conditions of the urban poor. In accounting for the impact of urban growth on future urban poverty, projections about multidimensional non-monetary factors should be carefully imputed into the models along with growth projections, which poses additional challenges on forecasting urban poverty.

Another complexity is the potential endogeneity between economic growth and economic inequality. As proposed by the pioneering work by Kuznets (1955), there is potentially a positive association between economic growth and inequality in less developed countries—although the underlying causal mechanisms have led to controversies in the literature; see, e.g., Ferreira and Ravallion (2009). The simulations performed in Lakner et al., (2020) do not consider any potential endogenous relationship between economic growth and inequality. This

potential relationship may be more important for urban poverty studies, as faster economic growth may lead to more adverse distributional consequences in urban settings even in the short-term. The models/tools to be developed in estimating the link between urbanization and urban poverty should consider these additional complexities.

The existing estimates suggest that attaining the goals set for 2030, i.e., eradicating poverty, does not seem likely in light of the recent challenges posed by COVID-19 developments, unless additional measures are taken. Although global poverty rates have exhibited a strong declining trend over the past 40 years, constantly emerging new challenges are expected to significantly slow down the pace of poverty reduction. Rapidly increasing urbanization rates in developing countries, emergence of new megacities and rapid enlargement of the existing ones especially in Asia and Africa, and uncertainties surrounding COVID-19 especially in overcrowded/urbanized areas suggest that expected worsening in urban poverty rates is the major challenge for poverty reduction. These considerations imply that the declining trend in global poverty rates may be ceased in the coming decades if the policy challenges posed by urban poverty issues are not addressed appropriately.

There is a debate in the literature suggesting that the pace of poverty reduction substantially slows down at lower rates of poverty. The main reason is that it is hardest to improve the welfare status of the poorest individuals. As a consequence, returns to poverty reduction efforts/policies decline as the number people below the specified poverty threshold decreases. In a recent study, Ravallion (2020) argues that the countries who have successfully eliminated poverty over time have also experienced substantial difficulty in going from a 3 percent poverty rate to zero poverty. This may partially explain why policies operating through decreasing economic inequality may be particularly effective in reducing poverty, particularly in urban settings. To put it differently, regressive distributional processes may be closely associated with the slowdown in poverty reduction trends.

There are other alternative explanations for the deceleration of poverty reduction around the world. First, the increased rate of urbanization has brought a larger number of poor/unskilled people into urban areas, which may be reducing productivity and returns to agglomeration in megacities across the developing countries with relatively high poverty rates. Second, it is documented in a recent World Bank report that [World Bank, 2018] the economic growth rates have visibly decelerated in countries accommodating a large fraction of the world's poor—such as China, India, other populated countries in Southeast Asia, and Sub-

Saharan Africa. The economic growth forecasts for those countries suggest that the outlook is not positive. Therefore, the poverty reduction trends are not expected to speed up in those countries. Third, countries that experience long-term political turmoil, civil conflict, forced displacement, and instability have more fragile economic status and lack of a sound institutional framework substantially reduces the effectiveness of poverty reduction efforts in those countries. Hence, political stability and long-term institutional commitment are important elements for the sustainability of poverty reduction policy implementation in the less developed world [Corral et al., 2020].

Another striking finding of the Lakner et al., (2020) study is that as poverty declines over time, it becomes more concentrated into a smaller number of countries. In other words, there is now a polarization across the world in the sense that there is a large number of countries with little or no poverty, while there are very high poverty rates in a rather smaller set of countries. There are two further considerations about this finding. First, the concept of "urban poverty" is harder to measure and the countries that are labelled as "countries with little or no poverty" may in fact exhibit substantial poverty in urban areas when appropriate data are collected and analyzed. Second, the poor countries have been facing adverse trends due to COVID-19 and rapid urbanization trends; thus, poverty rates may in fact be rising in those countries, which suggests that country- or region-specific poverty monitoring should be performed and reported rather than focusing merely on global poverty aggregates.

The refugee issue also substantially puts urban populations under pressure in major host countries, especially in the MENA region and Africa. Refugee influx can both positively and negatively affect the host country outcomes along various directions. The increase in population in host countries as a consequence of refugee inflows directly translates into increased demand and consumption; thus, aggregate economic activity improves. However, refugees also demand health, education, and security services, and they often lead to congestion in the provision of public services in host countries. Moreover, they enter host country labor markets through informal jobs and tend to displace low-skilled native workers [Ceritoglu et al., 2017; Del Carpio and Wagner, 2015; Tumen, 2015; Tumen, 2016; Fallah et al., 2019; Bagir, 2017; Akgunduz et al., 2018; Akgunduz and Torun, 2018; Peri and Yasenov, 2019]. They also demand low-cost housing and prefer to live in slums in segregated neighborhoods, which feed inequalities in urban settings [Balkan et al., 2018]. The refugee issue has a regional characteristic; therefore, the regions with high refugee intensities should also address the potential negative impact of

hosting a large refugee population on urban poverty rates in densely populated areas. Given that long-term political stability in major source countries—such as Syria, Libya, Afghanistan, Yemen, Sudan, etc.—has not been established yet, the refugee population is expected to pose continued challenges on urban poverty in host countries in the near future. Urban poverty trajectories should take this issue into consideration in regions where refugees are settled extensively. Failing to address the challenges posed by increased refugee presence may generate political economy consequences [Altindag and Kaushal, 2020].

1.7. Determinants of Urban Poverty

The main goals of this section are to demonstrate that (1) urban poverty is a complex phenomenon, (2) the seemingly strong positive association between economic growth and urban poverty is, in fact, rather weak and unstable (i.e., it vanishes after other socio-economic controls are introduced into the analysis), and (3) urban poverty reduction policies should operate along multiple dimensions. To achieve these goals, a simple econometric analysis is performed using cross-country data obtained from the World Development Indicators (WDI).[6] The results of the econometric analysis will set the stage for the conceptual framework and policy recommendations presented in Chapters 2 and 3, respectively.

The dependent variable is the share of population living urban slums, which is constructed using two different variables available in the WDI data set: the share of urban population and the share of urban population living in slums. Multiplying the two shares gives the share of population living in slums. The main explanatory variables are listed as follows: natural logarithm of the purchasing power parity (PPP) adjusted per capita GDP in 2017 constant international dollars, natural logarithm of the Gini index (World Bank estimates), informal employment expressed in terms of the share within the total non-agricultural employment, the female labor force participation rate calculated in terms of the share within the female population of age 15-64 (ILO estimates), the child employment rate as of age 7-14, natural logarithm of the number of hospital beds per 1,000 individuals, and natural logarithm of the length of rail lines in kilometers per 1,000 individuals.

Tables 1.1 and 1.2 present the estimates obtained from the least-squares regression of the urban poverty indicator on the explanatory variables listed above. Heteroskedasticity-

[6] See https://databank.worldbank.org/source/world-development-indicators.

consistent (i.e., robust) standard errors are reported in parentheses. The estimations are performed in two steps. The first step reports the regression of the share of population living in urban slums on each of the explanatory variables separately—see Table 1.1. The second step gradually introduces explanatory variables into the analysis and the last column in Table 1.2 incorporates all of the independent variables. The main goals of this two-step strategy are (1) to estimate the pairwise correlations between the dependent variable and each independent variable and (2) to understand how the explanatory power of each variable changes as additional covariates are introduced.

The estimates presented in Table 1.1 suggest that three variables—per capita GDP, informal employment, and child employment—exhibit a statistically significant relationship with urban poverty. The negative relationship between growth and poverty is well established in the literature. The estimates provide additional evidence that informal employment and child employment are positively related to urban poverty and the statistical power of the relationship is high. Interestingly, informal employment and child employment have much higher explanatory power than per capita GDP based on the R-squared statistic. This confirms the view that urban poverty is a complex phenomenon and it is determined by a large set of elements with different socio-economic implications.

Table 1.2 presents the conditional correlations between variables. A statistically significant negative relationship between urban poverty and per capita GDP can be observed when only the Gini index is included, but it disappears as other variables are introduced. This suggests that the negative correlation between growth and urban poverty might be driven by other variables that are often ignored in cross-country analyses, but affect both urban poverty and economic growth. The results also suggest that informal employment and child employment are viable covariates for urban even after controlling for all other factors. Finally, the variable representing the railway infrastructure exhibit a strong negative and statistically significant correlation with urban poverty after other covariates are controlled for. Similarly, the fit of the model improves substantially after informal employment, child employment, and railway variables are introduced. Overall, these results confirm the main idea that urban poverty is driven by many different socio-economic variables and other variables describing the institutional and/or policy environment. It should be noted that the analysis presented in this section is severely limited by data availability issues—both in terms of missing data for existing variables in many countries; and lack of appropriate variables to proxy urban poverty and also

lack of variables to predict it. Nevertheless, the existing data confirm that urban poverty is a complex multidimensional phenomenon and an approach solely focusing on economic growth-related issues would miss other relevant and strong determinants of urban poverty.

Dependent variable: Share of population living in urban slums							
	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**	**[7]**
ln(GDP)	-0.025* (0.014)						
ln(Gini)		0.049 (0.083)					
Informal emp.			0.226*** (0.062)				
Female LFP				0.007 (0.062)			
Child emp.					0.258*** (0.056)		
ln(hosp. beds)						-0.009 (0.031)	
ln(rail line)							-0.022 (0.014)
# of obs.	99	93	62	102	82	104	63
R-squared	0.04	0.01	0.17	0.01	0.19	0.01	0.04

Table 1.1: *Regression I. Robust standard errors are reported in parentheses. ***, **, and * correspond to 1 percent, 5 percent, and 10 percent significance levels, respectively.*

Dependent variable: Share of population living in urban slums							
	[1]	**[2]**	**[3]**	**[4]**	**[5]**	**[6]**	**[7]**
ln(GDP)	-0.025*	-0.034***	-0.006	-0.007	0.011	0.010	0.016
	(0.014)	(0.013)	(0.023)	(0.023)	(0.025)	(0.025)	(0.031)
ln(Gini)		0.055	0.061	0.063	0.053	0.060	-0.086
		(0.082)	(0.075)	(0.073)	(0.079)	(0.071)	(0.088)
Informal emp.			0.233*	0.230*	0.233*	0.304**	0.320***
			(0.122)	(0.122)	(0.129)	(0.118)	(0.114)
Female LFP				-0.009	-0.034	-0.047	0.103
				(0.085)	(0.085)	(0.089)	(0.089)
Child emp.					0.172*	0.179*	0.164
					(0.100)	(0.104)	(0.132)
ln(hosp. beds)						0.041	-0.044
						(0.058)	(0.054)
ln(rail line)							-0.059***
							(0.020)
# of obs.	62	62	62	62	62	62	62
R-squared	0.04	0.07	0.20	0.20	0.26	0.27	0.47

Table 1.2: *Regression II. Robust standard errors are reported in parentheses. ***, **, and * correspond to 1 percent, 5 percent, and 10 percent significance levels, respectively.*

Chapter 2

Identifying the Main Urban Poverty Challenges for the OIC Countries

2.1. Basic Trends in the OIC Countries

A major obstacle in performing a comprehensive analysis of urban poverty with cross-country comparability is the lack of high-quality data/indicators directly measuring, or even proxying, poverty developments in urban areas especially in developing or less-developed countries. Although there are various very detailed country-level studies aiming to both collect data and perform urban poverty analysis, most of those studies focus on specific topics, time periods, and sub-regions within a country; they also adopt different empirical and/or data-collection procedures. Therefore, the results of those studies do not generally yield directly comparable estimates across countries.

In this section, various indicators obtained from the World Bank, World Development Indicators (WDI) data set are elaborated to understand the recent trends in urban poverty in the Organization for Islamic Development (OIC) countries. Although indicators directly measuring various aspects of urban poverty are not consistently available, joint use of various related indicators forms a sound basis for an elementary analysis. The data period is 1980-2019. Since the indicators are not available for every year and every country, country-level observations are averaged to construct four broad time intervals: 1980-1989, 1990-1999, 2000-2009, and 2010-2019. Despite this time aggregation, some countries are still not represented in the analysis, which highlights the data gaps for those countries and for urban poverty analysis in general.

Four indicators are used in the analysis of trends: (1) the poverty headcount ratio at $1.90 a day (2011 PPP) (% of population), (2) urban population (% of total population), (3) the population living in slums (% of urban population), and (4) the Gini index.[7] The poverty headcount ratio is defined as the percentage of population living on less than $1.90 a day at 2011 international prices—i.e., PPP adjusted. The urban population ratio simply refers to

[7] There are other indicators in the WDI database and also in other sources. However, most of the poverty indicators aim measuring rural poverty; other ones focusing on urban poverty have many missing observations, thus do not allow for a comprehensive cross-country comparison.

people living in urban areas as provided by the national statistical offices—collected and processed by the UN Population Division. The population living in slums ratio gives the proportion of the urban population living in slum households. In the WDI metadata, a slum household is defined as "a group of individuals living under the same roof lacking one or more of the following conditions: access to improved water, access to improved sanitation, sufficient living area, and durability of housing." Finally, the Gini index, which is the most widely used measure of inequality, measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution. A higher value of the Gini index indicates higher inequality.

