



SECONDARY CITIES POST-COVID 19

Achieving Urban Sustainable
and Regenerative Development
in Emerging Economies

Editors: Brian H Roberts and Joshua Drake

Cities Alliance
Cities Without Slums

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ABSTRACT

Secondary cities comprise over 16% of the world's population. They play an important role in the development and operations of countries as intermediary hubs and logistics centres within national industry supply chains and production systems. They serve around 22% of the world's population living in metropolitan regions and 62% of those in smaller regional cities, towns and rural areas. As such, they have a key role to play in supporting post-COVID-19 recovery efforts. Secondary cities have, until recent years, been a neglected area of public policy and investment, especially in emerging economies. This book includes a series of vignettes presented as chapters by authors with significant knowledge and experience of disaster recovery. It provides different perspectives on what can be done to support the sustainable and regenerative development of secondary cities in developing countries post COVID-19 do to support the sustainable and regenerative development of secondary cities in developing countries post COVID-19. These perspectives cover topics

in economic and community development, infrastructure, finance, local government, logistics and governance. The book provides policy and planning recommendations, as well as practical initiatives and approaches that secondary cities can use. The book is intended for leaders and policymakers responsible for the development of secondary cities, but it will be of interest to other readers involved in urban and regional development recovery efforts post COVID-19. This book was also written by its contributors as a farewell tribute to the work of William (Billy) Cobbett, Cities Alliance's outgoing Director.

Key Words: Post-COVID-19 recovery; secondary cities; intermediate cities; emerging economies; policy; systems of cities; urban resilience; disaster recovery.



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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Banks
ASEAN	Association of Southeast Asian Nations
ATA	Africa Territorial Agency
BBB	Build Back Better
CBO	Community based organisation
CFTA	Continental free trade area
COVID-19	Coronavirus disease 2019 (also known as novel coronavirus/2019-nCoV)
EDCs	Economic development corridors
EDI	Electronic data interchanges
EEG	Equitable economic growth
EPZ	Export processing zone
FMDV	Global Fund for Cities Development
GDP	Gross domestic product
GHG	Greenhouse gas
GIS	Geographic Information System
GPN	Global production networks
ICA	Infrastructure Consortium for Africa
ICLEI	Local Governments for Sustainability
ICT	Information and communications technology
IGAD	Intergovernmental Authority on Development
IMIF	International Municipal Investment Fund
JWP-EEG	Joint Work Programme for Equitable Economic Growth in Cities
LCs	Learning communities
LDCs	Least Developed Countries
LED	local economic development
LGU	Local government unit
LPI	Logistic Performance Index
NGIS	National Geographic information System in Korea
NGOs	Non-governmental organizations
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
SCA	Social capital audits
SCDF	Smart Community Development Framework
SDGs	Sustainable development goals
SECAP	Sustainable energy and climate action plans
SEZ	Special economic zone
SIDS	Small Island Developing States
SMEs	Small and medium enterprises
UCLG	United Cities and Local Governments
UCLGA	United Cities and Local Governments - Africa
UN ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNCDF	United Nations Capital Development Fund
VAT	Value-added tax
WASH	Water, sanitation, and hygiene



FOREWORD

Cities Alliance, the Board of which I have the honour to chair, is dedicated to mobilising a united international effort to ensure that the population of the fast-growing cities of the developing world are provided with the opportunity to create a better life for themselves and their families. "Cities without Slums" is our aspiration, and there is a lot to do because, currently, over 900 million people live in slums – 1 in 8 of the total urban population. This means inadequate provision of water, sanitation, energy and other basic services. Yet in the years I have worked with Cities Alliance, I have visited many slums and met some of the most hard-working and enterprising people imaginable – mostly women. Given access to basic services, they would have the capacity to improve the lives of their families and to lift up the economic development of their countries.

As COVID-19 sweeps across the world, it is demonstrating in all countries that the poorest suffer most, how gross inequality blights all countries, and how many of the most essential jobs are badly protected and rewarded. The call to "Build Back Better" has echoed across the world. Crises – terrible as they are – always create opportunities. And the opportunity before us, when we emerge from the crisis of COVID-19, is to ensure that all people can live with dignity and that the growing threat of climate change – and the massive displacement and suffering to which it will lead – is fully addressed. The call for this change in the US and EU is for a "Green New Deal". This recalls the terrible crisis of the 1930s – which led the world to fascism and war – and recalls the wisdom of the then president of the United States. Franklin D Roosevelt tried to use the power of the state to stimulate an economic recovery and improve the lot of those who suffered terribly during the Great Depression. Maybe if all countries had followed this example, and implemented the teachings of John Maynard Keynes, not only the rise of fascism but even the Second World War itself might have been avoided.

Interestingly, as I write, the International Monetary Fund is preparing to hold its annual meetings. Every year, in the lead-up to the meetings, the IMF publishes its analysis of the global economy. It is important to note that this bastion of economic orthodoxy is today arguing that public investment, if well directed, is desirable in uncertain times and in turn boosts private businesses' willingness to invest. The analysis also argues that the goal of bringing net carbon emissions to zero in each country by 2050 can be achieved through a comprehensive policy package which includes renewable subsidies, green public investment, steeply rising carbon pricing and direct transfers of the carbon tax revenues to the poorest. These policy ideas are addressed to every country and call for a shift in policy to address the deep economic depression that is threatening the world as a result of the coronavirus pandemic.

Cities Alliance's focus is on the urban poor in developing countries and in particular those living in informal settlements in secondary cities. Populations living in slums are neglected in most countries, but where attention is given, it often focuses on capital cities, while the populations of secondary cities are usually the most neglected, whether in terms of health, employment, financial security or social security.

Over the past four years, Cities Alliance has worked with the support of the UK Department for International Development (DFID) Programme on Equitable Economic Growth which has operationalised an approach to enhance long-term economic resilience by bolstering critical public infrastructure and services, emphasising the role of local governments and better integrating the informal economy into the city. There is a need now to build on this work to drive economic development post COVID-19.

This publication serves that purpose. It provides different perspectives on what secondary cities can do to support their recovery efforts, covering topics from economic and community development, infrastructure, environment, finance, logistics and governance. When taken together, the opinions presented in this book offer an optimistic view, recognising that, despite the challenges, there are also significant opportunities for local economies to adapt, recalibrate and rebuild smarter and more equitable communities. Where secondary cities have long-standing shortcomings, such as an over-reliance on imports, insufficient health and social protection systems or insufficient public services, the pandemic has offered an opportunity to Build Back Better.

By recognising these opportunities, we will not just be addressing the economic symptoms of the crisis but also the underlying long-term causes of the vulnerabilities of the urban poor. I hope this book will inspire and inform future initiatives aimed at sustainable and regenerative post COVID-19 development. It is what Nelson Mandela, the founding Patron of the Cities Alliance, would I am sure, endorse as a message of hope for the future.

This book was also written by its contributors as a farewell tribute to the work of William (Billy) Cobbett, Cities Alliance's outgoing Director. I would like to take this opportunity to personally thank Billy for his friendship and more importantly his unrivalled contribution by building the capacity of Cities Alliance and creating a growing focus on including those who live in informal settlements in the development of cities in emerging economies. Finally, I would like to thank the editors and authors for the production of this book.

Rt. Hon. Clare SHORT

A handwritten signature in black ink that reads "Clare Short". The signature is written in a cursive, slightly slanted style.

TESTIMONIALS

I am honoured to have this opportunity to acknowledge my friend and former colleague, Billy Cobbett, on the occasion of this publication and his retirement. Billy came of age, both personally and professionally, in years of crisis and turbulence in South Africa before and after apartheid. His commitment to social justice and effective governance is deeply grounded. It has inspired his decades of work and leadership to advance the cause of reducing poverty and vulnerability of populations across the developing world, especially in cities and most especially, in slums. The COVID-19 pandemic has cast a further harsh light on the multiple layers and dimensions of inequity facing the poorest and most deprived residents, even in the cities of rich countries. The tasks to recover and regenerate cities require the vision, energy, persistence, heart, and, may we say, hard-headedness, that our friend Billy has personified in his exemplary career. He will continue to inspire us, even as we wish him a well-deserved retirement.

Christine Kessides, former World Bank Urban Practice Manager

Billy is certainly a curious character, because you can't imagine how he wakes up early in the morning to run a marathon before coming to the office, 'fresh like a garden'. A man of reflection, a man of the field, a team builder, a promoter of new ideas, yes Billy is all of these at once.

I had the opportunity to work with him in various duties within Cities Alliance and I have seen that he has worked tirelessly for the organisation to fulfil its mandate of *Cities without Slums*. The COVID-19 pandemic presents a new challenge to cities, but it has also helped to measure how integrating the entire city and partnering among all actors is crucial to the effectiveness of the fight against the pandemic. This confirmed the correctness of the guiding principles of Cities Alliance under Billy's direction. Billy was right to raise awareness on the important role of informality and intermediary cities, and this precursor work will find extensions in the debates of the future conferences and publications on cities, and particularly so during the next Africities Summit scheduled on 16-20 November 2021, with the theme, "The contribution of intermediary cities in the implementation of Agenda 2030 of the United Nations and Agenda 2063 of the African Union". Billy has also advocated for cities to benefit from a strong enabling environment put in place by national governments. It is this conviction that led Cities Alliance and UCLG Africa to collaborate on the publication of a three-year report issued since 2012, to assess the institutional environment of African countries in support of cities initiatives and actions. The report now serves as a reference document in the area of governance and this must also be credited to Billy as the Director of Cities Alliance.