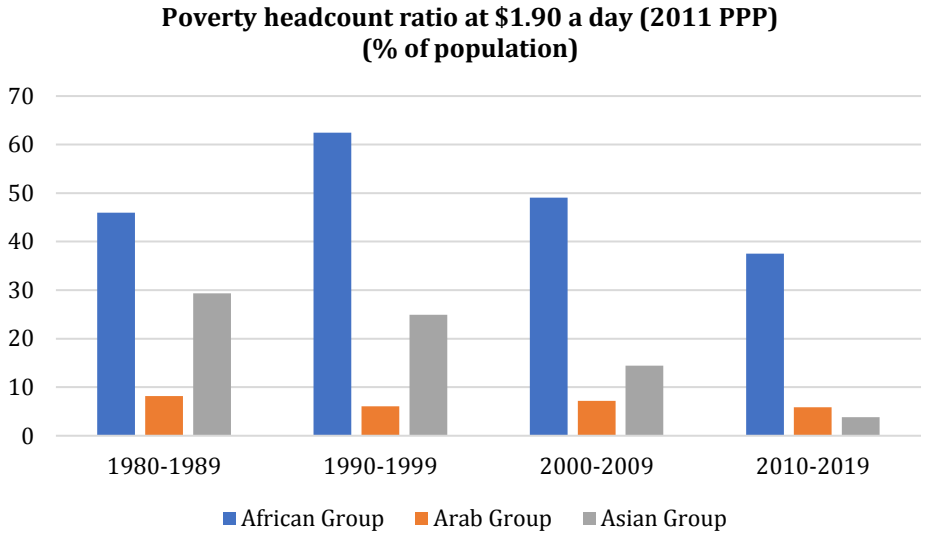

Figure 2.1: *Poverty headcount ratio at $1.90 a day for OIC countries.*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

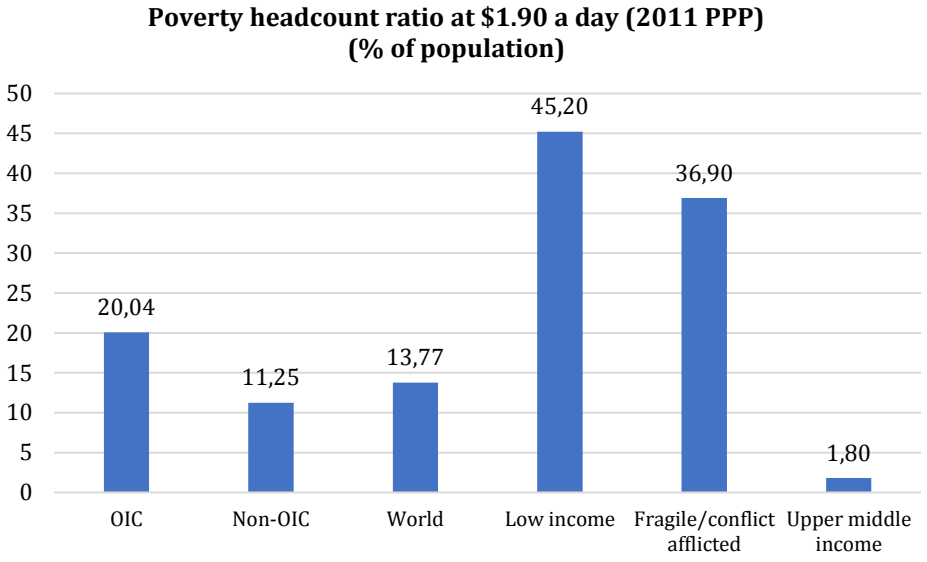

Figure 2.2: *Poverty headcount ratio at $1.90 a day for country groups.*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

Table 2.1 in the Annex documents the country-level poverty headcount ratios (at $1.90 a day) for the OIC countries. Although the numbers need to be interpreted cautiously due to missing observations and other standard problems caused by simple averaging across countries, there are several patterns that need to be highlighted. First, the poverty headcount ratios have been persistently low (around 5-8 percent) in the Arab group. There are many resource-rich countries in this group, which push the poverty headcount ratios down, as expected. However, there is some heterogeneity within the Arab group in terms of levels and trends of poverty headcount ratios. Countries that have recently experienced political turmoil tend to have higher poverty headcount ratios. Moreover, there may be some statistical problems pushing the headcount ratios down, such as emigration due to civil conflict in the post-Arab-Spring era. Second, poverty headcount ratios have substantially declined from around 30 percent to below 5 percent in the past four decades. Based on available data, countries including Pakistan, Indonesia, Tajikistan, and Kyrgyz Republic have been particularly successful in reducing poverty headcount ratios, while the decline has been slower in Bangladesh. Third, although the poverty headcount ratios have somewhat declined in the African group, it has been persistently high and still hovers around 40 percent. Apart from a few exceptions, the poverty headcount ratios are high for almost all countries in the group. Figure 2.1 compares the groups

within the OIC countries and Figure 2.2 provides a comparison of poverty headcount ratios across country groups—with an emphasis on the comparative situation in the OIC countries.

It should be noted that the poverty headcount ratio is a general indicator and does not fully reflect the trends in urban poverty. Considering the recent urbanization trends in Asia and Africa, the observed decline in the headcount ratios like comes from rural poverty reduction. Moreover, as emphasized in Chapter 1, urban poverty is a multidimensional concept and a simple headcount ratio may not capture the complex landscape of urban poverty dynamics. Nevertheless, the figures presented in Table 2.1 suggests that countries in the African group may be particularly sensitive to urban risks. For the Arab group, on the other hand, the headcount ratios may not reflect the impact of recent political economy developments in the region. Existing statistics may not reflect the potential impact of conflict and refugee outflows on urban poverty trends especially in conflict afflicted countries. Overall, the poverty headcount ratios may only partially reflect the urban poverty trends in OIC countries and, if anything, they underestimate urban poverty rates for all three groups among the OIC countries.

Table 2.2 in the Annex displays the urban population dynamics for the OIC countries. Unlike the poverty headcount ratio, data availability is not a problem for this indicator as the population estimates are almost fully available for all OIC countries over the relevant time horizon. The level of urbanization is higher for the Arab group. The pace of urbanization, however, is quite fast for the African group (around 50 percent over 40 years) followed by the Asian (25 percent) and Arab (17 percent) groups—see also Henderson and Kriticos, 2018. These figures are consistent with the UN estimates and forecasts presented in Chapter 1 and suggest that (1) Africa and Asia are behind the general urbanization rates observed around the world and (2) they are rapidly converging to the rest of the world in terms of the urbanization rates.

The percentage of population living in slums, presented in Table 2.3 in the Annex, is a more direct indicator of urban poverty. By definition, this indicator measures the percentage of individuals living in overcrowded and poor neighborhoods under inferior conditions in urban settings. The existence of high slum rates in cities located in developing countries is strongly correlated with urban poverty [Lucci et al., 2018]. Despite the rapid improvement in the general poverty headcount ratios presented in Table 2.1, the slum rates have been persistently high for all three groups among the OIC countries. Consistent with the previous indicators, the slum rates are lowest for the Arab group and highest for the African group. The most striking patterns

have been observed at country level. Most importantly, there are many countries among the African group with slum rates above 70 percent. Another observation is that the slum rates are higher in countries experiencing civil conflict even among the Arab group. Finally, slum rates are strikingly high in highly populated countries among the Asian group, such as Pakistan and Bangladesh. Table 2.3 conveys the clear message that urban poverty is actually a more serious issue than what the simple poverty headcount calculations imply. Figure 2.3 presents the fraction of population living in slums—multiplication of percentage of urban population and percentage of urban population living in slums—by country groups, which supports the arguments provided above.

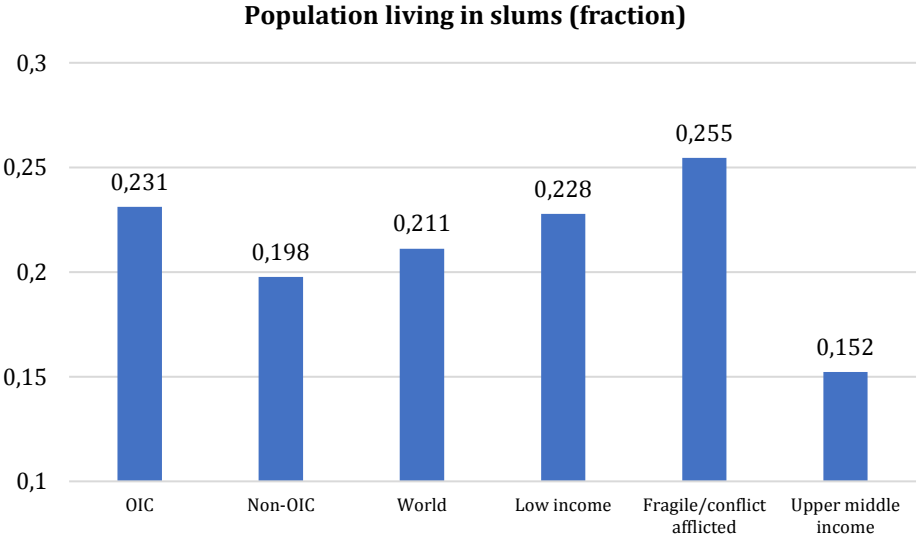

Figure 2.3: *Fraction of population living in slums.*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

The strong positive association between urban poverty and inequality is a longstanding matter of debate. Policy discussions on urban poverty reduction often make references to measures targeted at reducing economic inequality in urban areas. Therefore, cross-country comparisons of inequality indicators are also valuable exercises in understanding the urban poverty trends. One familiar problem is that inequality indicators with cross-country comparability are often available at national level and, typically, within-city inequality indicators are not available for a large number of cities across countries. This is a particularly difficult endeavor for developing countries. With this potential caveats in mind, Table 2.4 in the Annex compares the trends in the Gini index for the OIC countries from 1980 to 2019. The

results suggest that (1) inequality is persistently high across the OIC countries; (2) among the three groups, inequality is the highest for the countries in the African group; and (3) although there is a declining trend over time, the decline is not statistically significant even based on an eyeball test. It is important to note that inequality is persistently high—it even exhibits an increasing trends in some instances—for highly-populated Asian countries such as Indonesia and Malaysia. Figure 2.4 compares the Gini index across groups within the OIC area.

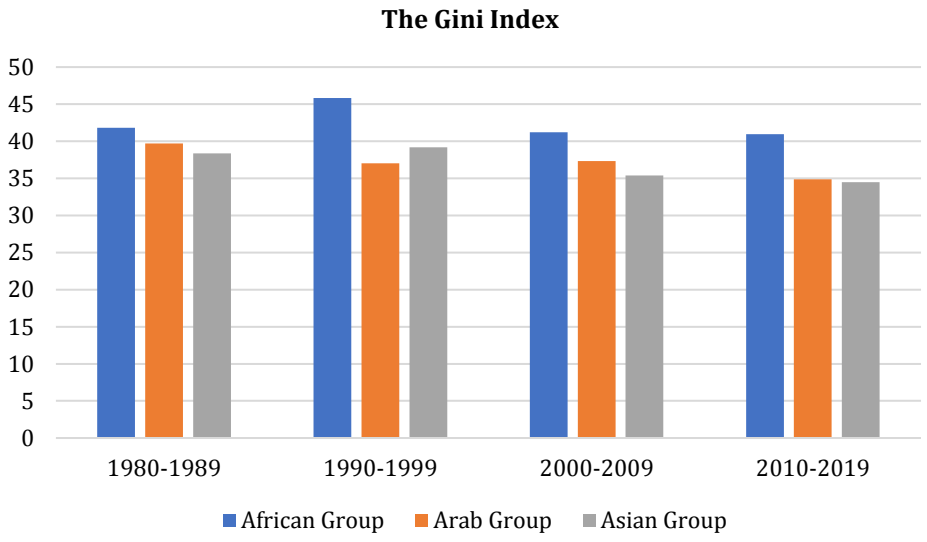

Figure 2.4: *The Gini index for the OIC countries.*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

The evidence from all four indicators discussed above suggests that (1) the OIC countries, especially the African and Asian groups, have experienced a strong urbanization trend—which is expected to continue further in the coming decades, (2) the slum rates have been persistently high for the African group and also exhibit strong country-specific patterns among the Asian group, and (3) socio-economic inequality is persistently high in the OIC countries, most prominently among the African group. Although the standard poverty indicators display declining trends, urban poverty rates, which are distinct and hard to directly measure with the data available at hand, are expected to stay high—even go up in highly populated urban areas in Asian and African countries—and pose significant challenges on the policy making agenda of governments aiming to meet the SDGs.

2.2. Urban Poverty and Labor Markets in the OIC Countries

The OIC countries face multiple labor market issues and challenges. High rates of informal employment is an inherent characteristic in most OIC countries. Moreover, low human capital levels, lack of incentives in investment in human capital (both in terms of formal education and vocational training), and elevated degree of skills mismatch between workers and firms jointly suggest that human capital utilization levels are ineffectively low in the OIC countries. Finally, non-employment (unemployment plus non-participation) levels are high—especially for women. The labor market statistics reflect these issues. In particular, relative to the comparable non-OIC countries, the OIC countries typically experience lower employment levels for the disadvantaged groups (e.g., women, youth, and other vulnerable groups), lower labor force participation rates in general, lower share of high-skilled workers in the workforce, higher percentage of agricultural employment as opposed to employment in more sophisticated sectors such as services and manufacturing, higher degree of labor market frictions, less structured labor market institutions/regulations, and less efficient transition from school to work.

Although the OIC countries have a significant demographic advantage in terms of a higher share of younger people in the workforce relative to the comparable non-OIC countries, the labor force participation rates are low suggesting that (1) lower returns to labor market entry do not provide sufficient incentives for labor market involvement and (2) there exists other socio-cultural factors and norms keeping females at home, mostly inactive economically.

Low labor productivity is another inherent feature of labor markets in the OIC countries. This is due to three main reasons. First, the human capital levels are low in the OIC countries, which reduces the research and development activity and innovative capacity of firms; therefore, reduces firm dynamism, inhibits firm growth, leads to decreased transition rates from non-exporter to exporter status for the relatively more productive firms, lowers returns to human capital investment, and provides lower incentives for product development and patenting. Second, the economic activity clusters in the agricultural sector, which is a lower-productivity sector relative to manufacturing and services. And, finally, both the size of the informal economy and informal employment are high in the OIC countries. High informal economic activity is associated with lower labor productivity, lower labor income, reduced labor market insurance, lower efficiency in factor utilization, and lower tax collection capacity

of the state—which further reduces the redistributive capacity of the state. Low productivity in the labor market is associated with low income generation capacity for individuals, households, and businesses, and, thus, low welfare levels in general.

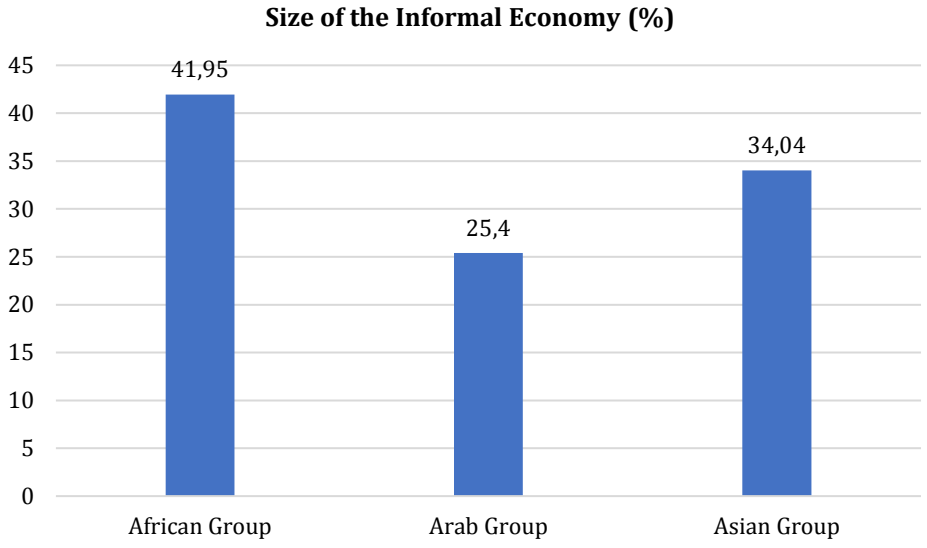

Figure 2.5: *Size of the informal economy in the OIC countries.*
Source: *Medina and Schneider (2017).*

High informality is a serious challenge that needs to be addressed to bolster inclusive economic growth and more effective public policies. Table 2.5 in the Annex documents the estimates of the size of the informal/shadow economy for the OIC countries—mainly based on the estimations performed by Medina and Schneider (2017). The estimates report the share of informal economic activity in the overall economy, which is also a good proxy for the rate of informal employment. The estimates suggest that the average rate of informality is approximately 35 percent in the OIC countries. The African group has the highest informality rate (42 percent), followed by the Asian group (34 percent) and the Arab group (25 percent)—see Figure 2.5. Informality rates above 50 percent are not uncommon among the countries in the African group—for example, 63 percent in Nigeria, 54 percent in Benin, 51 percent in Gabon, and around 50 percent in Sierra Leone. There are also several countries in the Asian group exhibiting informality rates above 40 percent—such as 53 percent in Azerbaijan, 44 percent in Tajikistan, and 43 percent in Kazakhstan. Countries with low informality rates (below 20 percent) are the ones with highest public sector involvement in labor markets such as Jordan,

Oman, and Qatar. It should be noted that countries that substantially reduced general poverty rates over the past 40 years, such as Pakistan, Indonesia, Cameroon, and Mauritania, experience moderate informality rates relative to comparable countries with worse poverty reduction performances.