But above all, Billy must be complimented for his pragmatic passion for the cause of cities, convinced as I am myself that the fate of humanity is now being played out in cities. Having been among the precursors to raise awareness about this essential perspective is not the least of Billy Cobbett's merits.

Jean Pierre Elong Mbassi, Secretary General, UCLG Africa



As a prominent thought leader in the field of sustainable urban development, Billy Cobbett has consistently stressed the need for deep transformation. Towards this goal, he has always advocated for strengthening the voice and capacity of both grassroots organisations and local governments, simultaneously and in equal measure.

Trustful collaboration between cities and communities has never been as important as today. Indeed, it is a prerequisite to begin addressing the compounding impacts of COVID-19 and climate change, which are further exposing the deep inequities confronting cities around the world. I am sure Billy's vision will continue to resonate as the Cities Alliance takes on this challenge.

Raf Tuts, Director, Global Solutions Division, UN-Habitat

The work that Billy Cobbett has carried out in Cities Alliance has allowed us to address the elephant in the room. The design of our cities building on inequality and the afterthought for the realities of slum dwellers who are largely dependent of an informal economy which has been hard to address, let alone acknowledge for any sphere of government.

His critical but constructive view of the urban era will be his legacy to the Cities Alliance and the international community. The urban era is not about the megacities phenomenon; it is about tens of thousands of intermediary/secondary cities that are daily facing increasing demands from a growing population, full of dreams and potential. Shifting the narrative on the poor and creating spaces that allow us to see cities as a system of territorial solidarity will be critical to the future and to transform into permanent some of the temporary measures that are being taken to address the pandemic, in particular around housing and human mobility.

2020 is a strange year to bid farewell to his fierce leadership of the Alliance as the COVID-19 pandemic has allowed us to see empirically how much the livelihoods of the slums reflect on our capacity to bounce back to face the sanitary and social crises that can emerge.

Emilia Saiz, Secretary General UCLG

'Billy the runner, not the jogger'

One of Billy's many abilities – in my opinion a quality – as I have observed him for the last 15 years at meetings and conferences – is to rise early in the morning for exercise. Wherever he is and in almost whatever condition – I am now primarily thinking about jetlag – he is out before anyone has put on shoes. Then: fresh as a fiddle for breakfast with his team, with chair Clare, colleagues and friends, or in solitude. Inspiring and energetic for his surroundings be it the plants in the kitchen garden or high level statesmen or women.

One morning – probably in Marakesh in 2005, I asked him how the jogging had been. I got an unusually brisk, almost angry response: "I am not jogging, I am running". Surprised initially by his tone, I have afterwards given the reaction some consideration. In a wider sense Mr. William B. Cobbett has certainly not been jogging through life. He has been running. My thinking reached the following conclusion; there is a vast semantic difference between "jogging" and "running". It is in fact reflecting two different life philosophies and styles.

Whereas "jogging" is a rather irregular, gentle movement at low pace, "running" is a more planned and determined effort. Of energy you take out what you have. Brief, in intervals or for a longer span of time frequently according to a set goal. One definition of "running" (Oxford definitions) is "the activity of managing the operations of something". Another: "the activity of controlling or taking care of something". Billy, the Manager, has throughout his career in every of his fibres reflected these "activities". Relevant, goal, result and impact oriented, consistent, kind and reliable he has been pursuing the highest ethical standards in his work.

Billy, on behalf of many Norwegian colleagues and friends, I would like to thank you for the cooperation. From co-ordinator of PLANACT in Johannesburg – via UN Habitat in Nairobi and the World Bank in Washington D.C. – to manager of Cities Alliance in Brussels, we have always appreciated your kind advice, good humour, energy and for being who you are.

One advice from us up North: in retirement enjoy your *otium*. Even consider some jogging!

Erik Berg, Retired Senior Adviser at the Norwegian Ministry of Foreign Affairs

It is very much the end of an era when I heard that Billy Cobbett decided to retire. A real champion of slums and of local governments, Billy played an important advocacy role to improve living conditions for the urban poor. He focused on being inclusive and ensuring that the myriad voices working on issues of cities and slums are represented in the dialogue and in the governance structure of the Cities Alliance. Billy was a tireless advocate for the role of communities in slum upgrading and ensuring no one is left behind. He did it in his own diplomatic and articulate way, and left his mark on the Cities Alliance. His will be great shoes to fill.

Sameh Wahba, Global Director, Urban, Disaster Risk Management, Resilience and Land Global Practice, World Bank

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INTRODUCTION

BRIAN H ROBERTS, JOSHUA DRAKE AND RENE HOHMANN

1.1 COVID-19 Setting a New Context Forcing Change

COVID-19 has changed the pathway of economic, social and technological development. It has accelerated the world, and especially cities, into advancing technologies and other changes to the nature of work, living and jobs in a way not conceived of prior to the crisis. The availability of vaccines will abate the crisis but much of what we do in the future will not change significantly, how we work and do things will.

Countries around the world are already taking steps to become more self-sufficient and to decouple their economies from the reliance on imports from predominantly Asian countries. Before the pandemic struck, world merchandise trade had peaked, and significant structural change was already occurring with the switch to reshoring industries to developed economies to be closer to markets and to reduce the risk of disruption to supply chains. The pressure on countries to become more self-sufficient, promote localisation of production and develop trade in domestic markets between cities to fill lost jobs will undermine the competitive advantage many emerging economies have in low labour costs and tax advantages for manufacturers.

The way we receive news and information has become rapidly digital, even in the poorest countries, economies and workplaces. The growing application of artificial intelligence (AI) will also impact the outsourcing of back-office processing services and call centres, with many advanced economies reshoring these activities to fill job losses.

The impact of COVID-19 compounds existing crises being experienced in many secondary cities, especially in Sub-Saharan Africa. These cities face the prolonged effects of climate change, high informal sector employment and poor endowment of public goods and services. The tendency of large cities and metropolitan regions to receive a disproportionate share of public resources, investment and jobs further exacerbates the situation of inequity facing the recovery efforts and the future development of secondary cities in many countries.

The shutting down of economic activity through lockdowns is triggering a potentially vicious cycle for local economies. As businesses and economic activities shut down, public spaces close, and supply chains are disrupted, there are a series of flow-on effects. These effects include a loss of economic output and income, which will lead to a loss in government tax revenue and a reduced capacity to provide basic public goods and services. This disproportionately affects the urban poor, who suffer reduced access to employment, health, education, public space and utilities such as electricity and water. This will cause a drop in the efficiency of labour markets and can potentially generate political unrest and humanitarian crises in the longer term, which would, in turn, further impede economic outputs and living standards.

1.2 COVID-19 and Secondary Cities

The impact of COVID-19 has been most profound in cities. It is in the big cities that national and international media and research have focused on identifying actions for post-recovery efforts. Secondary cities have been given much less media and research attention. Their crucial role and contribution will be important to the recovery effort post COVID-19 and need to be properly recognised.

Many secondary cities in emerging economies have been hit hard by the COVID-19 pandemic and subsequent economic fallout. Poverty and informal sector employment in these cities, which were already high, can be expected to continue to rise. Uncertainty in international and domestic financial markets, globalisation and trade, will likely continue. This will leave many emerging economies struggling to secure credit and raise capital to develop and maintain the essential

infrastructure and services needed to support local economic development and community services, and to replace lost jobs.

The lack of infrastructure, revenue and institutional capacity to manage the unpredictable changes and economic adjustments are likely priority issues that will emerge in the aftermath of the COVID-19 crisis. These adjustments can be expected to take many years. However, the crisis will create new and important opportunities to develop and create more resilient, innovative and engaging communities.

The overall challenge facing institutions, business and communities is the question of what can be done to aid their recovery and develop more sustainable and regenerative economies in the context of COVID-19. The pandemic has unlocked a wave of creativity and ideas that can make secondary cities more sustainable, but the realities are that few of these cities have the resources, capabilities, skills and knowhow to capitalise on these new developments. This book seeks to address those gaps.

1.3 10 Key Challenges of COVID-19 on the Future Development of Secondary Cities

In light of the changing context forced by COVID-19, emerging economies, and especially secondary cities, face a daunting series of challenges in managing the recovery and aftermath of the pandemic to support regenerative and sustainable development.

1. **The opportunities to grow export sectors are expected to become more limited.** Countries will be required to switch their economic development models from dependence on export-orientated development to grow economies, to a model boosting endogenous domestic growth and development, investment, tourism and consumption.
2. **Secondary cities will need to learn how to manage with less funds.** The capacity of local city governments to plan and deliver services and build public assets will continue to be weakened

by poor inter-governmental revenue sharing and taxation arrangements, an unwillingness of national and state/provincial governments to decentralise policy and services delivery and devolve responsibility for capital works programs. There may also be limited international development finance assistance.

3. **Secondary cities will also need to manage with limited institutional and physical capacity.** Local governments will need to take on the role and responsibility of re-orientating and retrofitting local economies and infrastructure and governance systems, with limited institutional capacity and advanced knowledge or industry skills. This also calls for governments, institutions, business and communities to identify localised efficiency measures to reduce the use of non-renewable and other limited resources, waste, consumption and to improve the efficiency of logistics and production systems.
4. **Access to capital and other credit will remain tight in both the public and private sectors.** Uncertainty in international and domestic financial markets, globalisation and trade, will likely mean emerging economies will struggle to secure credit and raise capital to develop and maintain essential infrastructure and services. Smarter ways to stretch and leverage the use of capital to optimise the multiplier effects of investments will be necessary. This will be a significant challenge for many secondary cities in developing countries where access to capital has always been difficult.
5. **Restoring business confidence and local employment** will be an immediate challenge. The role of the informal sector, community and business organisations will be important to achieving this.
6. **The average age and shortage of urban infrastructure will continue to rise.** The situation in many secondary cities is worse than in metropolitan regions. The quality of service delivery is expected to fall as funds for maintenance become

squeezed. Managing, maintaining, and extending the life of infrastructure and other public services will be crucial to maintaining production and service delivery capability for all secondary cities.

7. **Skills and human capital resources for many secondary cities will continue to be depleted.** This is because the demand for workers with advanced and specialised skills grows, and workers are attracted to metropolitan regions.
8. **Poverty levels in secondary cities are expected to rise,** as economic conditions slow and adjustments in labour markets, production systems and technologies are made in response to the emerging technology-driven economy. Ways of mobilising, educating and making better use of the assets of the urban poor will be incredibly challenging, but it is crucial to maintaining social stability and livelihoods in these communities.
9. **It will be more difficult to protect and ensure the long-term future of those that are vulnerable and working in the informal economy.** This will particularly be the case in the short-term as the effects of the pandemic continue to play out. For most of these workers, their livelihoods depend on daily cash flow, and there is no sick pay, no health insurance and little public money to provide for them if they are unable to go to work.
10. **The capacity of secondary cities to manage climate change and degraded environments will become increasingly difficult.** Restoring environmental services will also become increasingly difficult, as priority is given to restoring economies and the delivery of social and community services. Creative and innovative ways are needed to mobilise the resources of communities and interest groups to restore environmental capital and address localised risks associated with climate change.



1.4 Emerging Opportunities

The world is at a tipping point in history where there is a vital opportunity to bring about responsible and collective change and to rethink the future model of economic and social development. The challenges and impacts of COVID-19 on our health and economic and social wellbeing will be significant; however, the crisis has created the opportunity to set the future pathway for regenerative and sustainable development in secondary cities. At the same time, there is a chance to recalibrate and address other ongoing problems associated with the management of population growth, urban development, poverty and climate change. This book will argue that the new model of regenerative and sustainable development that is required for secondary cities must be holistic in addressing COVID-19 as well as existing ongoing problems.

Solutions to recovery and creating a better future are more likely to come from the decisions of local governments, communities and small-scale enterprises than central governments. Localisation, cooperation, collaboration, regeneration and a focus on greater self-sufficiency will be necessary to replace the unsustainable development model driven by a form of competition that leaves cities, institutions and businesses fighting each other in a “winner-takes-all” approach.

There are opportunities for a more balanced model of less export-oriented development and endogenous growth, with a strong focus on boosting levels of domestic trade, innovation, skills development, savings, investment, and responsible consumption. Opportunities for expanding and diversifying exports will need a greater focus on innovations and value-adding of local industry products and services. It is vital that national urban and regional development policies address inequality, inclusiveness and the digital divide, so the benefits of economic development are distributed more equitably.

There is an opportunity to correct the neglect of the role of secondary cities in national development, which has occurred in policy areas for decades. Secondary cities are important hubs within national systems of cities. They are the linchpin connecting 62% of the world’s population living in smaller cities, towns and rural areas, and the 22% that live in metropolitan regions. Investing in the development of secondary cities and lifting their performance has the potential to add significant value to sub-regional, metropolitan and national economies.

There is an opportunity to better recognise the informal economy and other marginalised groups for the legitimate value they bring to urban economies. This means better integration of the informal economy into the city through

rethinking current approaches to urban planning, city governance and international development. This should entail creating more legitimate workspaces for informal businesses, facilitating their integration with regional supply chains and regional markets, and accounting for them in the regulatory frameworks.

Where countries do not have viable social protection systems or sufficient public services, this is a chance to identify the shortcomings and develop them. Already the impacts of the crisis signify the need for better employment standards for vulnerable workers and more resilient economies. By recognising these opportunities, we will not just be addressing the economic symptoms of the crisis but also the underlying causes of the vulnerabilities of the urban poor.

There is an opportunity for secondary cities to capitalise on the wave of innovations and ideas that are emerging from the pandemic, provided they are assisted with resources, skills and know-how. The pandemic has created shortages of medical supplies, which has resulted in local firms in many secondary cities reengineering manufacturing production lines to make up for shortfalls in supply and even out-competing imports of equipment and goods. As supply chains have become disrupted, 3-D printing has emerged as a new prospect for firms in many secondary cities to develop substitutions for imports with limited production runs of products. Many of these innovations will continue and remain import-competitive in the future.

These and other opportunities will be discussed throughout the thematic chapters of this book as we advocate for a new model of development.

1.5 Post COVID-19 Development Pathways

As a guiding principle throughout this book, a three-pronged strategic approach (Figure 1.1) is advocated for in post COVID-19 development pathways. The first aspect involves a focus on resilience, rehabilitation and recovery; the second on sustainable development; and the third on regenerative development. All three will assist towards restoring, building new and advancing the responsiveness of systems and decision making, which shape a wide range of urban development and management processes.

Resilience or Rehabilitative Development involves efforts to salvage, restore and rehabilitate damaged physical, economic, governance and social systems and order needed to support the normal functions of cities and societies. Resilience involves restoring vital components such as assets, infrastructure, business confidence, stabilising financial systems, governance, and social support mechanisms. Resilience requires careful planning, management, allocation of resources and the full engagement of civil society. It is a period in which planning for change and thinking for innovative approaches to urban and regional development should occur.

Sustainable development has been described variously as the organising principle for meeting human development goals while simultaneously sustaining the ability of natural systems to provide the resources and ecosystem services upon which the economy, culture and society depends. Sustainable development has a primary focus on how the actions of the present will affect the future state, dynamics and functioning of urban systems. There are many well-established principles and guidelines used to guide decision-making processes toward the achievement of sustainable development outcomes. Among these are the [Sustainable Development Goals](#) and the [New Urban Agenda](#).

The framework of sustainable development is focused mainly on managing the decision-making actions of the present in shaping and assessing the impacts of development on the immediate and predictable future. The framework for sustainable development needs to be reimagined, incorporating regenerative development for everything that encompasses resilience, including new and as yet unknown types and courses of decision-making related to development and redevelopment.

In practical terms, **regenerative development** means the development of systems which have a greater ability to respond and recover from future shocks and contribute to continuous value-generating processes of human and other living systems over time. Regenerative development has as its core focus the rehabilitation, recovery and extended use of existing assets, products and service delivery systems damaged by the shock effects of COVID-19. However, its horizon goes well beyond the present or even the near future. Its focus is on improving the resilience of ongoing living relationships – such as ecosystems, human

Figure 1.1 Sustainability framework for secondary cities post COVID-19 recovery and development



social systems, businesses and families – and building in value-adding, discovery, stretching and leveraging, and adapting the use of existing and future built physical and non-physical assets, resources, and systems valued by communities and society. Without a process of continually adding value to these living systems and relationships, real sustainability is not possible (Reed, 2018).

1.6 Purpose and Book Content

In the context of these emerging challenges and opportunities, governments, businesses and communities in secondary cities of developing countries must be assisted in responding to the crisis, recovering, and developing more sustainable and regenerative economies. There is a wide body of literature emerging offering solutions to support the recovery of economies and societies from COVID-19. This book adds to this body of knowledge within the general context of secondary cities. It collates expert inputs across 10 thematic chapters, presented as a series of vignettes, to outline a series of regenerative initiatives that secondary cities could apply to support post-COVID-19 recovery efforts. Given the fiscal and resource constraints facing many local governments and institutions, the emphasis is given to mobilising the informal sector and the community, as well as collaboration and the development of networks and partnerships. This book build builds on the narrative and theories put forward in Cities Alliance’s book *Connecting*

Systems of Secondary Cities (Cities Alliance, 2019, p. 106) published in English, Chinese and Spanish.

This introductory chapter has set the scene for change following the outbreak of COVID-19, introducing a three-strategy framework for the sustainable recovery and development of secondary cities that underpins the content and message of the chapters of the book.

Chapter 2, written by Michael Cohen and Mitchell Cook, examines the concept of recalibrating cities and reconsiders strategies for inclusive urbanisation. There is a need to retool current urban growth models, re-examine the future of work, and unwind the big city bias within national urban investment strategies.