The inherent characteristics of the labor markets in the OIC countries reflect the urban poverty challenges faced by those countries. Increased urban population, increased share of low-skilled individuals in urban areas, high tendency to reside in slums, increased income inequality in highly-populated regions, and high share of lower-productivity economic activities are the main factors interacting with the labor market issues documented above for the OIC countries. High informality rates, high youth unemployment, low female labor force participation, low share of manufacturing and services sectors (i.e., high share of agricultural activity), and low levels of human capital/skills are the main structural issues that needs to be addressed in the medium- and long-term.

The structural problems in the labor markets and high poverty rates in urban areas jointly highlight the issue of high "working poverty rates." In fact, the OIC (2018) report documents based on the ILO Key Indicators of the Labor Market (ILO-KILM) that the working poverty rates are way above 40 percent in the OIC countries as opposed to only 25 percent in the non-OIC countries as of 2016. High incidence of child/forced labor in the OIC countries is another serious development issue that has emerged as a joint consequence of structural problems in labor markets and high urban poverty rates. Child/forced labor is easily accommodated and sustained in labor markets with high informal employment rates. Reducing the size of the informal or shadow economy can jointly address various structural problems related to both labor market inefficiencies and urban poverty issues.

2.3. Forced Migration and COVID-19 as Novel Challenges for Urban Poverty

Several countries in the OIC region—especially in the MENA region—have experienced civil conflict and political instability, which are still ongoing in some of those countries. During this process, millions of people have been forced to leave their homes; part of them left their countries as refugees, while the remaining ones were displaced internally. Moreover, physical, financial, and human capital resources of those countries have fled to safety. In the past decade, Syria was the major source country for the existing refugee population in the OIC region. OIC

countries such as Turkey, Lebanon, and Jordan have been the main host countries for the Syrian refugee population. The UNHCR data as of July 2020 suggest that among the 5.6 million total persons of concern, 3.6 million (64 percent) live in Turkey, 890,000 (16 percent) live in Lebanon, 660,000 (12 percent) live in Jordan, and the remaining 400,000 (7 percent) live in Iraq, Egypt, and other countries that are mostly located in North Africa.[8] Afghanistan, Sudan, Libya, Iraq, and Yemen have been the other major source countries for refugees.

Refugees mostly prefer to live in or close to urban areas in the hosting countries. Since their legal status is not well-defined in the host countries, they typically do not have official work permit and are forced to seek employment opportunities in the informal labor markets [Ceritoglu et al., 2017; Del Carpio and Wagner, 2015; Tumen, 2015; Tumen, 2016; Fallah et al., 2019; Bagir, 2017; Akgunduz et al., 2018; Akgunduz and Torun, 2018; Peri and Yasenov, 2019]. Lack of access to decent jobs reduce their income, which forces them to live in slums that are mostly populated by other refugees [Balkan et al., 2018]. As a result, neighborhoods that are predominantly inhabited by refugees are formed in the urban areas located in host countries. The living conditions and other amenities in those neighborhoods are below the general standards of the host countries, which feeds socio-economic inequality concerns. The inferior labor market outcomes, income levels, and other living conditions jointly push the refugee populations into poverty.

Given the ongoing political situations in the major source countries, refugee repatriation is not likely in the near feature. As a result, urban areas highly populated with refugees pose substantially high poverty risks for both the refugee population and the natives residing in those areas as well as the surrounding neighborhoods. Congestion in education, health, and housing services in areas with high refugee shares constitute the other important policy challenges. Failing to appropriately address these issues may lead to persistent urban poverty consequences for the hosting countries and regions.

Another novel risk on urban poverty is the emergence of the COVID-19 disease. Given that more than half of the world's population live in cities today, understanding the potential channels through which COVID-19 may affect urban poverty both in the short and long term has become a policy priority. It is well-known that high rates of urbanization are associated with increased population density. The basic theories of urban economics suggest that increased

[8] See https://data2.unhcr.org/en/situations/syria.

density is associated with economic agglomeration, which facilitates increased productivity and improves access to basic public services such as health and education.[9] However, if the required infrastructure investment is not undertaken, then increased population density may be rather problematic as it may bring in other issues such as congestion in public services and reduction in the quality of public amenities especially in slums, which typically do not have access to modern infrastructure facilities including sewage, waste collection/disposal, drainage, power, water/sanitation, healthcare, education, and security [Castells-Quintana, 2017; Shiras et al., 2018].

Highly populated areas also expose individuals to communicable diseases. People living in slum areas are particularly vulnerable to the risks due to contracting infectious diseases such as COVID-19. The episodes of infectious diseases—such as tuberculosis, plague, influenza—that the humanity experienced in the past also provide evidence that dwellers in slums have been affected the worst [Ezeh et al., 2017]. Refugee populations, particularly the ones residing in overcrowded refugee camps, are also exposed to similar risks. The risks particularly emanate from:

- Overcrowded areas in slums and also overcrowded households/camps.
- Low access to hygiene material and water.
- Limited access to basic health services (elevated at times of high incidence).
- Heavy dependence on public transportation for commuting to work/school/shopping.
- Non-hygienic employment conditions and low social distancing in the workplace (which are also highly correlated with informal work).

A high volume of individuals living in slums who are heavily exposed to such risks reduces the effectiveness of policies and interventions aiming to locally contain the COVID-19 outbreak and develop efficient treatment strategies. Those risks also make it difficult to track individual-level contact in case of a possible contraction to disease. Low-income individuals living in slums also face fear of losing their jobs, which lead them to partially, and even completely, disregard

[9] For more recent relevant work, see Almond et al., (2020), Alon et al., (2020), Azevedo et al., (2020), Barrero et al., (2020), Borjas (2020), Brown and Ravallion (2020), Brown et al., (2020), Bui et al., (2020), Campello et al., (2020), Chetty et al., (2020), Decerf et al., (2020), Desmet and Wacziarg (2020), Gordon and Reber (2020), Gupta et al., (2020), Han et al., (2020), Loayza (2020), McLaren (2020), Psacharopoulos et al., (2020), Ravindran and Shah (2020), Razin et al., (2020), Schmitt-Grohé et al., (2020), Simonov et al., (2020), and Wiemers et al., (2020).

the recommended safety and health measures. Other issues include lack of awareness, lack of understanding the disease symptoms, and lack of access to health services mostly due to informal employment arrangements.

There are also other indirect urban poverty risks of the COVID-19 outbreak. First, school closures kept children and especially girls out of school and increased the risk of school dropout, which further exposes children to wide range of issues such as domestic violence, child labor, and early marriages. Second, informally employed individuals (including refugees) have lost their jobs; formal employment is protected by government policies/guarantees, but informally employed ones immediately lost their jobs right after the sector closures. Homeless individuals are also exposed to risks due to lack of isolated shelter and other well-defined safety nets.

2.4. Role of Infrastructure and Technology in Reducing Urban Poverty in OIC Countries

Investment in infrastructure development projects has been regarded as an effective urban poverty reduction strategy. The emergence of refugee and COVID-19 issues—which are novel urban poverty challenges as discussed above—also highlights the need to improve the quantity and quality of infrastructure especially in urban areas.

The SDGs underline the importance of pro-poor growth in effective implementation of poverty reduction strategies. Investment in infrastructure especially in slums targets improving the living conditions of the urban poor, which will have extensive positive spillover effects beyond merely improving the well-being of the residents in urban slums. By improving healthcare, water/sanitation, power, street lighting, road, education, security, sewage, and transportation facilities in slums, infrastructure development can improve socio-economic inequality, increase general happiness levels in the city, boost urban economic growth and productivity, and improve the effectiveness of other policies—for example, locally implemented policies aiming to contain the COVID-19 outbreak. Therefore, sustained infrastructure investment can help achieving the SDG targets for urban poverty reduction.

Infrastructure investment is also beneficial for job creation and improved access to decent jobs. Infrastructure development can directly increase employment opportunities by creating jobs during the construction stage and through labor-based maintenance services provided in the post-construction period. Moreover, increased utilization of local resources and services

would further improve the level of economic activity in general and increase employment both directly and indirectly. Finally, improved infrastructure would increase general level of productivity by reducing costs, improving access to markets, and providing incentives for business development, which might jointly boost income and employment opportunities. Various academic studies show that highway/railroad construction substantially increases productivity and income both at local and nation levels; and the effects are particularly larger in the longer term [Donaldson, 2018]. Although infrastructure investment was typically seen as a strategy to address rural poverty in the past, newly emerged policy challenges associated with urban poverty have made infrastructure investment an important means to reduce urban poverty especially in highly-populated developing countries.

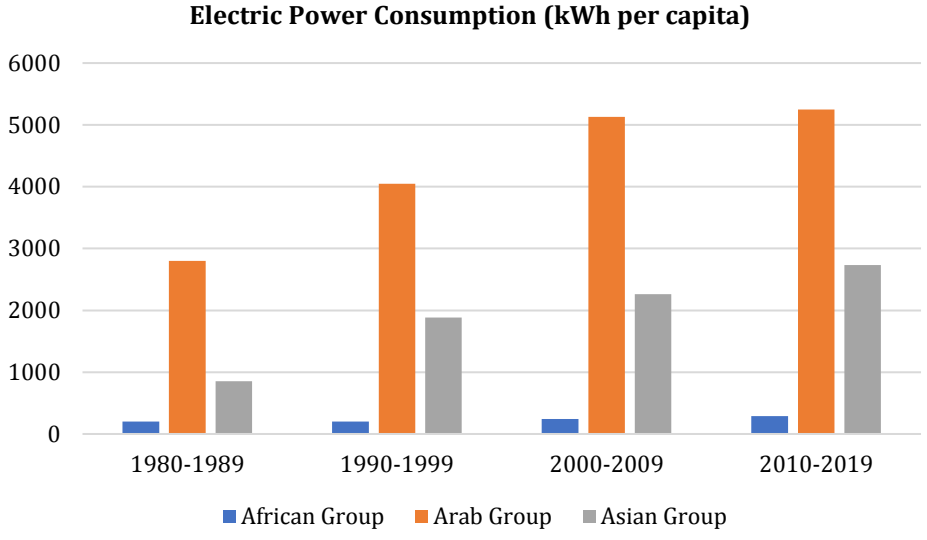

Figure 2.6: *Electric power consumption (kWh per capita) in the OIC countries.*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

Tables 2.6, 2.7, and 2.8 in the Annex present infrastructure investment statistics for the OIC countries between 1980 and 2019 based on WDI data. Table 2.6 displays time series evolution of Electric Power Consumption (kWh per capita) for the OIC countries. Electricity consumption is already high for the Arab group, and the figures suggest that consumption is more or less satiated and has remained almost constant over the past two decades. The African group is the other extreme. Both the level and growth rates of electricity consumption are very low among the African group despite the low base. The Asian group, on the other hand, displays a rapid

growth of electricity consumption due to high rates of urbanization and increased infrastructure investment in power plants. Figure 2.6 compares the groups within the OIC countries.

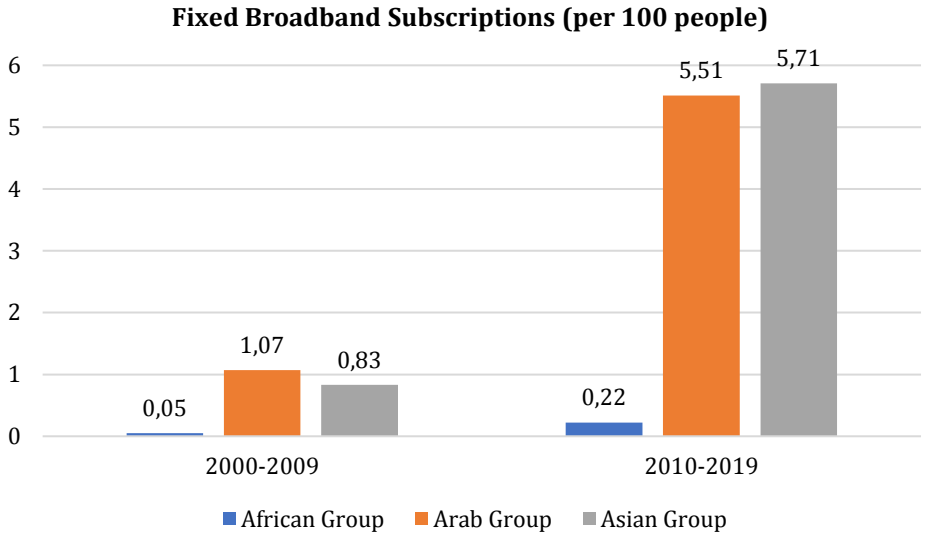

Figure 2.7: *Fixed broadband subscriptions (per 100 people) in the OIC countries.*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

Table 2.7 shows fixed broadband subscriptions per 100 people in OIC countries. Although data availability is a concern for most countries prior to year 2000, the existing figures still give an idea about the broadband infrastructure for the OIC countries. The Arab and Asian group have heavily invested in broadband subscriptions over the past decade, while the broadband infrastructure is still quite stagnant and weak among the African group—see Figure 2.7. Finally, Table 2.8 presents the total route length for rail lines in kilometers for the OIC countries. Thinking in per capita terms, the Asian and Arab groups have more established railway infrastructures than the countries in the African group—see Figure 2.8. Overall, the existing evidence suggest that the OIC countries exhibit a large degree of heterogeneity in terms of infrastructure investments. The evidence also suggests that the infrastructure investments are most severely and urgently needed by the countries in the African group.