Chapter 3, by Brian H Roberts, Joshua Drake, and Rene Peter Hohmann, focuses on restoring prosperity and the sustainable development of local economies, and it examines approaches to the regeneration and future development of secondary city local economies, including leveraging the capital of the informal sector. The emphasis is on regenerative and sustainable localisation of employment; investment and development opportunities; how to encourage a better balance between export and consumption-driven economic development strategies, with a greater focus on city-to-city and trade and investment; increased local production; and consumption of resources, goods and services.

Chapter 4, written by Mike Lindfield and Brian Roberts, examines the importance of both hard and soft infrastructure in supporting the recovery

and future sustainable development of secondary cities. It stresses the need for secondary cities to restore, fix, rehabilitate and reengineer existing infrastructure to extend its economic and physical life until it can be replaced by smarter and green systems. It provides guidance on what secondary cities can do in planning and building the next generation of infrastructure.

Chapter 5, written by Bernadia Tjandradewi and Brian Roberts, explores the role of local governments and institutions in supporting the recovery efforts and in setting the agenda for a new platform of governance that enables communities, business, and interest groups to play a more direct role in the delivery and management of urban services. Emphasis is given to adopting a more collaborative and participatory approach to policy, planning and development decision making by business, professional and community interest groups.

Chapter 6, written by Jamie Simpson, sets out the broad framework shaping national and city economic development. It discusses the critical importance of urbanisation, productive cities, trade flows and the transport and logistics systems connecting cities as critical enablers of growth in facilitating the exchange of goods, services and people within national and secondary systems of cities. It explores missing links in logistics and supply chain systems and what secondary cities can do to enhance urban and logistics systems to support inclusive city growth and poverty reduction as part of recovery efforts after the COVID-19 global crisis.

Chapter 7, written by Serge Allou and Omar Siddique, describes the characteristics of local government finances in developing economies and what has been the immediate and expected medium-term impact of COVID-19 on local government finances. It discusses how secondary

city local governments could approach the financing of their recovery planning to Build Back Better, what should be the recommended national responses to support local governments to adapt and transform towards economic resilience, and the role and responsibilities of development institutions to support these transformations.

Chapter 8, written by Josef Leitmann, looks at why cities, and especially secondary cities, are important and need to enhance their resilience to shocks and stresses, including pandemics, disasters and climate change. It examines why cities are important as sources of pollution and the reasons why it is essential to reduce their vulnerability to a range of threats, including pandemics. It focuses on the implications of COVID-19 for urban resilience in secondary cities and outlines options for strengthening the resilience of secondary cities as part of a strategy for sustainable recovery.

Chapter 9, written by Brian Roberts, discusses social responses to restore confidence and wellbeing to secondary cities and their local communities. Given public funds and resources to support post-COVID-19 recovery efforts will be constrained, it explores the need for local communities to become more self-reliant and self-sufficient, the importance of the development of social safety nets and other ways to develop smarter and healthier communities that are equitable and inclusive.

Chapter 10, written by Brian Roberts and Joshua Drake, is on preparing an action agenda for post-COVID-19 recovery efforts by secondary cities. It outlines initiatives and priorities to support rehabilitation and resilience during the initial recovery phase and longer-term initiatives to support sustainable and regenerative development activities in secondary cities.

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The background of the page is an aerial photograph of a city, showing a dense urban area with various buildings and structures. In the top right corner, there is a large, light gray number '2'.

2

RECALIBRATING CITIES RECONSIDERING URBAN STRATEGY

A 21st CENTURY ACTION AGENDA FOR INCLUSIVE
URBANISATION IN THE TIME OF CORONAVIRUS

MICHAEL COHEN AND MITCHELL COOK

2.1 Introduction

This chapter argues that the global coronavirus pandemic that began in 2019 and the public health and economic policy responses by governments constitute an unprecedented crisis for both megacities and secondary cities in developing countries. With the initial lockdowns and subsequent return of urban economic and fiscal crisis conditions, COVID-19 and other high-consequence and emerging infectious disease pandemics raise important issues for the future of urban policy and strategy. New thinking about alternative approaches to strengthening local resilience is needed, particularly around ideas to guide the ongoing urban transition towards more inclusive and durable prosperity in secondary cities (Roberts, 2014). Heightened levels of cascading risk require us to urgently consider whether current patterns of urbanisation might be influenced by national policy in new directions that are more consistent with the broad exposure of cities and vulnerable urban population groups to infectious diseases and cumulate climate hazards (Galaz et al., 2017; Mora et al., 2018).

This chapter contends that some of the fundamental premises that have guided urban strategy and how cities are incorporated into national development policy need to be reconsidered. These premises include at least the following:

1. National authorities should not be preoccupied with city size, but rather they should focus more narrowly on the efficient functioning of urban settlements.
2. The economic value generated through agglomeration and density could be captured as public revenue relatively easily, with only a small fraction of total income needed for cities to finance administration and urban investments.
3. Density and compact urban form are positive contributors to the reduction of greenhouse gas (GHG) emissions and are relatively free of risk to the many different populations and income groups residing in cities.

The urgency to reconsider at least these three premises of urban strategy is based on preliminary observations of two dimensions of the COVID-19 crisis:

- Speed of transmission and severity of population health impacts.
- Design of emergency public health and economic policy measures adopted in response to the pandemic.

While remedies to contain transmission inevitably vary within and across countries, the major elements that have been deployed so far – lockdown, quarantines, physical distancing, individual and household income support, food rations, fiscal transfers to state and local government budgets, business loans and guarantees, interest rate reductions, and foreign exchange operations – are unaffordable for most (but not all) of the national and municipal governments in countries where urbanisation rates will be highest over the next decade (Gibson & Rush, 2020; Corburn et al., 2020). This is especially the case for those governments managing urban growth in secondary cities in the Least Developed Countries and Small Island Developing States.

If the remedies are too expensive, they will not be sustained. Why should future strategies assume that developing country governments have domestic financial resources to sustain these measures? This view fails to recognise existing conditions in cities and urban areas, which now account for an increasing share of the poorest and most disadvantaged people with no private income and assets to cope with the remedies advanced across nearly all countries. We ask where will the future resources come from to mitigate and reduce the risks to cities that the COVID-19 pandemic is exposing?

We believe that a new generation of questions around national urban policy and strategy, rooted in a rethinking of foundational assumptions of agglomeration, can be a promising terrain for designing responses that reduce risks posed by high-consequence and emerging infectious diseases – of which COVID-19 is the latest example – and improving societal resilience to the worst effects of climate change more generally. This chapter aims to outline some of these questions and provide initial evidence to support their relevance.

COVID-19 is the canary in the coalmine. It warns humanity that cities are poorly prepared for global scale shocks to public health and livelihoods. While history suggests that secondary cities are in a relatively weak position to avoid the worst impact channels, the severity of the COVID-19 crisis means it is necessary to at least question the primacy of megacities in the existing global economy while planning new roles and development trajectories for smaller urban centres. A window of opportunity currently exists to reconsider the premises behind urban strategy, and to question prevailing assumptions around the costs and benefits of density and agglomeration.

Recalibrating urban strategy in light of the diversity of compounding risks that are apparent with COVID-19 is an urgent task to be undertaken by the international community and by urban policymakers in developing countries in close collaboration with affected communities. It is up to national, regional, and local governments to ask whether they can support more effective planning and management of density and its corollary – crowding – in urban areas. Can future communication technologies and digital forms of connectivity increase economic productivity, employment, and incomes while supporting new

patterns of human settlements that mitigate the risks associated with high densities and agglomeration?

One alternative to be considered is whether small and intermediate urban centres can offer economic opportunities equivalent to those of large cities while diminishing the risks in dense megacities to manageable levels. Since it is expected that 2 billion additional people will live in urban areas by 2050, almost totally in developing countries, should these countries explore alternative patterns of human settlements? This question is made more urgent by the likelihood of sea-level rise which, according to 2019 estimates, could threaten 136 coastal cities with a population over 5 million, and could endanger the lives of about 1 billion people.

2.2 Challenging the Assumptions of Current Urban Growth Models

Three principles – compact land use, physical connectivity, and more efficient mobility to facilitate local labour markets – have guided much of the international advice on urban strategy for the previous two generations. The adoption of these principles supported economies of scale that made goods and services more affordable to growing urban populations. Nonetheless, large cities with high-density municipalities have struggled to contain a growing array of negative side effects like congestion and pollution, infectious diseases, and threats to child and adolescent mental and developmental health.

As concerns with global GHG emissions have grown and public-private partnerships advanced as a promising instrument to meet investment needs in cities, climate and urban finance considerations have merged in urban strategies to almost always justify higher-density urban development along mass transit corridors. This vision of compact and accessible cities has consistently encountered a more complex reality on the ground, particularly in developing countries. Notable barriers to implementation include drastic increases in the price of land, pervasive intra-urban inequality in access to basic infrastructure, and widening disparities in the quality of living conditions across neighbourhoods (Elhadary & Ali, 2017; López-Morales et al., 2016).

Territorial policy and planning using real-time data covering ever larger functional urban scales were advanced as tools to provide the way out of these dilemmas. Prevailing approaches to inclusive urban economic growth and more resilient cities therefore became strongly associated with the spatial peripheries of cities and the need to transform un-serviced urban settlements. As national policymakers were encouraged not to focus attention on city size, the role of secondary cities in diffusing the growth of pandemic risk in large cities rarely entered discussions of solutions.

The speed and pattern of spread of COVID-19, which varies between cities and settlement areas, have both illustrated cascading risks associated with compactness and physical proximity in the dominant urban growth model (Graham, 2010). Initial discussions of the role of population density noted crowding as a principle factor in transmission risk, but debates focused on narrow indicators of crowding as the sole issue of concern are also problematic (Lall & Wahba, 2020). The composition of urban labour markets, the extent of social safety nets, and a mix of social factors at the individual and community level – housing, ethnicity, and gender, among others – influence differences in the disease burden experienced across cities and urban areas (Hassell et al., 2017).

These factors also are the variables that governments must integrate into a proactive strategy to reduce or mitigate the wider set of risks that are emerging in response to the coronavirus and that will result from the impacts of a 1.5-degree global temperature rise on cities (IPCC, 2018).

Lockdown and physical distancing measures appear to be successful in containing the spread of coronavirus. They are, however, best thought of as a *14th-century solution to a 21st-century problem of insufficient health services relative to prevailing conditions in large, high-density cities* (Pellecchia, 2017). There are obvious limits to the ability of vulnerable populations to sacrifice their individual wellbeing and livelihoods for policy measures of quarantine and social distancing, as currently constituted. These limits are likely to be encountered faster, but less predictably, in cities characterised by high levels of asset and income inequality, weak or insufficient safety nets, and a high share of employment in the informal sector.



This perspective on the risks and remedies stemming from centralisation, concentration, and density in the context of COVID-19 pandemic must be viewed within *two larger dynamics* at the global level. The first is the economic structure of globalisation itself with the consequences of multi-national supply chains, new patterns of both dependence and interdependence in trade relations, and the growing trends towards automation through digital technologies and artificial intelligence. If these developments offer the promise of increased productivity, they also are directly connected with the growing informality that the ILO reminds us has reached 60% of all global employment and 90% in developing countries (ILO, 2018).

The second dynamic is the pattern of urbanisation marked by increasing intra-urban inequality, declining infrastructure and environmental quality, and social exclusion. Cities are now recognised as the significant generators of GHGs contributing to climate change, while only occupying 2% of the world's land mass.

To summarise, the coronavirus crisis has dramatically revealed the urban implications of high-consequence and emerging infectious

diseases. It has also warned humanity about the disruptions that will come with a changing climate. Three issues stand out for the focus of policy attention on current growth models.

- The first is the trade-off between large cities and medium-sized cities and specifically the distribution of cascading risks associated with small spaces and large spaces.
- The second issue is whether economic models based on agglomeration economies continue to be valid. In many countries, big cities have grown based on implementing a least-cost model, whereby firms and households privately benefit from proximity that increases economic productivity while failing to meaningfully compensate or protect vulnerable populations from the negative consequences of living close together.
- The third issue is, therefore, the need for urban social policies and safety nets to compensate the poorest and most vulnerable urban residents for the burden of the costs of proximity, including the high costs of housing and urban health services, congestion, and environmental pollution.



2.3 Employment and the Future of Work

The April 2020 reports and images of large-scale migration out of major cities in India in response to the country's national lockdown order demonstrate the failures of large urban agglomerations to provide stable employment. Similarly, even a well-managed city-state such as Singapore discovered that the "blind spot" in its strategy to control the coronavirus outbreak was the large number of migrant workers living in close quarters without adequate sanitation. Singapore was congratulating itself as the coronavirus seemed to be under control. The blind spot proved to be critical.

In surveying government responses, direct compensatory measures, whether income support or food rations have been insufficient to meet the needs of informal sector workers in cities. Food stampedes in the Kibera slum in Nairobi, protests in Bogota, Lagos, Sao Paulo, and Tehran, and political rallies against social distancing in US cities all illustrate the time-bound limits to social distancing, which may be possible for the middle class but is not a realistic approach for the millions of households living without clean water and toilets in their housing.

Linking informality and density, as demonstrated by the economic consequences of coronavirus in cities around the world, must focus urgent need on employment patterns in post-coronavirus economies. This requires a discussion of the "location of the future of work", not just the "what" but also the "where". Moreover, it suggests the question of the qualifications for 21st-century employment, such as education and training. Urban employment and the quest for economic prosperity thus also require measures to reduce non-economic exclusion and intra-urban inequality.

Employment, however, is not free, wherever it is located. Even if employment generation is less expensive in secondary cities, it nonetheless requires both public and private investment. This is not just a question of public budgets, but rather the capacity and willingness of the financial sector and the presence and strength of local banking systems.

2.4 Rebalancing the Big City Bias within National Urban Investment Strategies

One of the realities of all countries, whether industrialised or developing, is the strong national bias in policies and resource allocated to big cities. These urban areas generate the largest share of GDP and thus appear to require the largest share of available resources. Even in countries with long histories of “anti-urban biases”, such as India, analysis of public financial flows in many countries shows that a disproportionate share of public resources is increasingly directed to larger urban areas. For instance, whether in South Asia or Africa, road widening projects and enormous elevated highways and flyovers for the largest cities are the latest feat of engineering to capture a quarter or more of the public resources allocated through national urban investment programs.

The need to rebalance the big city bias within national urban investment strategies is not intended to pit large and secondary cities as equal substitutes. Rather, a focus on small and intermediate urban centres would imply stronger, potentially more sustainable linkages between the urban and rural (agricultural) sectors. A rebalancing of this sort requires valuing these secondary cities more than as simply administrative centres or hubs for natural resource extraction to supply international markets and instead as integrators and the key to rejection of urban-rural dichotomies.

Small and intermediate urban centres would come to be seen as platforms for a wide spectrum of interventions necessary for more resilient cities and the achievement of regional stability and security within national economies. The need for greater urban-rural integration is particularly relevant as a hedge against frequently changing commodity prices.

While economic productivity may be lower in small and intermediate urban centres, a new vision for national urban investment strategies might value these cities and towns as less costly to locate in and manage. Infrastructure project planning and implementation are less complicated, with lower upfront costs and fewer project risks. These characteristics might also imply that the domestic financial sector might more adequately mobilise and structure climate-resilient investment in secondary cities.

2.5 An Agenda for Action on National Urban Strategy

The common contours of national responses to coronavirus are becoming clear. Lockdowns and physical distancing measures have proven medically effective in slowing the transmission of a highly contagious virus. Urban health systems must necessarily build surge capacity, using whatever means available, to contain outbreaks that inevitably follow restarting local economic activity and widespread in-person social interaction. Further assistance in the form of food and income support delivered through social safety nets is unavoidable where comprehensive lockdowns prevent poor and otherwise vulnerable people with no savings to cope with unemployment and economic contraction.

The long-term consequences of these measures, however, must be thought through in the national and municipal contexts in which they are implemented. Are they socially effective? As remedies to the risks associated with high population densities in cities, these compensatory measures and stimulus packages are simply too expensive for most low- and middle-income countries. Lockdowns and physical distancing are not viable solutions for very long periods, as evidence of rising unemployment, homelessness, malnutrition, and social exclusion are exacerbated in cities around the world.

What then would constitute an agenda for action for reconsidering 21st-century national urban strategy? Can the risks of public health crises and climate change frighten national governments and also capture their imagination so that they might consider recalibrating policies and strategies affecting urban areas? Would they support investments in resilience by decentralising economic activity and productive functions to less dense and less vulnerable cities? To do so, national and local governments, supported by the international community, scientific expertise, and the financial sector, would need to reconsider the following questions:

First, what processes and institutions can be tapped to enable national and local governments to reconsider the role of small and intermediate urban centres in the achievement of regional, national, and international development goals?

Second, what tools and instruments are available to incorporate probabilistic cost-benefit analysis of priority infrastructure investments that could

encourage safer densities and population dispersion to smaller and intermediate urban centres?

Third, how can national and local governments support economic and spatial planning to allow secondary cities to match local infrastructure and services to the future skills and capabilities needed from small and medium-sized businesses and leading national and international firms and industries?

Fourth, how can these changes occur within what might be called “a just transition” which is not simply a new form of spatial segregation by income and education, but rather a focused effort to reduce intra-urban inequality and social exclusion?

These questions are only the beginning. But they are proposed as an initiative of hope rather than despair. A Swahili proverb reminds us that, “those who have arrived have a long way to go”.

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3

RESTORING PROSPERITY TO LOCAL ECONOMIES

BRIAN H ROBERTS, JOSHUA DRAKE AND RENE PETER HOHMANN

Chapter 1 discussed some of the formidable challenges related to the post-COVID-19 recovery phase of development in secondary cities in developing countries. These included reduced access to public capital and subsequent challenges in providing basic infrastructure and services; continuing capacity of local and central governments to support employment creation, and the loss of skills and human capital resources. There is expected to be ongoing pressure to reduce public expenditure on other services, including pensions and welfare payments. Informal sector employment can be expected to rise, along with social development problems – especially poverty and domestic violence. At the same time, community expectations and dependence on governments and institutions to help rebuild local economies, lives and businesses will be high. A change to the economic model, as discussed in the previous chapter, will be necessary if these pessimistic outcomes for secondary cities are to be avoided in many emerging economies.