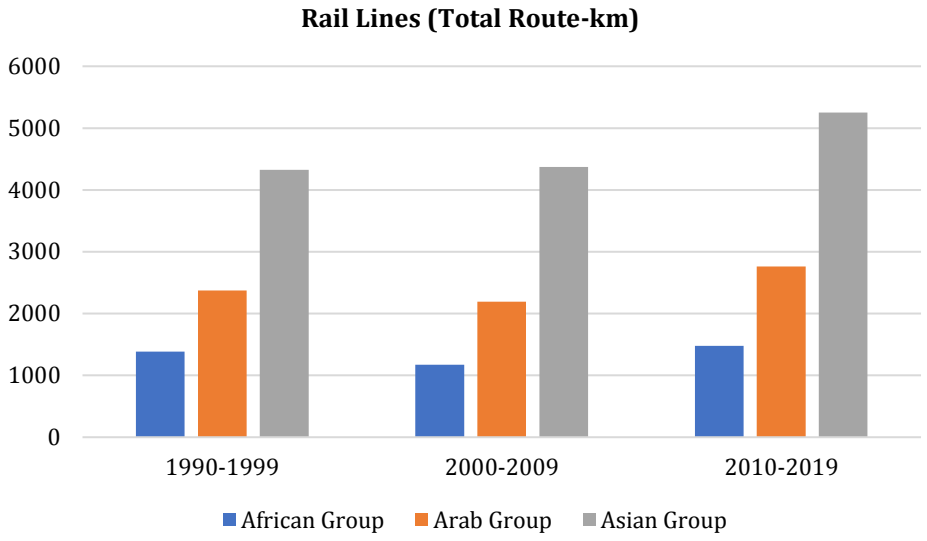

Figure 2.8: *Length of rail lines (km) in the OIC countries.*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

Among the OIC countries, the Turkish and Indonesian experiences can be highlighted as examples of the strong impact of infrastructure investment on economic growth and urban poverty reduction in the long term. Turkey implemented ambitious infrastructure investment strategies in the past 30 years—especially after 2003. The main emphasis is on building airports, highways/roads, railways, bridges/tunnels, hospitals, organized industrial zones, and power plants. For example, between 2002 and 2018, the total length of dual carriageway is increased from 6,101 km to 26,655 km; number of airports from 26 to 56; and the size of high-speed railway from 0 to 1,271 km. The New Istanbul Airport, which started its operations in 2019, has an annual passenger capacity of up to 200 million, which makes it the largest air transport hub in the region. Strong collaboration between the central government and local governments also generated a large wave of infrastructure investments in large urban areas—in the form of constructing new facilities and upgrading the existing ones. Those investments yielded widespread benefits, but they particularly improved the living conditions and welfare in urban areas. Several papers document that improved infrastructure has boosted economic activity in Turkey both at national and regional levels—see, e.g., Cosar and Demir (2016).

Public procurement and public-private partnerships (PPP) have been the main methods of financing and implementation. Turkey has systematically increased the share of PPP in

infrastructure investments over time, which constituted a model for other countries aiming to undertake large infrastructure investments by attracting private investors. The Turkish case for PPP-financed infrastructure investments is presented in Box 2.1.

Box 2.1: PPP-financed infrastructure investment in Turkey between 1986-2018.

The socio-economic needs and necessities have generated a large wave of infrastructure investment in Turkey after mid-1980s—mostly after 2003. Although those investments have generally improved welfare across the country, the urban poor have benefited the most. The PPP model is an example of multi-stakeholder governance and its main advantages are mutual risk sharing, shorter completion time, and more effective management. The number of PPP projects undertaken between 1986-2018 is 242 (175 after 2002) and the total amount of investment, including fees, is 139 billion USD (127 billion USD after 2002). The breakdown of the number of PPP projects and the total amount across sectors is presented in Figure 2.B1. In terms of the investment amount, four sectors—Airport, Energy, Motorway, and Health Facility—capture approximately 95 percent of all PPP investments. The financing model varies across PPP projects. Specifically, four models are adopted: build-operate-transfer (63 percent), transfer of operating rights (26 percent), build-lease-transfer (8 percent), and build-operate (3 percent).

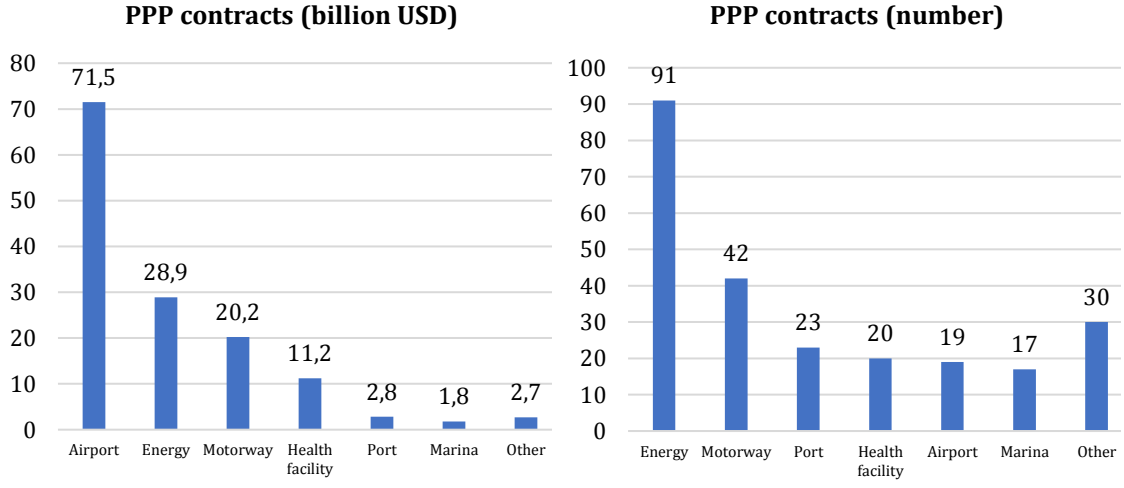

Figure 2.B1. *Number and amount of PPP contracts between 1986-2018.*
Source: *Presidency of Strategy and Budget. The "other" category includes Mining, Railway, Culture & Tourism, Industrial Facility, and Border Gate.*

Healthcare facilities has been a major pillar of infrastructure investment in Turkey. The number of Integrated Healthcare Campuses (also called as the City Hospitals), which are mainly financed

through PPP, is 32 including completed, ongoing, and planned ones. The healthcare PPP projects are structured as designing, constructing, financing and managing the facilities, while the health services are provided by the Ministry of Health. Public investment in health facilities has made Turkey a regional healthcare hub and upgraded the quality of health services for everyone in the country.

Turkey has an ambitious agenda to increase infrastructure investments further especially on motorways and high-speed railway. The official targets suggest that the total length of toll roads will increase almost three folds between 2018 and 2035 (from 2,855 km to 8,523 km), and the total high-speed railway network will expand around ten folds between 2018 and 2023 (from 1,213 km to 12,915 km).

In the past four decades, Indonesia implemented extensive infrastructure investment projects in various areas in coordination with the UN agencies, the World Bank, and donor governments, which brought urban poverty rates down significantly in recent years. Although there is still a large population living under the poverty threshold in Indonesia, infrastructure investments largely improved the income generation capacity of households living in both urban and rural areas.

Infrastructure investments ranging from intensive school construction programs [e.g., INPRES, see Duflo, 2001] to nation-wide road/highway/tollway construction, from improved distribution of clean water both in urban and rural areas through PDAM to rapid investment in the land and mobile telecommunication lines (as well as internet infrastructure)—see Mustajab (2009) for a comprehensive review of the infrastructure investment history of Indonesia. The infrastructure investments have improved labor market indicators, school attainment levels (especially for women), the quantity and quality of public service provision, and the level of economic activity in rural and urban areas. Despite these developments and improvements, the asymmetric spatial distribution of infrastructure investment, depreciation in the quality of infrastructure over time, limited access, delayed maintenance due to lack sustained financing, and the need for special focus on newly emerging urban poverty issues remain as main challenges and have to be addressed to reduce poverty further. Certain coordination issues between the central and local governments are cited among other crucial problems reducing the effectiveness of infrastructure investment management.

Other countries in the Asian group have also undertaken large infrastructure projects aiming to reduce urban poverty. Bangladesh is currently investing in the Padma Multipurpose (road/rail) Bridge linking the southwest to the northern and eastern regions, Dhaka Metro Rail to reduce extreme traffic jams that occur throughout the Dhaka urban area, Rooppur Nuclear Power Plant, and the Purbachal New Town to address the urbanization challenges that the Dhaka areas has been experiencing with a total budget of approximately 36 billion USD. Iran undertakes multiple large-scale railway projects (including Tehran-Isfahan, Tehran-Sanandaj, Kermanshah-Khosravi, and Shiraz-Bushehr routes), although sustainable financing is a serious issue. Pakistan also invests in various long-term infrastructure projects. For example, the China-Pakistan Economic Corridor (CPEC) can be described as a collection of different infrastructure projects—with a total value of 62 billion USD—ranging from transportation networks and special economic zones to energy projects. The Iran-Pakistan gas pipeline is another ongoing projects. Apart from country-specific and/or bilateral projects, there are other large projects within the Asian group that involve multiple countries. As an example, the CASA-1000 project aims to transfer the hydroelectricity surplus in Tajikistan and Kyrgyzstan to Afghanistan and Pakistan.

There are also several countries that have successfully implemented infrastructure investment projects within the African group targeting urban poverty reduction. Unlike the Turkish and Indonesian examples, the infrastructure investment efforts within the African group are mostly project-specific rather than long-term, multi-sector, and large-scale investment strategies. One exception is Senegal. Following a series of structural reforms encouraging private sector participation, Senegal undertook four PPP projects—the Dakar Toll Highway, the Senegal Coal Power Plant, the Blaise Diagne International Airport, and the Dakar Container Terminal—between 2009 and 2011. More recently, industrial clusters are formed, and agricultural processing zones are established to boost productivity and competitiveness. Two new bridges are built to strengthen Senegal-Gambia and Senegal-Mauritania trade connections. Upgrading and maintenance of existing energy infrastructure are undertaken. Another example is Uganda's large-scale energy plant investments on Bujagali, Karuma, and Ayago hydroelectric power stations with a total construction cost of around 4.5 billion USD. Cote d'Ivoire and Gambia are currently investing in upgrading the urban transport capacity in Abidjan and greater Banjul area, respectively. Egypt is carrying out large-scale road

construction projects both to upgrade transportation infrastructure within Cairo and to improve the connectivity between Cairo and other large cities in Egypt—such as Alexandria.

Information and communication technologies (ICT) are commonly used to support development policies in various countries and settings. Access to information empowers individuals and policy-makers in making more informed decisions. Communication facilitates information sharing and effective exchange of ideas across various agents. Technology allows the relevant parties to collect, disseminate, process, and use information throughout the process.

Today, ICT are used in the implementation of poverty eradication policies along various directions. Internet and mobile communication technologies are among the fastest ways to access information. Easy access to information:

- enables the poor to assess their own situations, identify their own needs, and seek solutions based on the available options;
- enables governments and policy makers to identify the vulnerable populations; employ various algorithms (such as the newly-developed machine learning and artificial intelligence tools) to focus on a targeted group in policy implementation rather than spending resources over the entire population; and develop more effective regional/sectoral policies;
- enables entrepreneurs to make better decisions in establishing, developing, and/or expanding their own businesses; making operations more profitable; accessing new markets both nationally and internationally;
- enables job seekers and employers to have access to better labor market information, which helps eliminating labor market frictions;
- enables large business owners to make more effective investment decisions in terms of acquiring additional capacity (i.e., new plants, machinery, and equipment); and
- enables international organizations to identify the needs of the poor worldwide and define policy priorities.

There are also well-studied, and rather specific, additional benefits that would help poverty eradication. For example, it is well-known that equipping farmers with better technologies

improves productivity and income in rural settings [Magruder, 2018]. Another example is that developing digital education material improve access to education for the poor and vulnerable populations. Access to online tools help urban commuters optimize their transportation routes and save time. In all these examples, the development of targeted ICT tools not only improve the welfare of user, but help policy makers in developing more effective policies and monitoring the existing ones.

Although ICT investments are extensive even in the least developed regions of the world, access to information is still very limited—less than 10 percent among poor in some OIC countries especially among the African group. There is still lots of room to improve the rate of diffusion for both internet and other mobile technologies in the OIC countries. It should be noted, however, that improved access to internet and mobile technologies does not guarantee immediate poverty eradication; as it is also important to have access to relevant/useful material and resources, which have to be provided by the policy makers especially in the developing countries.

Technical and social innovation plays a key role in terms of the interaction between ICT and poverty reduction. ICT tools are regularly updated and become more useful based on users' experiences. New development challenges can be addressed more effectively through those fresh opportunities. Moreover, new tools/technologies also force institutions to evolve and, thus, trigger "change" and social innovation toward various directions. Implementing the new theory of change and those new ICT tools to existing development challenges can be more effectively performed by the governments and other policy making institutions. In this sense, policy makers seem to be underutilizing the existing capacity of technology development in poverty reduction, which is particularly relevant for urban poverty reduction efforts. New challenges posed by the COVID-19 outbreak can also be categorized as an area in which policymakers underutilize the existing technological tools.

2.5. Islamic Social Finance and Other Social Safety Nets

The standard poverty reduction approaches attribute a higher weight on government policies and finance, while the value of utilizing the existing socio-cultural mechanisms in traditional societies is not generally discussed in a systematic way. The world has become more prosperous and more urbanized over the past years, but socio-economic inequalities also opened up both in general terms and within cities. There are some global improvements in

terms poverty reduction, but urban poverty remains as a challenge and is expected to persist in the heavily populated urban areas located in developing countries especially in Asia and Africa. So, global poverty still remains as a human rights issue.

The multidimensional nature of poverty makes it more difficult to be addressed through implementing a uniform set of policies. In particular, supporting institutions and other social support systems are needed to identify the poor, identify the specific needs of the poor, to monitor the effectiveness of provided support, and to perform efficient follow up.

Cultural, socio-economic, political, and historical origins/characteristics of cities essentially reflect the values and attitudes of their inhabitants, and make cities more than only a geographical construct. Beliefs and lifestyles of the inhabitants also greatly contribute to those values and attitudes. Those values and attitudes even shape the architecture styles, social norms, neighborhoods, means of communication, and social identities within the city [Tonkiss, 2005].

In the Islamic tradition, the "neighborhood" is the building block of the city and society. Neighborhoods play a key role in urban life in the sense that, in addition to the standard formal services and amenities provided by the local authorities, the neighborhoods carry out additional—and rather informal—tasks such as sharing, social protection and control, solidarity, and connectivity. The within-neighborhood networks in the Islamic society actively monitor and identify the needs of the poor, and then mobilize the necessary resources accordingly. Islamic social finance institutions, such as waqf or zakat, are often used to mobilize those resources, which are used to reduce poverty and hunger within the neighborhood and, therefore, the city. The OIC countries are inherently equipped with those institutions. For example, the Zakat Fund in Indonesia is a major source of financing of infrastructure investment in slums. There are other Islamic social finance tools that are used to subsidize the urban poor in the OIC countries i.e. Malaysia, Turkey, and Pakistan. The redistributive function of such funds can reduce inequality and eradicate poverty in urban settings.

However, rapid urbanization, formation of slums due to lack of appropriate urban planning strategies, and increased mobility of individuals within and between cities/neighborhoods tend to reduce the effectiveness of neighborhood-level mechanisms in the modern world. Extreme segregation of individuals across neighborhoods based on their socio-economic status and

wealth levels also reduce the scope for neighborhood-level mechanisms in addressing the local needs. Central and local governments can play an important role to re-enhance and revive those mechanism by effectively coordinating Islamic social finance institutions both within and across neighborhoods. Improving the transparency and accountability of the Islamic social finance institutions would incentivize participation. More effective use of technology—such as blockchains, cashless transaction tools, apps/software facilitating public monitoring, etc.—can be used to bridge the financing gaps and manage the process as a whole in a more effective way [Abdul Aziz and Zhang, 2019]. More effective and systematic utilization of Islamic social finance institutions could substantially improve the efficiency of urban poverty policies and could be explicitly used as part of a formal long-term strategy in the OIC countries.

2.6. Understanding Urbanization Patterns and the Main Challenges in the OIC Countries

Rapid urbanization and clustering of settlement networks around large urban areas are among the key features of world demography in the modern era. Urban populations have grown exponentially during the past century. Some cities have exhibited much faster growth rates and are transformed into huge metropolitan areas with unique population/demographic dynamics and socio-economic characteristics, while others remained stagnant and failed to attract newcomers. Why some cities grow faster, and others remain stagnant (or even shrink) over time is an old question in the urban economics literature, although it still attracts a lot of attention among researchers. Regardless of these differential dynamics, the pace of urbanization will continue and the share of world's population living in urban areas is expected to be close to 70 percent (around 1.7 billion individuals) by mid-21st century.

The OIC region has substantially contributed to the development of key concepts such as "city" and "urbanization." In particular, the economic, social, political, demographic, and cultural ingredients of the Islamic civilization paved the wave for a rapid transformation of the traditional settlement systems into co-habitation patterns still prevailing in the modern day. Many scientific innovations and breakthrough work of art—that shaped the main components of the contemporary daily life—have their roots in the cities located in the OIC area.

Urbanization is a multifactorial concept surrounded by the key demographic, socio-economic, cultural, political, environmental, and health issues. The multifactorial nature of urbanization exposes cities to new challenges that continuously emerge along various

anticipated and unanticipated directions. Today it became clear that addressing the main challenges associated with urbanization would not be possible without tackling the issues such as governance structure, civil conflict, migration (rural-urban, internal, and international migration—including refugees), risks of widespread communicable diseases, legal framework, terrorism, environmental hazards, and disaster risk. Urban areas in the OIC countries are particularly exposed to those additional issues, and it may not be possible to develop effective urban poverty reduction policies without addressing them.

The epicenter of rapid urbanization movements has gradually shifted from the developed world toward developing countries over the past 50 years, and this systematic shift is expected to progress further in the coming decades. The OIC countries have urbanized at a higher pace than the non-OIC developing countries in the past few decades and the urban areas in the OIC region have been hosting approximately one fifth of the global urban population. Another key feature of the urbanization patterns in the OIC region is that it harbors some of the most and the least urbanized places as well as the fastest growing urban areas in the world. Moreover, there are marked within-country differences in urbanization patterns in the region. This substantial heterogeneity both within and across countries in the OIC area imposes additional policy-making challenges for both urban poverty reduction and urban planning/design. According to the UN forecasts, the urban population shares are expected to be much higher—mostly driven by the highly-populated OIC developing countries in the Asian and African regions—by year 2050, and a sound policy framework needs to be designed as soon as possible to minimize the socio-economic issues that would potentially emerge in the future.

To reduce urban poverty and improve living conditions of the urban poor, several countries in the OIC region have implemented various programs and policies. Among those programs and policies, the ones that are related to infrastructure investments are summarized in Section 4 of this chapter. There are other urban poverty reduction programs implemented by the OIC countries aiming to address the basic daily needs of the urban poor. Those programs can be classified in two categories: job/employment creation programs and social/cash assistance programs. Some examples from countries in the OIC region are provided below.

To create long-term employment opportunities for the disadvantaged groups living in urban areas to close gender gaps in labor market outcomes, an urban sanitation program called "N'Djamena Nadif," which is a labor-intensive public program, is launched in 2009. N'Djamena is a rapidly growing city (the capital city in Chad) with extensive slums. In line with the

principles set by the National Development Plan and National Employment Policy in Chad, disadvantaged women are hired as "surface technicians" to clean the streets and marketplaces in N'Djamena. Women are hired contract workers (renewable six-month contracts) and are paid the official minimum wage. The main positive impacts of the program can be listed as better care for children, enhanced ability to meet the cost of basic daily needs, increased savings, and female empowerment. Although the program initially targeted hiring around 10,000 women, the actual number was rather limited mainly due to difficulties in commuting to work from slums to the city center and lack of public awareness [Watson et al., 2016]. A similar labor-intensive public work program was implemented in Maputo, Mozambique in 2012.

Extensive urban voucher programs have been implemented in Gaza, which is a conflict-afflicted area with a high rate of urban poverty, as part of humanitarian aid projects in the past two decades. The cash transfers are supplemented by food assistance and other social service programs. During this period, externally financed urban voucher programs have been a significant source of household income. Approximately 35,000 beneficiaries have received those vouchers as of 2015 and more than 300,000 individuals have benefited from the food assistance and other social service programs. The programs were partnered by UNICEF, UNRWA, WFP, the World Bank, and other national/international NGOs [Creti, 2014].

The Indonesian government launched a conditional cash transfer program called PKH (Program Keluarga Harapan) aiming to initially cover around 400,000 individuals in 2007, which later increased to 3 million individuals by 2014. Although the program did not specifically target the urban poor, more than 50 percent of the beneficiaries were residents of urban slums. The budget of the program was close to half a billion US dollars by the end of 2014 [Fernandez, 2014]. The PKH program had a permanent nature with the ultimate goal of eradicating the intergenerational transmission of poverty over the long term. The program was strengthened by extensive public awareness efforts—such as ads, videos, and other online communication tools. The PKH was complemented by other regional cash assistance programs. One example is the "poor student allowance program" implemented in Jakarta in 2013, which aimed to increase school enrollment rates of poor children by providing them cash assistance to cover their daily out-of-pocket expenditures.

The cash transfer program launched by the government of Mozambique in early 1990s was among the first cash assistance programs implemented in Africa. The program mainly targeted the urban poor, but also extended to rural surroundings. The initial payment was rather low—

covering only one third of the urban poverty line—but then supplemented by other programs including the urban transport subsidy and urban food vouchers. The National Strategy for Basic Social Protection—launched in 2010—has strengthened the general operational principles of these programs.

Turkey is another OIC country that has implemented extensive cash transfer programs in the past two decades. Initially, those programs mostly aimed to mitigate the negative impact of the 2001 crisis on disadvantaged groups across the country. Those programs also included conditional cash transfers providing incentives to increase school enrollment of children in poor households – higher incentives are provided to particularly increase girls' school enrollment. With close collaboration between local and national governments, the cash assistance programs have been complemented by wide scale food assistance, employment subsidy (especially after the 2008 global financial crisis), and housing subsidy programs. More recently, large conditional cash transfers are provided—in collaboration with international stakeholders—to the refugee population in Turkey for the purpose of increasing refugee children's school enrollment rates and supporting the basic needs of refugee families.[10] Although those programs do not explicitly have an urban focus, the share of urban beneficiaries is quite large. Turkish cash transfer programs have been relatively successful in comparison to other countries' experiences as those programs received stronger institutional and budgetary support prevailed in the long-term in Turkey.

Although many poor households residing in urban slums have benefited from those programs, they typically fall short of fully addressing the key urban poverty challenges and, most of the time, their effects do not go beyond the very short term. Moreover, social assistance provided to urban poor may generate additional incentives for slum formation by triggering movement of the poor from rural areas to urban slums. The structure of urban poverty reduction policies should be reconsidered with a longer-term view and urban planning aspects should be brought to the forefront to improve policy effectiveness.

The 2030 Agenda for Sustainable Development includes an item, the SDG 11, explicitly focusing on the goal of making human settlements in cities and urban areas sustainable, safe, resilient, and inclusive. Although the issues surrounding this item have long been discussed for decades, rapid urbanization in the developing world, the alarming increase in the number of

[10] Similar programs are also implemented in Jordan and Lebanon.

urban poor, and deteriorating living conditions in slums make viable policy design a top priority. This is a particularly important agenda for the OIC countries. More sustainable and resilient cities not only promote better socio-economic conditions and increase quality of life within cities, but they also strongly support economic development and growth at national level through productivity-enhancing mechanisms. Countries with a number of large, vibrant, and rapidly growing cities have also been the ones exhibiting stronger macroeconomic performance.

Although the link between urbanization and economic growth—measured in terms of national income and product accounts—is rather clear, urban poverty is still a cruel reality even in the largest and most prosperous cities in developed countries. In the OIC countries, which host some of the largest cities in the world (such as Istanbul, Cairo, Jakarta, Tehran, Karachi, Lahore, and Dhaka) and some of the fastest growing ones (mostly the ones located within the countries in the African group), urban poverty is an inherent feature of most urban areas. High population density in slums is among the most important problems those regions have been facing. Individuals and families residing in slums are mostly excluded from the benefits/amenities that formal settlements can easily access, such as drinkable water, sanitation, waste disposal services, sewage, power, and other basic services—which exacerbates urban poverty further. Slums also accommodate some of the most disadvantaged and segregated groups of individuals including minorities, refugees, and disabled people. Therefore, emergence of highly-populated slums is a major concern for equality of opportunity and access to decent jobs in formal labor markets. Slums are also associated with heightened environmental/climate risks, disaster risks, and health risks (i.e., COVID-19) due to inadequacy of infrastructure and highly congested public services. Recent estimates suggest that the number of people living in the OIC-country slums is approximately 300 million, which is expected to substantially increase further in the coming decades if necessary policy steps are not taken in a timely manner.

High population density in slums reduces the capacity of public policy to effectively intervene and respond to urgencies, develop efficient long-term strategies for urban poverty reduction, and improve the living standards for everyone residing in urban areas. Robust institutional/legal framework, stronger governance capacity, increased policy coordination between national and local authorities, and viable urban planning strategies are needed for effective management of urban poverty challenges that the OIC cities have been experiencing in

the face of rapid urbanization. In particular, the rural-urban population movements should be closely monitored, and placements need to be performed in a planned way to prevent uncontrolled growth of existing slums and formation of new ones.

Chapter 3

Policy Recommendations

3.1. Main Policy Issues and Recommendations for the OIC Countries

Designing a policy framework that could effectively tackle the current and future urban poverty challenges requires a sound understanding of the modern urbanization dynamics and the related concepts. Most importantly, it is crucial to recognize that urbanization is not merely a socio- demographic process; in fact, it is a multifactorial and multidimensional process that is shaped by markets, consumption patterns, housing/residency structures, history, culture, lifestyle, institutions, governance capacity, policy framework, and other exogenous characteristics—such as geographic location, climate conditions, natural resources, etc. [Seto et al., 2010; Roy et al., 2016].

The urbanization patterns in the OIC countries have led to malformations in urban areas and proliferated urban poverty. In line with the main objectives and principles of the New Urban Agenda (in particular, the SDG 11), the OIC countries have to develop a feasible/effective policy framework and a long-term urban planning perspective that would address the urban poverty challenges caused by the rapid urbanization process that has been taking place. Accordingly, this section aims to highlight the key areas of policy interventions for the OIC countries and identify a set of policy recommendations that could be implemented to reduce urban poverty.

3.1.1. Preventing Slum Formation and Reducing Socio-economic Inequality

Poverty is often considered as a rural phenomenon, especially in underdeveloped regions of the world. However, with rapid urbanization trends, living conditions of low-income individuals in urban areas have become a concern and poverty has increasingly concentrated in highly urbanized regions across the world. Neighborhoods segregated by income, race, ethnicity, and/or social status are observed in almost every large city. The OIC countries are no exception.

Poor neighborhoods in segregated areas are often classified as "slums" and are characterized by inferior living conditions. In particular, most people residing in slums do not have access to affordable formal housing, decent jobs and employment conditions, infrastructure facilities, and other key public services such a health, education, and transportation. These "lack of access" is generally argued as a major source of socio-economic inequality within cities, which is the building block of nationwide inequality [see, e.g., Duranton and Puga, 2004; Glaeser, 2008; Baum-Snow and Pavan, 2012, 2013; Moretti, 2013; Wang, 2016; Baum-Snow et al., 2018]. Moreover, children who grow up in slums perform worse in school and have poorer labor market outcomes than those who grow up in better neighborhoods [Wilson, 1987; Jencks and Mayer, 1990; Brooks-Gunn et al., 1993; Wodtke et al., 2011; Wodtke, 2013; Damm and Dustmann, 2014; Sharkey and Faber, 2014; Chetty and Hendren, 2018a, 2018b], which suggests that slums also operate as an important source of intergenerational inequality. As argued in Chapter 2, slum formation is a significant concern for the OIC countries, especially among the African and Asian groups, and it needs to be addressed in a systematic way [Cavalcanti et al., 2019].

To minimize the impact of exposure to slums on economic inequality, several large-scale programs have been implemented in various contexts to reduce population density in slums. Those programs are typically named as "moving to opportunity (MTO)" programs and aim to subsidize poor families to move into higher-quality neighborhoods. The socio-economic status of those families as well as school and labor market performance of the children of those families are followed in the long-term to understand the effectiveness of the MTO programs. Although the magnitude of the "causal impact" of those MTO programs is a highly debated issue [Ludwig et al., 2008], the academic work mostly agree on the finding that MTO programs have positively affected the socio-economic status of movers and have reduced inequality within cities [see, e.g., Katz et al., 2001; Kling et al., 2007; Clampet-Lundquist and Massey, 2008; Crowder and South, 2011; Ludwig et al., 2013; Chetty et al., 2016]. In particular, those studies argue that the MTO programs have been effective in improving physical and mental health, subjective well-being outcomes, family safety, educational outcomes of children, and labor market outcomes of both children and other family members for the families who have benefited from the programs.

The MTO programs were mostly implemented in the developed countries, especially in the United States (Baltimore, Boston, Chicago, Los Angeles, and New York areas). Those programs typically distributed vouchers to poor families living in slums to financially support their moving expenses and rents. Those families were also provided assistance to find suitable housing in better neighborhoods. The MTO programs were relatively hard to implement as they required provision of cash, close monitoring of families and their needs, and following up their outcomes. They also did not directly address other structural issues—such as lack of infrastructure, lower-quality amenities and services—in slums. To address slum formation, some OIC countries (e.g., Turkey and Bangladesh) have been implementing alternative policies mostly in the form of constructing affordable formal housing with higher quality infrastructure and better access to basic services and amenities. The Housing Development Administration (TOKİ) in Turkey produces mass housing projects across the country mainly targeting low- and middle-income households. Subsidized mortgages are also available for those projects. The ongoing Purbachal New Town project in Bangladesh is another example from the OIC region. It is the largest planned township project in Bangladesh, and it aims to build a large self-contained town with all modern facilities. The main goals are to reduce population density in the Dhaka region (especially in slums), and facilitate more effective urban planning and management in one of the most populated areas in Bangladesh.

Racial and ethnic segregation based on identity is another key feature of slums, which also negatively affects inequality and discrimination outcomes within cities [Card et al., 2008; Bayer et al., 2014]. It is well documented that segregation of neighborhoods by racial or ethnic identity substantially worsens racial inequality and increases racial gaps [Ananat, 2011; Trounstine, 2020]. Card and Krueger (1996) find that neighborhoods predominantly occupied by disadvantaged racial or ethnic groups receive substantially lower governmental resources/transfers than other neighborhoods. Clotfelter et al., (2007) report that within-city racial/ethnic gaps are positively correlated with the differences in the resources allocated to neighborhoods segregated by race and/or ethnic identity. Most urban slums in the OIC countries suffer from segregation by identity and/or socio-economic status.

In light of the lessons learned from existing policy implementations and empirical evidence suggesting that intervening to slums can improve the outcomes of the poor and reduce socio-economic inequality/discrimination within cities, new policies for better management of slums should be designed in the OIC countries along the following directions:

- *Dissolution:* Large-scale programs should be implemented to dissolve slums and relocate the slum residents to either newly-constructed or existing neighborhoods with better infrastructure and living conditions.