In an attempt to cast a positive light on post-COVID-19 recovery of local economies, with particular attention to these challenges, this chapter outlines a four-step framework for creating long-term sustainable and regenerative economic development for secondary cities (figure 3.1). The four steps are intended to guide secondary cities on the process towards making changes to the way they are governed and their economic model of development and in public services delivery. As part of the outcomes driven by the framework, we advocate for a focus on import substitution, localisation and glocalisation of manufacturing, employment, investment, and other value-adding activities. It is crucial that secondary cities develop strategies for local economic development to support domestic trade and markets, whilst continuing to support export and responsible consumption-driven growth with a greater focus on city-to-city trade and investment and increased local production and consumption of resources, goods and services. We also advocate for a strong emphasis on strengthening access to public goods and services for the urban poor. This builds on the theory of change and programmatic work of the Cities Alliance on Equitable Economic Growth, which demonstrated that fostering equitable access to public goods is the optimal pathway to achieving equitable economic growth. This is something which was true before COVID-19 and remains even more important now.

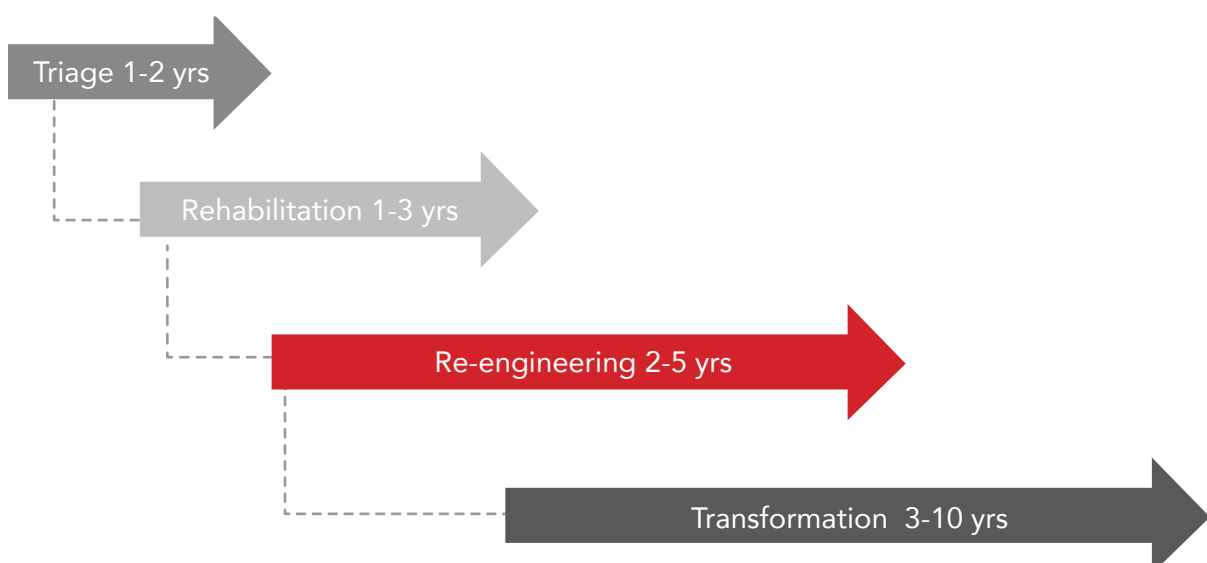
3.1 Framework for Post Covid-19 Recovery

This post-COVID-19 situation of limited resources and public funds, as well as higher debt, calls for secondary city governments to concentrate on achieving efficiency gains to provide essential services and basic support for local economic development and employment. Many public officials will see this as an impossible task. However, there is no choice but for secondary cities to make changes to the ways they are governed, the economic model of development and in their public services delivery.

3.1.1 TRIAGE STRATEGIES

This process of change begins with local economies undergoing “triage”, a medical term used for determining the severity of a patient’s condition. In the case of secondary city economies, this requires a rapid assessment of the condition of the economy and enables local and national government public officials, business and community leaders to assess the extent of damage, what parts of the economy are most affected, and which factors need varying levels of attention to restore the economy back to health and a basic level of efficiency. Examples of factors that should be assessed include levels of unemployment (disaggregated by sector and

Figure 3.1 Post COVID-19 economic recovery phases



demographics), welfare support, business closures, readily available funds, stock and resources of local government and institutions, and an assessment of the availability of local credit and money circulating in the economy. We recommend that a determination be made of the current condition of these factors according to the following scale: Level 1 – Resuscitation (immediate intervention); Level 2 – Emergency; Level 3 – Urgent; Level 4 – Semi-urgent; Level 5 – Non-urgent (Gilboy et al., 2012).

Triage assessment should also be used to identify which sectors of the economy have been damaged or may become more vulnerable, should some symptoms worsen. Without triage assessment, significant efforts and precious resources can be wasted, and the rate of recovery of local economies set back many years.

The intent of the triage assessment should not be to come up with solutions (except for emergency provisions) but to know which sectors and elements of the economy within the public and private sectors have been the most seriously damaged. Documentation of impacts is crucial to making decisions about the repair, replacement or write off of economic assets. From this assessment, the extent of the damage bill and what will be required in terms of fiscal, human and other capital needs to restore the economy to health can be identified.

Triage assessment requires qualified and informed experts familiar with the local economy to conduct the assessment. In many cases, the skills, expertise, data, and information will not be available locally. A way to overcome this situation is to develop an assessment committee comprising informed local and external experts. External experts may include politicians, business professionals and public officials who no longer live locally, but retain strong ties to the city and region. Tapping diaspora networks is an extremely useful way of accessing higher-level knowledge skills and potential sources of capital needed for the redevelopment of the private sector side of the local economy during the resilience phase of recovery.

3.1.2 REHABILITATION STRATEGIES

The second phase of recovery involves formulating resilience strategies for rehabilitation and adaptation in order to foster the recovery of the local economies to restore things to the

way they were. These will be shaped largely by the priorities identified during triage. Although COVID-19 has not caused physical destruction of infrastructure, human capital or environmental assets, it is unique in the manner in which it has caused societal change through social, economic and technological disruption. Resilience strategies for economic recovery will therefore need to not only target rehabilitation of economic assets but also adaptation to societal changes, such as the emergence of the digital economy.

Examples of initiatives needed to support economic resilience in secondary cities include the following:

Rehabilitation of public infrastructure and public services: Maintaining the operations of existing public infrastructure will be crucial to supporting economic development and living standards. *In the short term, if citizens cannot rely on clean water, waste disposal, food provision, mobility and basic utilities, then there is no platform upon which they can protect their livelihoods.* Studies have shown that if economies can restore public infrastructure to fully functioning use, annual growth in GDP can improve by 1% to 2%. Building new infrastructure should be deferred in preference to restoring, where possible, critical infrastructure assets and networks to optimise operational efficiency. As will be discussed in Section 3.1.3, upholding public infrastructure is also vital for generating a *virtuous cycle* of economic development longer term.

Preparing for a digital economy: COVID-19 has accelerated the use and new applications of telecommunications. It has also revealed significant deficiencies in the capability and capacity of existing networks and systems to take advantage of e-technologies. Secondary cities run the risk of being left behind metropolitan regions because of their poorer digital economy infrastructure. The resilience phase of recovery will require an immediate boost to telecommunications support services (both hard and soft infrastructure), and in particular improve Wi-Fi services.

Capitalisation: Many secondary city economies are running short of cash and lack access to credit, necessitating re-capitalising quickly. Local governments will need to work with the business sector to ensure that the flows of capital in both the public and private sectors are not slowed further, and innovative measures may need to

be applied to try and retain capital within local economies. This may require, for example, secondary cities working collaboratively with central governments to ensure that a greater percentage of bank deposits are retained within regions, rather than repatriated to central branches of banks in capital metropolitan regions (see Chapter 7).

Improved efficiency of informal labour markets:

The functioning of informal labour markets can be enhanced by using software applications that make use of social media for recruiting employment within local labour markets. Such apps have been used widely in dealing with disaster management and could easily be adapted for informal sector short-term employment, particularly in the construction, logistics and domestic health services.