- *Rehabilitation/Transformation:* If complete slum dissolution is not feasible, then comprehensive investment and re-construction programs should be implemented to permanently improve living conditions, infrastructure, and access to public services. The rehabilitation efforts should also aim reducing population density in slums.

- *Prevention:* Preventing formation of new slums and growth of existing ones by effectively controlling migration from rural to urban areas, migration from smaller to larger cities, and internal migration within cities. A long-term urban planning strategy needs to be implemented to achieve a more balanced compositional distribution across neighborhoods within cities.

Note that programs targeting rehabilitation/dissolution of slums should incorporate large-scale investment programs aiming to re-build infrastructure (water, sanitation, sewage, power, roads, etc.), to improve the access to key public services (education, health, transportation, security, cleaning, etc.), and to construct affordable housing. Large infrastructure investments are indispensable elements of urban poverty reduction policies, and should be effectively implemented to achieve more effective urban planning and management in the OIC countries.

Although the actual and potential benefits of infrastructure upgrading are well-understood, the challenges also need to be cited. First, the infrastructure investments are generally implemented as targeted projects specific to certain regions and sectors. To achieve a stronger/lasting impact and to mobilize a larger amount of resources, the investment activities have to be implemented at national level with a more centralized focus. But, such an approach needs a longer-term commitment both in terms of policy and managerial strategies.

Second, sustained financing of infrastructure projects is hard to achieve and requires dedicated effort as well as continuous and strong collaboration between the central government, local governments, international development agencies, donor governments, private stakeholders, and other local/civil beneficiaries. Continuation of the inflow of external funds necessitates the implementation of good governance practices and improved accountability/transparency principles. Macroeconomic stability is often a problem in

developing countries, which is another barrier to sustainable financing of infrastructure investment in the long term. The ongoing infrastructure projects in the OIC countries are often interrupted due to additional financing needs, which substantially lengthens project durations, and bears additional monetary and non-monetary costs to the society.

Third, improved implementation capacity necessitates establishing and maintaining stronger institutions dedicated to achieving the goal of urban poverty reduction through improved infrastructure facilities. Longer-term institutional sustainability requires intensive investment in human capital capacity and other capacity building activities (i.e., in the form of training and education of technical staff) at both central and regional levels. Lack of institutional capacity and an appropriately designed complementary legal background are major obstacles to infrastructure development in several OIC countries—especially among the countries in the African group.

Fourth, clear viability and efficiency criteria need to be set in advance to generate a realistic implementation capacity. In particular, a clear plan to improve the existing facilities rather than building parallel systems and focusing on maximizing the "added value" of the existing projects are particularly important aspect to improve advocacy and accountability. Moreover, transparent and achievable targets have to be set to facilitate the monitoring activities.

Finally, the sectors to be invested should be carefully selected to achieve the urban poverty reduction goals. For example, investment in construction and routine labor-based maintenance of highways and other roads would be most beneficial to improve local employment in a sustained way. Relying on local resources might lead to more environment-friendly outcomes. Maintaining the balance between investments interacting with agricultural versus manufacturing/services sectors determines whether the investment to be undertaken will benefit most to rural versus urban poverty reduction. Investment in clean water, sewage, sanitation, healthcare, drainage, and flood protection facilities in slums would benefit most for urban poverty reduction efforts. Investment in schooling facilities, hospitals, and other governmental buildings would facilitate the effectiveness of human capital investment and policy effectiveness in the long term, and benefit the society as a whole.

It should also be noted that controlling communicable diseases is much more difficult in overcrowded slums than more reasonably-populated areas with more educated residents. In the refugee-hosting regions, sorting of refugees into slums and other lower-quality

neighborhoods may exacerbate the socio-economic problems associated with residential segregation. Therefore, depopulating slums and reducing the degree of residential segregation through implementation of better policies may help addressing the newly emerged COVID-19 and refugee issues in the OIC countries.

The share of slum population in urban areas is much higher in OIC countries than the world averages [SESRIC, 2019]. Given the strong empirical link between slum formation and socio-economic inequality, the urban poverty reduction efforts of the OIC countries should put a much greater emphasis on managing the dynamics of slums [Wong, 2019].

Better management of slums also requires more effective use of information and communication technology (ICT) tools [Shekhar, 2020]. More effective use of technology enables policy makers to identify the vulnerable populations living in slums. This is particularly important for countries where the official statistical infrastructure and related institutions are not well developed—such as some of the OIC countries. For example, satellite technologies, geo rectification, image processing tools, and machine learning algorithms can be used to generate poverty maps and monitor slums within urban areas. Creating slum maps and supplementing them with detailed field surveys may facilitate policy design targeting specific regions and/or groups of individuals. Encouraging slum residents to use ICT tools more effectively would also increase the effectiveness of those policies. Collecting data through urban sensors, using advanced data analytics and big data techniques to process the collected data, and establishing real-time monitoring systems would enhance the governance capacity—some examples include management/optimization of ground transportation; traffic management; human mobility monitoring; operation of smart vehicles; virtual communities encouraging active participation of citizens into urban planning decisions; systems allowing for instant monitoring of resource usage (such as water and energy), environmental hazard, natural disasters, health risks, and climate risks; public safety systems; and systems improving social inclusion.

3.1.2. Creating More and Better Jobs

In the OIC countries, roughly one in three jobs is formed in the informal labor market. Informal workers are not protected by labor legislation or a social security system. Families residing in slums are mostly employed in the informal sector, which suggests that informal employment is closely linked with more intensive urban poverty. Informal jobs are undesirable for four main reasons. First, labor market efficiency and flexibility are essential features of

effectively functioning labor markets and are often set as the main targets of labor market reform in developing countries. Existence of a large informal labor market suggests that labor markets are segmented, which improves employment conditions in the formal sector due to government or union intervention. The informal sector, on the other hand, offers migrant, young, and low-skilled workers temporary jobs while they line up for better jobs in the formal sector. Second, although firms in the developing economies use informal employment as a means to reduce labor costs and to become more competitive both internally and externally, informal work is often associated with reduced productivity. Third, informal workers do not have access to job protection, health insurance, and social security benefits, which directly translate into inferior living conditions and increased poverty. Finally, higher informal economic activity is associated with reduced tax collection and lower fiscal capacity. Reduced tax collection jeopardizes the sustainability of financing the necessary public investments and other related policies facilitating the urban poverty reduction efforts.

Informal work arrangements persist for two main reasons: (1) low-skilled individuals and disadvantaged groups do not have enough employment options in the formal sector, and (2) firms and workers might prefer informal employment over formal employment to avoid high taxes and mandatory social security contributions [Slemrod, 2007]. Reducing informal employment and increasing the share of formal work in the labor market are standard recommendations in any development policy agenda; but, achieving these goals are often not straightforward. Willingness to enforce policies that would reduce informality may also be undesirable due to political economy concerns especially in developing countries. Nevertheless, the strong positive correlation between urban poverty and informal work arrangements suggests that any urban poverty reduction policy agenda or effort should decisively and carefully based on implementing policies that would eliminate informal employment [Elgin and Oyvat, 2013]. Accordingly, the following set of policies can be recommended for the OIC countries:

- *Training and skill acquisition.* Skill requirements are typically low in informal jobs; thus, moving people into more productive labor market activities requires additional skill accumulation [Almeida and Aterido, 2011]. Well-designed training and skill-development programs may enable workers to more effectively participate into formal work and stay in the formal labor market in the longer term [Albrecht et al., 2009]. Skill acquisition is also important to improve the resilience of the low-skilled workforce

against the automation/digitalization trends. Labor saving technologies aim to replace physical labor with automated/digital systems with the ultimate goal of eliminating the labor cost. Acquisition of new skills and relevant labor market experience in multiple sectors would increase labor market options among the most vulnerable groups—such as unskilled workers, females, and young workers.

- *Improved flexibility of formal work.* If informal employment is more desirable since it offers more flexibility, lower taxes, and lower bureaucracy/administrative burden, then more efficient and flexible formal work arrangements should be implemented to facilitate the shift from informal to formal employment. Stronger labor market institutions and better business climate are among the key policy ingredients.

- *Stricter enforcement.* The quantity and quality of public resources allocated to policing, inspection, enforcement, and monitoring activities should be increased to enhance strict compliance with laws and to effectively identify non-complier firms and workers [Ihrig and Moe, 2004; Almeida and Carneiro, 2009].

- *Supporting job creation.* Formal job creation should be incentivized by the OIC governments through appropriately designed subsidies to small enterprises [Bosch and Esteban-Pretel, 2012]. Macroeconomic policies (i.e., pro-poor/employment-intensive growth; redistributive fiscal policies, etc.) should also be calibrated in a way that is consistent with creating more and better jobs in the formal sector.

- *Temporary social protection.* A certain level of tolerance (in the form of public-backed insurance for illness, old age, death, disability, and vlunerable family members) should be exercised toward informal workers, while decisive policies to reduce informal employment are being implemented. Individuals informally employed in risky occupations or in hazardous environments should be given priority.

3.1.3. Activating the Islamic Social Finance Tools

The OIC countries should develop an effective "policy mix" by combining the traditional urban poverty reduction policies with the existing social institutions already existing in the Islamic society. For example, organizing an effective distribution of individual-level compulsory transfers, charity-based recommended transfers, and other voluntary transfers (both pecuniary

and non-pecuniary) would greatly improve welfare in the society and reduce poverty in urban settings. These tasks have been performed in many Islamic communities for a long time and there is an established social tradition that would strongly support effective implementation of such a policy mix. The policy example about the targeted use of zakat funds and other Muslim giving to address urban development and poverty challenges in OIC countries is discussed as a country case study in Box 3.1 below.

Box 3.1: Targeted use of zakat funds and other forms of Muslim philanthropy.

There is now a consensus that Islamic social finance can bridge up the needs of the poor to be used as social safety nets. As a viable policy example, in a joint project by UNDP, private banks, and the Ministry of Energy and Mineral Resources, the zakat funds in Indonesia provided around half a million USD financing to the construction of a hydroelectricity power plant in Jambi province, which supplied electricity to various slum neighborhoods. The project was launched in 2017 and provided electricity to four poor areas in the Jambi province. Around 5,000 individuals in 803 disadvantaged households benefited from the program. There are ongoing efforts to channel zakat funds to address other urban poverty issues in Indonesia. For example, UNDP and the Badan Amil Zakat National Agency (BAZNAS) jointly work on a livelihood enhancement project in Jambi area aiming to improve the income generating capacity of people residing in slums. Another project aims to assist disaster-affected local communities in Palu and Lombok following earthquake that hit the area in 2018.

Another example is the Global Muslim Philanthropy Fund for Children (GMPFC) jointly launched by UNICEF and the Islamic Development Bank, which is an innovative fund that aims to help children in need of humanitarian support and achieve the SDGs. The fund aims to enable zakat funds and other voluntary giving, such as Sadaqah and Waqf, to contribute to development programs.

There exist other examples of the use of similar funds to support urban poor for various purposes in OIC countries such as Malaysia, Turkey, and Pakistan. The redistributive function of such funds can both reduce inequality and eradicate poverty in urban settings. Joint work by the World Bank and the Islamic Development Bank (IsDB) suggests that the estimated volume of global zakat funds is approximately 600 billion USD, and channeling part of those funds toward the infrastructure needs of the urban poor would substantially strengthen the urban poverty reduction efforts and policies in the OIC countries.

ICT tools can facilitate the more effective functioning of Islamic social finance tool and institutions. For example, an effective use of blockchain technologies can improve the efficiency of transfers, increase transparency, remove asymmetric information, eliminate distrust between counterparties, facilitate effective monitoring, protect anonymity, and prevent potential fraud. Improved efficiency in the functioning of such institutions would increase the funds collected and redistributed. Various other tools are also developed in some countries to improve the Islamic social finance systems. For example, to support cashless transactions, a Smart Card is developed in Egypt—the Social Family Card. A cashless system may also prevent misuses associated with cash handling.

Blockchain technologies and card-based shopping systems have been implemented in refugee camps in Jordan and Turkey, respectively. The blockchain system in Jordan has been employed by the UN World Food Program to provide basic assistance aimed at preventing hunger and to reduce transaction fees by incorporation of biometric authentication. A cashless shopping card is distributed to refugees settled in camps in Turkey to re-engage refugees in daily life by letting them shop for their own needs using the cards distributed them by the government. FINTECH systems can also be utilized to further strengthen the technological infrastructure of these innovative tools.

The existing evidence suggests that the Islamic social finance system is a viable complementary tool that can be used in combination with traditional poverty reduction policies to eradicate urban poverty in the OIC countries. Adoption of new technologies would make the operating principles of Islamic social finance institutions more productive, transparent, and reliable. The existing Islamic social institutions have several unique features that can function as effective redistributive tools, and reduce socio-economic inequality and poverty.

3.1.4. Improving Urban Governance, Legislation, and Policy Coordination

The New Urban Agenda calls for better national strategies and more effective coordination between national and local policy actions in tackling the urban poverty challenges. National governments should put strong commitment to sustainable implementation of robust urban poverty reduction policies and close collaboration with subnational governments, local authorities, and other relevant stakeholders is needed to enhance policy effectiveness.

The first step toward this direction is to set up effective, ambitious, but, at the same time, feasible long-term national strategies that are determined in agreement with local authorities and other stakeholders with an inclusive and integrated perspective. A government-led process of coordinating and motivating the relevant actors around a common goal would be the most efficient strategy to transform the urban governance vision in a sustainable way [UN-Habitat, 2016]. The second step is to build a bottom-up feedback system that would address the specific needs of each city or community. A broad national strategy cannot effectively address the unique challenges that each city faces; thus, subnational governments and other local authorities should be actively involved in the implementation of the national urban strategy in line with the city-specific needs. The third step is to reformulate the urban legislation in line with the long-term national strategy. An adequate legislation would improve the effectiveness of policies that aim to address key urban poverty challenges such as slum formation, uncontrolled increase in population density in poor neighborhoods, urban sprawl, exhaustion of natural resources, environmental hazard, socio-economic inequalities and other vulnerabilities, ineffective/unproductive use of land, etc. Without a feasible and implementable urban legislation designed in line with the long-tern urban poverty reduction strategies, policy effectiveness will remain low in the OIC countries. Finally, national policies need to be effectively coordinated, monitored, and discussed at international level through more efficient inter-governmental interactions. The UN initiative attempts to fill this gap, but a more involved approach is obviously needed. The OIC countries would particularly benefit from such an improvement in international coordination.

The OIC countries already have explicit and implicit national urban policies designed as part of their long-term urban development agenda. It should be noted that there is substantial heterogeneity among the OIC countries in terms of commitment, implementation, monitoring, and evaluation of those policies [UN-Habitat and OECD, 2018]. The existing strategies should be promptly reviewed—and, if necessary, appropriately amended and revised—in line with the (existing and future) urban poverty challenges faced by the OIC countries.

3.1.5. Improving Resilience to Shocks

Shocks with adverse consequences on health, education, and labor market outcomes are being experienced at an increasing rate in the OIC countries—and developing countries in general—and the level of preparedness to those shocks is particularly low in those countries.

Although “shocks” are generally defined as unexpected events, the majority of those events experienced by the OIC countries are not “unexpected” other than their timing.

Natural disasters are frequently experienced in the OIC countries and the disaster management capacities in those countries are limited due to lack of efficient response strategies [Douglas, 2018]. The types of natural disasters vary across regions—ranging from earthquakes to climate-induced weather extremes and from wildfire to volcano eruptions. Some countries are more prone to experience a specific type of disaster, while others are exposed to many different types of natural disasters. Regardless of the type of natural disasters, the poor are invariably affected the worst and they are the most vulnerable ones to the adverse socio-economic consequences of natural disasters.

Some of the OIC countries are recently hit by large refugee inflows mostly due to civil conflict in a neighboring country—see, e.g., the civil conflict in Syria and large inflows of Syrian refugees into Turkey, Lebanon, Jordan, Iraq, and Egypt. Refugees are not evenly distributed across the hosting countries—partly due to lack of planning and preparedness. The uneven distribution of refugees across host-country provinces leads to congested public services in overcrowded regions, which in turn lowers the quality of services and generates public unrest. Refugees often settle in areas where housing costs are more reasonable and affordable, which means that the incumbent residents are mostly low-income and disadvantaged natives and minorities. Increased refugee presence in those neighborhoods leads to more limited access to formal education and health services, which further lowers options and opportunities for disadvantaged individuals. Refugees often do not have official work permit and they enter the host country labor markets through informal channels. In particular, they are more willing to accept lower wages than the native workers and they tend to displace informally employed low-skilled native workers, which may directly lead to decreased employment opportunities for the incumbent poor [Akgunduz et al., 2018; Del Carpio and Wagner, 2015; Tumen, 2016; Ceritoglu et al., 2017].

The COVID-19 outbreak is another example. Although COVID-19 is a global shock, its adverse consequences are more severely felt by the poor, who are more likely to live in overcrowded neighborhoods and slums [Brown et al., 2020; Wiemers et al., 2020]. For example, school closures may have generated additional disadvantages for the poor, as children in low-income families already have low school attachment levels and school closures may have triggered school dropout behavior [Azevedo et al., 2020; Psacharopoulos et al., 2020].

Moreover, they may have no access to online learning tools due to lack of access to broadband internet and other technological devices. Formation of learning gaps during this period is a global phenomenon, however those gaps may be larger for the disadvantaged children. Similar adverse conditions are also present in labor markets. Low-skilled and informal workers are more likely to be employed in overcrowded workplaces that are less likely to be inspected. They are also less likely to have access to formal health insurance with extended coverage for family members. As a result, they are more likely to be exposed to the virus and less likely to receive proper treatment.

The punchline is that key institutions in the OIC countries—such as the ones focusing on education, health, security, and regulation of markets and economic activities—should be well prepared to contingencies and they should also develop governance capacities to handle the adverse consequences of shocks. For example, education policy should be prepared to shocks to physical capacity due to earthquakes in regions at risk, additional refugee inflows into border regions under various scenarios, possibility of prolonged school closures in case of additional COVID-19 risks, and other region-specific shocks. Lack of proper response to those shocks may make the poor poorer and reduce the effectiveness of urban poverty reduction policies.

3.1.6. Conceptualizing Urban Poverty, and Improving Data Collection and Measurement Practices

Around one billion people currently live in slums, mostly in Sub-Saharan Africa and South Asia, under deprived conditions [Pariente, 2017; Beard, 2019]. The fraction of people living in slums has steadily increased over the past few decades and poverty has become an urban phenomenon especially in regions with densely populated slums. As the "influx" into slums continues, experts and policymakers are trying to find new and more systematic ways to tackle the main urban poverty challenges. Effective policy design has three essential ingredients: conceptualization, data collection, and measurement.

Conceptualization of urban poverty is a major challenge, because different urban areas have quite different characteristics and "one size fits all" approaches fall short of addressing those region-specific issues. Moreover, as discussed in-depth in Chapter 1, urban poverty is highly multidimensional, and those multiple dimensions must be systematically internalized to improve our understanding of the main policy issues. Conceptualizing and defining urban poverty within a multidimensional and region-specific context is also very important since

those concepts and definitions crucially influence humanitarian policy and the nature of other basic services provided—such as health, water, sanitation, sewage, etc. Without a well-structured conceptualization, national and local authorities will be ill-equipped to address the key urban poverty challenges.

Data collection is another major challenge for various reasons. First, individuals living in slums are highly mobile and their locations cannot be easily identified by official address-based databases as they typically engage in informal residency. Hence, they are typically underrepresented in survey-based household datasets. Second, to address the underrepresentation problem, specific field surveys need to be designed to collect high-quality data; however, each region and culture have their own characteristics and those field surveys have to be defined in a way to reflect those specificities in detail. Third, region-specific surveys are quite valuable to collect specific information on the needs of a certain region or population group, but those region- or group-specific surveys often cannot be brought together in a systematic way to have an idea about the big picture—such as large-scale cross-country studies. Therefore, comparability and external validity of region-specific information might be low. Fourth, region-specific data collection is often costly, lengthy, and also requires intensive technical work, which mask the benefits in comparison to costs. Fifth, survey-based field studies often need to be supported by additional fine-grained regional information, which needs more effective use of ICT tools and techniques. Finally, collecting high-quality data and sustaining targeted data-collection studies require long-term and consistent institutional support, which may be a problem in the OIC region as national statistical infrastructure is weak in some of the OIC countries.

The traditional measures of poverty often involve income-based (i.e., monetary or pecuniary) tools. Monetary measures of poverty are very useful in capturing the individuals' or households' ability to have access to basic needs. However, urban poverty is multidimensional and new instruments/indicators/approaches have to be developed to capture those dimensions in a better, deeper, and more comprehensive way. There are some serious efforts devoted to developing some indicators for the purpose of addressing this need; however, we still need a sound theory of urban poverty measurement that addresses the multidimensionality issue and agreed upon by academics, experts, and policymakers.

3.2. Conclusion

Increased urbanization is traditionally regarded as a phenomenon supporting economic growth, regional development, and welfare levels of individuals and families. However, rapid urbanization is also associated with congested public services, formation of slums, and increased poverty in urban areas if required policy measures are not taken. Increased urban poverty make the society more vulnerable to the adverse consequences of various shocks.

This report reviews the global trends in urban poverty, highlights the main data gaps and related statistical issues, reviews the current and future urban poverty challenges for the OIC countries, evaluates the existing policies and relevant institutional framework, and finally recommends policies that can be implemented as part of the urban poverty reduction policy set in the OIC area. The policy recommendations can be briefly listed as follows:

- Develop more effective urban planning strategies that particularly focus on better management of slums (through dissolving/depopulating them and preventing formation of new ones), which are the main poverty hubs in urban areas [e.g., Housing Development Administration (TOKİ) in Turkey and Purbachal New Town project in Bangladesh].
- Use the relevant ICT tools and techniques more effectively to monitor slums and accurately identify the urban poor.
- Design local labor market policies that would help tackling the informality problem, which feeds urban poverty; gradually reduce the share of informal employment over time; and create more and decent jobs.
- Activate the Islamic social finance tools and systematically integrate them into the general urban poverty reduction policy toolbox within a well-crafted "policy-mix" [e.g., the zakat-based infrastructure projects implemented in Indonesia]; utilize the related ICT tools (such as blockchain technologies, FINTECH systems, cashless smart cards, geographical information systems) that facilitate a more effective use of the Islamic social finance tools [e.g., the Social Family Card in Egypt; cashless shopping cards distributed to refugees living in camps in Turkey and Jordan].
- Improve urban governance capacity by establishing a viable long-term national strategy aiming to effectively tackle urban poverty, strengthening policy coordination

between national and local authorities, enhancing legal and institutional capacity, and getting connected to the international policy network in a more effective way.

- Improve resilience to unexpected events—such as natural disasters, large population movements, and health shocks.
- Conceptualize urban poverty to improve our understanding of the main policy issues and to facilitate policymaking; improve data collection practices; and develop new instruments to enhance measurement of urban poverty.

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DATA ANNEX for CHAPTER 2

Table 2.1. Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population)				
Country Name	**1980-1989**	**1990-1999**	**2000-2009**	**2010-2019**
Afghanistan				
Albania		1.10	1.17	1.42
United Arab Emirates				0.00
Azerbaijan		7.30	0.54	
Benin			48.80	51.30
Burkina Faso		82.35	56.30	43.70
Bangladesh	31.03	39.95	30.25	17.20
Bahrain				
Brunei Darussalam				
Cote d'Ivoire	6.85	22.60	26.15	28.20
Cameroon		48.10	26.20	23.80
Comoros			13.50	17.60
Djibouti			20.60	19.37
Algeria	6.40	5.80		0.50
Egypt, Arab Rep.		4.67	4.15	1.88
Gabon			8.00	3.40
Guinea		70.45	60.95	35.30
Gambia, The		70.50	45.30	17.60
Guinea-Bissau		53.50	53.90	67.10
Guyana		23.40		
Indonesia	71.40	54.62	25.50	9.10
Iran, Islamic Rep.	6.80	3.80	0.60	0.24
Iraq			2.10	2.50
Jordan	0.00	2.25	0.50	0.10
Kazakhstan		6.30	3.57	0.01
Kyrgyz Republic		30.60	19.55	2.19
Kuwait				
Lebanon				0.00
Libya				
Morocco	11.10	5.20	4.70	1.00
Maldives			8.65	0.00
Mali		85.10	53.13	
Mozambique		81.60	74.00	62.90
Mauritania	40.00	30.85	14.93	6.00
Malaysia	2.20	1.17	0.50	0.03
Niger		79.80	73.45	47.40
Nigeria	53.30	60.30	53.50	

Oman				
Pakistan	62.20	32.73	19.08	6.55
West Bank and Gaza			0.82	0.47
Qatar				
Saudi Arabia				
Sudan			16.20	12.70
Senegal		62.25	42.85	38.00
Sierra Leone	72.00		71.60	46.15
Somalia				
Suriname		23.40		
Syrian Arab Republic			1.70	
Chad			62.90	38.40
Togo			55.60	52.00
Tajikistan		54.40	15.33	4.80
Turkmenistan		51.40		
Tunisia	15.10	11.25	4.70	1.10
Turkey	2.40	3.20	2.04	0.31
Uganda	57.70	64.43	55.37	38.80
Uzbekistan		40.20	60.77	
Yemen, Rep.		7.40	9.80	18.80
African Group	45.97	62.45	49.05	37.50
Arab Group	8.15	6.09	7.16	5.85
Asian Group	29.34	24.90	14.43	3.81
Overall	29.23	35.94	27.36	17.95

Table 2.1: *Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population).*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

Table 2.2. Urban population (% of total population)				
Country Name	**1980-1989**	**1990-1999**	**2000-2009**	**2010-2019**
Afghanistan	18.69	21.58	22.69	24.71
Albania	34.95	38.67	46.24	56.83
United Arab Emirates	79.96	78.87	82.04	85.49
Azerbaijan	53.44	52.38	52.29	54.63
Benin	30.48	36.51	40.34	45.45
Burkina Faso	11.58	15.18	21.09	27.26
Bangladesh	17.26	21.52	26.52	33.93
Bahrain	87.04	88.36	88.44	88.98
Brunei Darussalam	65.62	68.41	72.95	76.48
Cote d'Ivoire	37.83	41.03	45.03	49.25
Cameroon	35.70	42.29	48.24	54.27
Comoros	25.26	28.25	27.94	28.47
Djibouti	74.50	76.27	76.74	77.40
Algeria	47.49	55.60	63.42	70.47
Egypt, Arab Rep.	43.86	42.97	42.97	42.84
Gabon	61.62	74.06	82.04	87.78
Guinea	26.18	29.32	32.12	35.03
Gambia, The	32.63	42.81	51.56	58.84
Guinea-Bissau	23.26	33.97	37.97	41.93
Guyana	30.08	29.18	27.89	26.50
Indonesia	25.74	35.57	45.55	52.96
Iran, Islamic Rep.	52.92	59.78	67.15	73.06
Iraq	68.23	68.93	68.74	69.86
Jordan	66.22	76.89	80.29	89.43
Kazakhstan	55.62	56.03	56.43	57.16
Kyrgyz Republic	38.39	36.50	35.29	35.80
Kuwait	97.11	98.25	99.89	100.00
Lebanon	78.67	84.61	86.57	88.03
Libya	74.15	75.98	77.04	79.17
Morocco	44.43	51.10	55.15	60.52
Maldives	24.62	26.05	32.57	38.33
Mali	20.74	25.35	31.72	39.58
Mozambique	17.99	27.16	30.00	34.15
Mauritania	34.06	38.77	41.72	50.60
Malaysia	45.51	55.08	66.10	73.84
Niger	14.42	15.73	16.24	16.29
Nigeria	25.31	31.97	38.67	47.37
Oman	56.07	70.42	72.56	80.53
Pakistan	29.22	31.70	33.88	35.93

West Bank and Gaza		69.90	72.95	75.26
Qatar	90.38	94.67	97.29	98.88
Saudi Arabia	71.55	78.40	80.86	83.07
Sudan	22.90	31.55	32.74	33.88
Senegal	37.35	39.54	41.63	45.68
Sierra Leone	31.61	34.31	36.90	40.64
Somalia	27.97	31.25	35.26	42.86
Suriname	65.30	66.04	66.57	66.13
Syrian Arab Republic	47.77	50.09	53.60	53.53
Chad	19.68	21.36	21.79	22.52
Togo	26.38	30.50	34.97	39.86
Tajikistan	33.33	29.17	26.51	26.78
Turkmenistan	46.09	45.07	46.98	50.18
Tunisia	53.63	60.90	65.00	67.93
Turkey	51.15	61.82	67.51	73.30
Uganda	9.03	12.70	16.77	21.82
Uzbekistan	40.75	43.50	48.30	50.78
Yemen, Rep.	18.30	23.41	28.69	34.49
African Group	27.55	32.92	37.15	42.13
Arab Group	58.77	63.65	66.10	69.10
Asian Group	40.48	43.23	46.75	50.41
Overall	42.86	47.50	50.85	54.68

Table 2.2: *Urban population (% of total population).*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

Table 2.3. Population living in slums (% of urban population)				
Country Name	**1980-1989**	**1990-1999**	**2000-2009**	**2010-2019**
Afghanistan				62.70
Albania				
United Arab Emirates				
Azerbaijan				
Benin		78.05	71.68	61.50
Burkina Faso		75.60	61.63	65.80
Bangladesh		86.00	69.10	55.10
Bahrain				
Brunei Darussalam				
Cote d'Ivoire		53.85	56.28	56.00
Cameroon		50.20	47.13	37.80
Comoros		65.40	67.73	69.60
Djibouti				65.60
Algeria		11.80		
Egypt, Arab Rep.		44.70	18.18	10.60
Gabon			38.70	37.00
Guinea		74.60	49.57	43.30
Gambia, The			40.10	34.80
Guinea-Bissau			83.10	82.30
Guyana			33.47	33.10
Indonesia		46.70	26.68	21.80
Iran, Islamic Rep.		51.90	30.30	
Iraq		16.90	43.83	47.20
Jordan			17.70	12.90
Kazakhstan				
Kyrgyz Republic				
Kuwait				
Lebanon			53.10	
Libya		35.20		
Morocco		36.30	15.88	13.10
Maldives				
Mali		89.50	68.28	56.30
Mozambique		76.25	79.55	80.30
Mauritania				79.90
Malaysia				
Niger		83.35	82.08	70.10
Nigeria		75.40	65.58	50.20
Oman		60.50		
Pakistan		50.40	47.45	45.50