Improving logistics systems: Logistics arrangements can be adapted and improved in secondary cities, particularly the delivery of goods

during non-business hours. The current capacity of some existing road networks significantly constrains the capacity of freight and public transport systems to move people freely within and around urban and hinterland areas, due mainly to the condition of and encroachment onto roads. Secondary cities can also encourage greater use of app technology to improve shared freight and parcel delivery, reduce transaction costs and make more efficient use of a city's public and private vehicle fleet services (see Chapter 6)

Self-organisation networking of the informal sector:

the informal sector economy its own system for organising the allocation, use and consumption of resources. There are efficiency gains in seeking to enhance the capacity to encourage the development of self-organising networks within the formal sector and to mobilise community resources to fix infrastructure, develop community facilities, and support community education and development. These can be organised through non-governmental organization

BOX 1

Vegetables on Wheels, an Initiative from Iriga, the Philippines

Iriga has been one of the most vulnerable cities in the Philippines – where annual typhoons strike its population of 111,757 people frequently. This is the reason why the city has made resiliency its focus over the years. Responding to COVID-19 and taking action to protect its local economy, Iriga City has initiated the “Vegetables on Wheels” initiative, after the implementation of its Enhanced Community Quarantine (ECQ) restricting residents from going out of their homes. With the help of the local government, Vegetables on Wheels allows local farmers to sell their agriculture products to Iriga City without having to leave their places and assists them in earning and upholding their livelihoods. Through this programme, the economic activities in the city are sustained, despite the community quarantine, and subsequently lead to beneficial partnerships between the local government unit (LGU) and the local farmers for farm-fresh products. Iriga City also gives away the agriculture products to its residents. The city is the first LGU in the country to implement the Vegetables on Wheels programme, which has inspired and been adopted by other LGUs in the Philippines.

(NGO) and community-based organisation (CBO) groups, which will require some capacity building using public, international development agency or diaspora refunds. During the resilience stage, informal sector workers need to receive government assistance and international support to maintain their livelihoods.

Targeting interventions to the urban poor and those that are most vulnerable. This includes women, ethnic groups, immigrants, elderly, youth and people with disabilities, among others. Such interventions might include the identification of households in which the principal income earner has died from COVID-19 for special assistance; community learning programs in languages of ethnic groups on improving public and personal health, and on where to gain access to support services; and the development of networks of community support for the improvement and maintenance of general health and community wellbeing. One such example is the “Vegetables on Wheels” initiative from Iriga, in the Philippines (Box 1).

3.1.3 REENGINEERING THE PATHWAYS OF SUSTAINABLE DEVELOPMENT

Once a local economy is sufficiently rehabilitated and stable, the third phase requires reengineering to set out a road map and pathways for a new model of sustainable long-term development. This requires new planning efforts to define objectives, strategies, targets, initiatives and investments needed to reengineer and restructure local and regional economies. This phase will involve realistic consideration and assessment of long-term financial, resource, asset-replacement and technology investment needs, as well as institutional responsibilities and arrangements for the delivery and operation of these. This will need to be done concurrently with changes to governance, institutional and social support systems, and arrangements to ensure secondary cities function more efficiently, but also to be better prepared, more responsive and resilient to future shocks and changes that will inevitably occur in the future.

Ensuring that future development is both sustainable and regenerative requires governments and business to invest in assets and systems of production that reduce the consumption of non-renewable resources, lifetime costs of capital investments, and the capacity

of infrastructure and the built environment to respond more rapidly to changes in technology, materials and climate-change impacts. Key elements of long-term strategies which support sustainable and regenerative development should include the following:

Investing in public infrastructure, goods and services to shape more efficiently functioning future cities:

The Cities Alliance Joint Work Programme on Equitable Economic Growth has demonstrated that fair access to public goods and services is the most important pathway to equitable economic growth. This was true before coronavirus and remains as important now as ever. In the longer term, directing efforts towards equitable access to public goods and services generates a *virtuous cycle* of economic development (see Figure 3.2). In developing plans for new public infrastructure and services, authorities should pay heed to the choice of technologies, construction, materials and design of infrastructure and public assets. These will impact the life-cycle costs and value for money over the long-term, and should be considered rather than short-term, low-cost fitting solutions, which will only end up costing more to maintain the service throughout its lifetime. Value engineering should be used as a tool to ensure the best choice of infrastructure and assets, and that these are capable of being adapted and responsive to shocks which will have a significant impact on their economic life.

Recognising this as an opportunity to give the informal sector more legitimacy:

There is a need to address the crisis by better recognising the informal economy as a vital economic force and supporter of livelihoods. This means better integration of the informal economy into the city through re-thinking current approaches to urban planning, city governance and international development. This should entail creating more legitimate workspaces for informal businesses, facilitating their integration with regional supply chains and regional markets, and accounting for them in the regulatory frameworks.

Investing in sectors that contribute to the vibrancy of our cities:

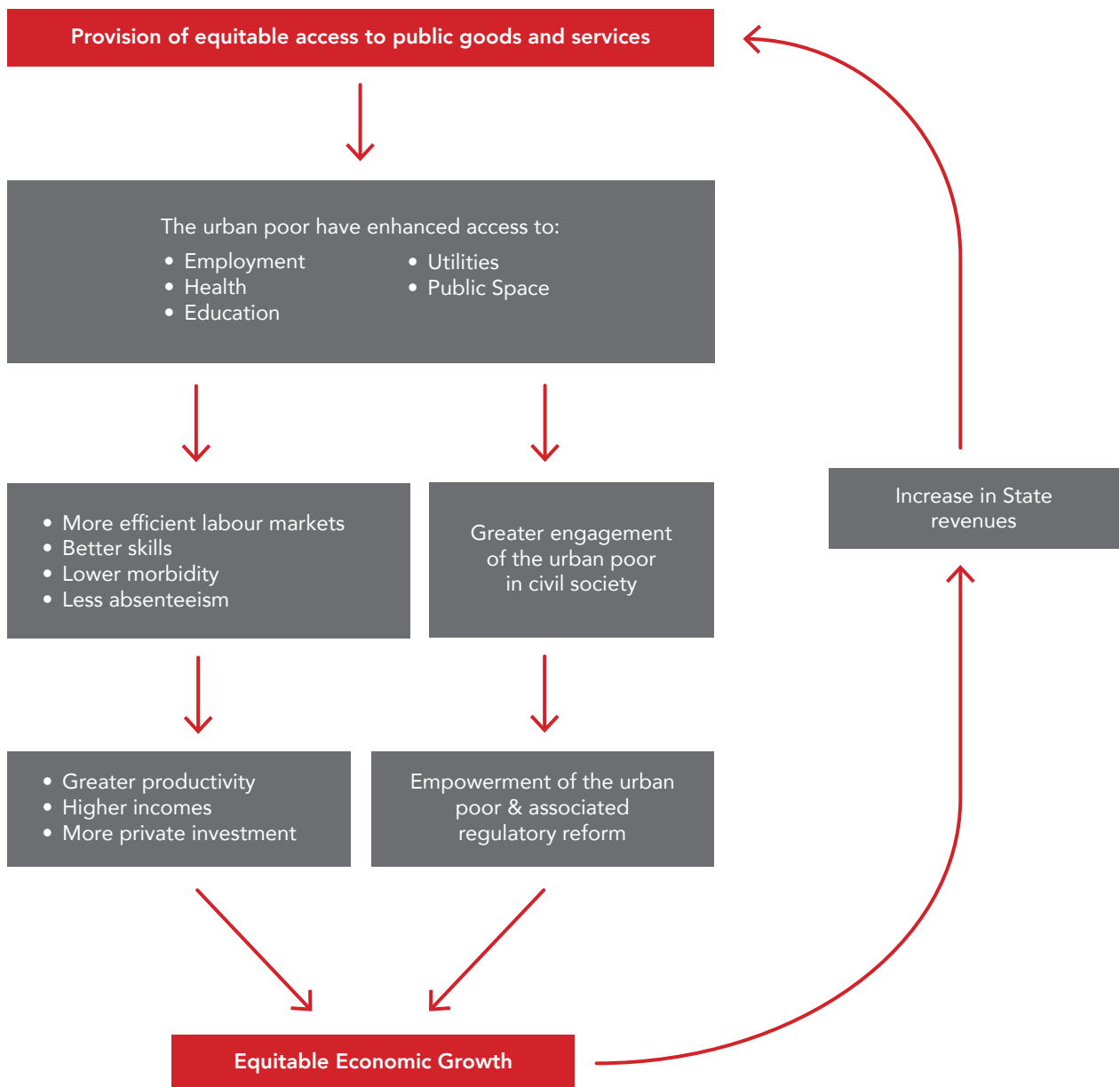
All secondary cities have one or more baseline industries which underpin the development of the local economy. City development plans and strategies should identify which sectors of the economy require critical hard and soft infrastructure investment to create an enabling environment that enables

the local economy to flourish. Investment in critical sectors, such as knowledge, construction, telecommunications, education, health import substitution industries, will be important to maintaining dynamic and sustainable economic growth and development.

Investing in and leverage existing industry strengths: To maximise the efficiency of economic infrastructure, public policy should

seek to encourage co-investment in common user infrastructure that will reduce transaction costs and enhance the competitiveness of local business and institutions. Development of common user warehousing, co- or shared training facilities, comarketing and co-investment in research and development offer ways of leveraging underutilised assets and reducing risks and underutilised storage and utility capacity.

Figure 3.2 Framework for more inclusive, equitable and sustainable development of secondary city economies



Upskilling populations for jobs of the future:

Modern economies are becoming much less labour-intensive and more technology-dependent for the production of goods and services. Depending on who is responsible for education and training, the stronger focus on designing local education curricula that is responsive to industry, institution and community demands will be necessary. A good model for this is the development of community colleges (Mann, 2017, p. 21).