West Bank and Gaza				
Qatar				
Saudi Arabia			18.00	
Sudan				91.60
Senegal		65.20	43.03	39.40
Sierra Leone			97.00	75.60
Somalia			73.57	73.60
Suriname			3.90	7.30
Syrian Arab Republic			16.50	19.30
Chad		97.65	91.20	88.20
Togo			62.10	51.20
Tajikistan				
Turkmenistan				
Tunisia				8.00
Turkey		22.05	15.13	11.90
Uganda		75.00	66.30	53.60
Uzbekistan				
Yemen, Rep.			72.00	60.80
African Group		74.55	64.90	59.07
Arab Group		38.69	39.65	42.94
Asian Group		51.41	32.29	33.91
Overall		59.27	50.76	49.25

Table 2.3: *Population living in slums (% of urban population).*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

Table 2.4. The Gini Index				
Country Name	**1980-1989**	**1990-1999**	**2000-2009**	**2010-2019**
Afghanistan				
Albania		27.00	30.77	32.68
United Arab Emirates				32.50
Azerbaijan		34.70	28.36	
Benin			38.60	45.60
Burkina Faso		49.00	41.55	35.30
Bangladesh	27.20	30.25	33.30	32.25
Bahrain				
Brunei Darussalam				
Cote d'Ivoire	40.23	39.67	42.25	41.50
Cameroon		44.40	42.45	46.60
Comoros			55.90	45.30
Djibouti			40.00	43.60
Algeria	40.20	35.30		27.60
Egypt, Arab Rep.		31.63	31.45	30.45
Gabon			42.20	38.00
Guinea		46.45	41.20	33.70
Gambia, The		48.50	47.30	39.75
Guinea-Bissau		43.60	35.60	50.70
Guyana		44.60		
Indonesia	31.50	31.94	34.57	40.19
Iran, Islamic Rep.	47.40	43.57	43.47	39.30
Iraq			28.60	29.50
Jordan	36.10	39.90	34.50	33.70
Kazakhstan		35.40	32.57	27.48
Kyrgyz Republic		46.40	32.03	27.97
Kuwait				
Lebanon				31.80
Libya				
Morocco	39.20	39.35	40.65	39.50
Maldives			39.85	31.30
Mali		50.40	37.27	
Mozambique		53.60	46.30	54.00
Mauritania	43.90	43.90	38.30	32.60
Malaysia	47.27	48.43	45.90	42.07
Niger		38.80	40.85	32.90
Nigeria	38.70	48.45	41.55	
Oman				
Pakistan	33.30	31.67	31.80	31.23

West Bank and Gaza			34.56	34.47
Qatar				
Saudi Arabia				
Sudan			35.40	34.20
Senegal		47.75	40.20	40.30
Sierra Leone			40.20	34.85
Somalia				
Suriname		57.60		
Syrian Arab Republic			35.80	
Chad			39.80	43.30
Togo			42.20	44.55
Tajikistan		29.50	32.33	34.00
Turkmenistan		40.80		
Tunisia	43.40	40.95	39.25	34.30
Turkey	43.50	41.30	40.44	40.94
Uganda	44.40	41.13	44.10	41.90
Uzbekistan		44.70	34.80	
Yemen, Rep.		35.00	34.70	36.70
African Group	41.81	45.82	41.22	40.97
Arab Group	39.73	37.02	37.35	34.89
Asian Group	38.36	39.19	35.40	34.49
Overall	39.74	41.34	38.40	37.21

Table 2.4: *The Gini Index (World Bank estimates).*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

Table 2.5. Size of the Shadow Economy				
Countries above 40 percent informality (HIGH)				
Country Name	**Average**	**Median**	**Minimum**	**Maximum**
Nigeria	62.76	63.58	57.90	68.75
Benin	53.75	52.83	44.58	66.31
Azerbaijan	52.96	50.98	47.15	60.60
Gabon	51.44	51.69	46.85	55.12
Sierra Leone	49.19	49.77	38.74	57.22
Tajikistan	43.81	43.50	41.34	49.59
Gambia, The	43.32	44.52	36.23	46.35
Senegal	42.91	43.44	36.34	47.63
Kazakhstan	42.78	41.94	38.92	50.31
Chad	41.70	41.14	33.89	46.20
Mali	41.59	40.49	36.16	48.90
Uganda	40.44	40.58	35.88	45.35
Countries between 30-40 percent informality (MODERATE-HIGH)				
Cote d'Ivoire	39.78	40.98	34.64	43.97
Guinea-Bissau	39.33	39.60	34.01	46.66
Mozambique	38.90	37.62	34.43	47.06
Guinea	38.54	39.00	29.97	43.17
Burkina Faso	38.16	38.68	31.58	42.82
Niger	37.82	38.30	30.42	44.02
Kyrgyz Republic	37.74	38.04	33.56	44.33
Suriname	35.85	35.27	30.27	45.99
Comoros	34.97	35.41	28.66	39.60
Bangladesh	34.60	34.81	32.02	37.71
Guyana	34.31	33.92	32.34	39.21
Morocco	33.85	34.79	27.94	38.70
Egypt, Arab Rep.	33.30	34.41	27.07	37.00
Tunisia	33.20	32.20	24.63	39.29
Pakistan	33.05	32.08	29.32	37.74
Togo	32.90	33.78	26.35	35.53
Mauritania	32.45	31.64	27.85	36.67
Lebanon	31.45	31.21	29.07	34.20
Turkey	31.28	31.32	27.72	34.65
Malaysia	31.08	31.10	29.06	32.24
Algeria	31.01	28.79	26.24	35.79
Albania	30.76	31.46	26.24	35.79
Cameroon	30.11	29.37	24.71	35.04
Countries between 20-30 percent informality (MODERATE)				
Brunei Darussalam	29.11	29.15	25.31	32.49

Indonesia	21.09	21.40	16.19	23.97
Kuwait	20.36	20.10	19.07	24.18
Countries below 20 percent informality (LOW)				
Jordan	18.21	18.38	15.96	20.49
Iran, Islamic Rep.	18.20	18.41	15.30	21.12
Oman	17.92	18.22	14.66	19.47
Qatar	17.03	17.25	13.87	19.14
Saudi Arabia	16.80	17.39	13.73	19.52
Bahrain	16.64	16.73	14.76	18.40
African Group	41.95			
Arab Group	25.40			
Asian Group	34.04			
Overall	34.92			

Table 2.5: *Size of the Shadow Economy. Countries for which the informality data is missing are listed as follows: Afghanistan, United Arab Emirates, Djibouti, Iraq, Libya, Maldives, West Bank and Gaza, Sudan, Somalia, Syrian Arab Republic, Turkmenistan, Uzbekistan, and Yemen Rep.*
Source: *Medina and Schneider (2017).*

Table 2.6. Electric Power Consumption (kWh per capita)				
Country Name	**1980-1989**	**1990-1999**	**2000-2009**	**2010-2019**
Afghanistan				
Albania	1085.89	696.95	1525.28	2222.00
United Arab Emirates	7597.75	9574.25	11861.36	10625.18
Azerbaijan		2114.23	2138.11	1931.29
Benin	31.17	41.99	72.56	95.42
Burkina Faso				
Bangladesh	33.36	72.88	165.01	283.71
Bahrain	11340.77	19460.09	19829.70	18418.04
Brunei Darussalam	3222.05	6043.27	8218.80	9399.81
Cote d'Ivoire	167.72	162.54	181.73	230.92
Cameroon	205.37	178.94	207.29	258.53
Comoros				
Djibouti				
Algeria	436.98	570.02	817.47	1203.94
Egypt, Arab Rep.	528.34	772.98	1244.92	1663.09
Gabon	918.65	864.49	931.40	1032.15
Guinea				
Gambia, The				
Guinea-Bissau				
Guyana				
Indonesia	83.06	256.80	484.95	727.11
Iran, Islamic Rep.	708.57	1191.03	2037.04	2795.80
Iraq	1127.71	1316.92	1022.19	1289.67
Jordan	670.16	1080.16	1571.11	1865.65
Kazakhstan		4242.26	3976.49	5149.42
Kyrgyz Republic		2011.39	1448.06	1731.66
Kuwait	7828.64	11879.25	16228.30	15899.58
Lebanon	1221.84	1541.19	2480.49	2767.14
Libya	1181.01	1825.14	3061.53	2514.75
Morocco	290.07	420.56	626.40	852.90
Maldives				
Mali				
Mozambique	37.48	51.18	374.92	459.52
Mauritania				
Malaysia	838.49	1899.94	3066.54	4351.81
Niger			34.98	48.08
Nigeria	78.95	87.53	110.81	146.14
Oman	1363.32	2566.38	4010.52	6040.96
Pakistan	195.95	333.94	413.90	441.59

West Bank and Gaza				
Qatar	9807.65	11195.07	15148.59	14382.19
Saudi Arabia	3040.35	4822.70	6559.62	8535.73
Sudan	42.20	47.05	76.63	155.70
Senegal	103.48	110.74	149.94	213.37
Sierra Leone				
Somalia				
Suriname			2659.31	3367.79
Syrian Arab Republic	560.17	814.15	1378.48	1380.57
Chad				
Togo	75.00	94.84	105.00	140.46
Tajikistan		2569.37	2096.28	1731.54
Turkmenistan		1734.97	2000.29	2488.50
Tunisia	492.09	752.84	1091.13	1395.49
Turkey	654.07	1227.21	1987.48	2711.66
Uganda				
Uzbekistan		1979.29	1728.84	1635.69
Yemen, Rep.	87.17	130.68	183.03	222.64
African Group	202.23	199.03	240.96	291.62
Arab Group	2800.95	4045.26	5128.91	5247.84
Asian Group	852.68	1883.82	2263.09	2731.29
Overall	1698.65	2480.39	3007.48	3239.20

Table 2.6: *Electric Power Consumption (kWh per capita).*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

Table 2.7. Fixed Broadband Subscriptions (per 100 people)				
Country Name	**1980-1989**	**1990-1999**	**2000-2009**	**2010-2019**
Afghanistan			0.00	0.02
Albania			1.39	7.51
United Arab Emirates		0.01	3.31	15.58
Azerbaijan			0.34	16.06
Benin			0.04	0.38
Burkina Faso			0.03	0.07
Bangladesh			0.09	2.47
Bahrain			4.12	18.13
Brunei Darussalam			2.40	7.64
Cote d'Ivoire			0.03	0.48
Cameroon			0.00	0.08
Comoros			0.01	0.16
Djibouti			0.14	2.08
Algeria			0.80	4.83
Egypt, Arab Rep.			0.46	3.78
Gabon			0.12	0.59
Guinea				0.01
Gambia, The			0.01	0.11
Guinea-Bissau				0.06
Guyana			0.54	5.22
Indonesia			0.18	1.68
Iran, Islamic Rep.			0.18	7.17
Iraq			0.00	7.71
Jordan			0.96	3.70
Kazakhstan			1.10	11.14
Kyrgyz Republic			0.11	2.75
Kuwait			1.01	1.83
Lebanon			0.91	8.23
Libya			0.90	1.72
Morocco			0.86	2.88
Maldives			1.92	5.76
Mali			0.04	0.13
Mozambique			0.04	0.15
Mauritania			0.11	0.22
Malaysia			2.29	9.18
Niger			0.00	0.06
Nigeria			0.03	0.03
Oman			0.59	4.90
Pakistan			0.07	0.80

West Bank and Gaza			0.61	5.80
Qatar			4.10	8.96
Saudi Arabia			1.54	14.56
Sudan			0.04	0.06
Senegal			0.21	0.72
Sierra Leone				
Somalia				0.53
Suriname			0.57	8.33
Syrian Arab Republic			0.05	3.61
Chad			0.00	0.07
Togo			0.04	0.49
Tajikistan			0.04	0.07
Turkmenistan			0.01	0.04
Tunisia			0.91	5.67
Turkey			3.52	12.24
Uganda			0.01	0.11
Uzbekistan			0.10	4.78
Yemen, Rep.			0.09	1.00
African Group			0.05	0.22
Arab Group		0.01	1.07	5.51
Asian Group			0.83	5.71
Overall		0.01	0.70	3.97

Table 2.7: *Fixed Broadband Subscriptions (per 100 people).*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

Table 2.8. Rail Lines (Total Route-km)				
Country Name	**1980-1989**	**1990-1999**	**2000-2009**	**2010-2019**
Afghanistan				
Albania		491.00	434.30	
United Arab Emirates				
Azerbaijan		2117.40	2111.91	2085.32
Benin		518.50	598.00	
Burkina Faso		622.00	622.00	518.00
Bangladesh		2711.00	2838.00	2846.43
Bahrain				
Brunei Darussalam				
Cote d'Ivoire		1691.80	639.00	639.00
Cameroon		1010.00	990.35	993.00
Comoros				
Djibouti		781.00	781.00	
Algeria		4194.60	3727.20	3932.04
Egypt, Arab Rep.		4951.20	5134.80	5167.00
Gabon		787.80	778.70	810.00
Guinea				
Gambia, The				
Guinea-Bissau				
Guyana				
Indonesia		6444.40	4620.67	5505.50
Iran, Islamic Rep.		5688.80	6799.00	8618.50
Iraq		2500.40	2088.88	2254.00
Jordan		293.00	421.64	364.73
Kazakhstan		13635.20	13972.32	15021.53
Kyrgyz Republic		416.60	417.02	420.58
Kuwait				
Lebanon			401.00	
Libya				
Morocco		1907.00	1943.50	2129.67
Maldives				
Mali		729.00	733.67	
Mozambique		3116.60	3110.56	3116.00
Mauritania			725.25	728.00
Malaysia		1775.00	1657.30	2230.00
Niger				
Nigeria		3557.00	3529.20	3528.00
Oman				
Pakistan		7988.40	7791.00	7791.00

West Bank and Gaza				
Qatar				
Saudi Arabia		1018.00	1019.56	2323.67
Sudan		4595.00	4571.88	4392.00
Senegal		906.00	906.00	
Sierra Leone				
Somalia				
Suriname				
Syrian Arab Republic		1574.20	1960.20	2139.00
Chad				
Togo				
Tajikistan		495.80	608.00	608.80
Turkmenistan		2307.40	2760.31	3685.63
Tunisia		1899.60	2047.22	2154.83
Turkey		8610.40	8727.70	9940.78
Uganda		906.20	259.00	
Uzbekistan		3544.00	4069.96	4281.20
Yemen, Rep.				
African Group		1384.49	1171.97	1476.00
Arab Group		2371.40	2190.62	2761.88
Asian Group		4325.03	4369.81	5252.94
Overall		2841.95	2679.89	3508.01

Table 2.8: *Rail Lines (Total Route-km).*
Source: *The World Bank, World Development Indicators.*
http://datatopics.worldbank.org/world-development-indicators/

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