Leveraging behavioural shifts: COVID-19 has shown the importance of attention to personal hygiene and sanitation. Good public health, in turn, affects the productivity performance of local economies and workplaces. There is a need for substantial investment in sustaining behavioural changes in personal hygiene and sanitation, but this will also need to be complemented with crucial investments in better public health infrastructure.

Improving the built form and the public realm:

The use of inferior materials and poor design adds significantly to the maintenance costs of economic assets in many secondary cities. Where possible, building standards need to be improved to ensure that safety, security, and longevity of assets are improved or extended. Urban planning should ensure that there are opportunities for value capture, improving urban design and increasing the area of public open space in cities as a means of improving public health and amenities.

3.2 Transformational Phase

The fourth and final phase is the “transformation” itself, whereby we move from planning, design, and financing to the construction of the assets – new economic and social infrastructure that is needed to transform from an old to a new economy. This phase will also require risk management strategies and mitigation measures to address long-term climatic and socio-economic issues linked to poverty, exclusion, and inequity – especially the digital divide.

In this stage, local economies can begin to move beyond COVID-19 recovery and are able to leverage the changes in the first three stages to create positive transformations. These transformations, for instance, can be in more viable social protection systems, more legitimate

recognition of the informal economy, more participatory approaches and local economic development (LED), enhanced access to public goods and services, greater engagement of the urban poor in civil society to ensure that growth is equitable, and more smart cities approaches.

The reform of public sector institutions to ensure that they operate in a more collaborative, engaging and open manner will be essential to provide a platform to engage with business, institutions and community sectors in a collective response to post-COVID recovery. This will be extremely difficult, given the entrenched practices and vested interests that have emerged from the way the political economy operated before the COVID crisis hit.

Some key actions that can be undertaken during this phase include the following:

Establish a planning and development commission or operational unit: Secondary city government or governments, where a secondary city is made up of more than one local government, should establish a future planning and development commission or operational unit reporting to the highest level of appointed officials responsible for the city, to deal with post-COVID-19 disaster recovery.

Restoring economic capacity: Following the damage assessment, priority must be given to investments in assets, infrastructure and structures that will restore production capacity and a more fully functioning economy. The resilience strategy should focus on infrastructure, critical skills and mobilising of human resources, particularly those working in the informal sector of the economy. These should be assessed in order of priority based on need and the potential to generate employment and value-added multiplier effects through the economy.

More viable social protection systems: COVID-19 has demonstrated the vulnerability of the poor and reliance on governments to support their wellbeing. The transformational phase offers an opportunity to address issues such as better social safety nets (discussed in Chapter 9), ensuring a basic minimum wage and tenure security. These are important measures that are needed to maintain the stability of social systems, which are vital to improving economic performance in secondary cities.

Formalised and self-organised approach to recovery: Secondary cities need to develop and adopt strategies for a formalised and self-organised approach to recovery post COVID-19. Economic recovery and development after the pandemic are unlikely to be successful if led exclusively by the public sector. New governance arrangements will need to be put in place for reconfiguring the formalised operational arrangements, for example, agency responsibilities and the establishment of a task force with representatives from public, business and civil society interests. Task force teams will be responsible for overseeing the implementation of initiatives identified and resourced through a planning and development commission.

Informal sector mobilisation to support of local area development: The role of the informal sector will be critical in local area revitalisation: mobilising community resources and labour for specific initiatives to help create employment, reengineer and recommission crucial infrastructure and support community development initiatives that lead to job creation, improvements in quality of the environment and public health. Quasi-formal collaborative governance arrangements will be needed involving public and informal sector representation to identify priority programs of investment, business and employment support, which should be executed through community-based organisations, NGOs, and local interest groups. These will need capacitating.

Enhance local revenue collection capacity and improved financial and economic management. Smart ways to enhance revenue raised within communities and collection include taxation of land and property, based on electricity consumption, use of mobile phone services, taxation of diaspora property at higher property tax rates. Improvements to public sector management, finance and budgeting are essential to improve the efficiency of the delivery of public services and to restore confidence to business and communities in local government. The introduction of collaborative governance will help in reducing the cost of public services.

3.3 Conclusion

The speed of the spread of COVID-19 has accelerated the transformation to a more digital and technologically based economy. It has also exposed how dependent countries, cities and

communities are on international supply chains, a few locations and countries for the production and sourcing of essential goods and services, and the lack of preparedness governments have to manage global risk events. COVID-19 has taught the world that everyone will have to learn to live within a climate of higher risks and rapid change, and that governments and societies need to be better prepared in order to manage uncertainty more effectively when similar events arise. It has also raised attention towards the need to address other lingering threats, such as climate change, the management of global waste and sustainable resource consumption. These matters will have more profound impacts on countries, cities and communities and must be addressed as part of the strategies put in place for post-COVID-19 recovery.

This chapter outlined a four-phase recovery framework, which can help nations, cities and local communities to create a more sustainable and regenerative model of development. This begins with conducting a triage assessment to understand the severity of the damage caused to economies by the pandemic and what is needed to rehabilitate them. Despite the urgency and need to address the immediate concerns and impacts of COVID-19, it is vital that governments, institutions, businesses and communities adopt a longer-term perspective on recovery and shaping the development of the future economy.

The second phase of recovery involves creating strategies for rehabilitation and adaptation in local economies to restore things to the way they were, including rehabilitation of public infrastructure and public services. Once a local economy is sufficiently rehabilitated and stable, the third phase requires reengineering to set out a road map and pathways for a new model of sustainable long-term economic development that leverages local strengths. The final phase is the "transformation" itself, where local economies are moving beyond COVID-19 recovery and are able to leverage the changes of the first three stages to create positive transformations, such as more viable social protection systems or enhanced access to public goods and services.

This chapter has stressed the importance of investing in and leveraging existing industry strengths in sectors of local economies that contribute to the vibrancy of the city. This will involve upskilling populations for jobs of the future and ensuring informal sector involvement in this, as well as adopting a more self-sufficient,



formalised and organised approach to recovery efforts. These and other initiatives suggested in the following chapters will help secondary cities

in developing more sustainable and regenerative economic development pathways for the future.

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4

HARD & SOFT INFRASTRUCTURE ROAD TO RECOVERY

MIKE LINDFIELD AND BRIAN H ROBERTS

Many governments see the focus on developing new infrastructure as a means of stimulating economic activities and creating jobs to support post-COVID-19 recovery efforts. The importance of infrastructure to support economic activities and improve accessibility and communications, public health, and urban and regional services is well documented, as is the extent of the gaps and shortfalls in the provision of it. While the need for new infrastructure is important, it is the existing infrastructure that will be called upon to carry the load and underpin recovery efforts.

For many developing countries and secondary cities, years of neglected repairs and maintenance have resulted in infrastructure assets and services performing sub-optimally or failing. The level, condition and efficiency of infrastructure in secondary cities tend to be worse than in metropolitan regions because the per capita level of investment is significantly lower (Song, 2013). Restoring and improving the capacity of infrastructure in secondary cities to perform to a level that can serve the needs of national and local economies and their communities will be critical to the speed of post-pandemic recovery. However, infrastructure varies greatly and embraces a wide range of networks, systems, technologies and services needed to run countries, cities and local communities. In this chapter, we explore diverse types of infrastructure needed to support the recovery and development of secondary cities in the post-COVID-19 phases of recovery outlined in Figure 3.1.

4.1 What is Infrastructure?

Infrastructure has traditionally been divided into two types or categories: Hard and Soft.

Hard infrastructure is physical things – roads, airports, buildings, and structures (physical assets/stocks) – that are essential to the economy, basic services, and quality of life. **Soft Infrastructure** is institutions, social capital, and basic technologies (flows) that are essential to run the economy and deliver services and quality of life. The availability, quantity, quality, accessibility, efficiency and effectiveness of hard and soft infrastructure have a significant impact on the economy, community services, quality of life, and the environment.

Smart infrastructure encompasses both hard and soft infrastructure by embedding sensors and monitoring devices into the infrastructure itself to capture data and process information, using smart information and communications technologies (smart ICT) to improve the way infrastructure is planned and managed. It includes a wide range of physical, institutional and transformational infrastructure required to support sustainable and regenerative development. Smart infrastructure applications are important in driving greater efficiency, increasing productivity, and greatly simplifying construction processes and life-of-asset maintenance. Sensors embedded in networks allow real-time reporting, data acquisition and analysis, which are then interpreted and used to deliver more reliable, robust and meaningful

information to infrastructure providers, and to improve management decisions about the structural health and maintenance of public and private sector assets.

The internet has created a sensing environment, where almost every aspect of infrastructure used – production, service delivery, logistics, and consumption – can respond in real-time to users' needs and demands. Smart infrastructure enables its service providers and users to learn and be more self-aware of the behaviour of infrastructure networks and to adjust loads and maintenance, leading to condition-based maintenance, reduced downtime and greater operational efficiency of the infrastructure overall. The impact of this will lead to transformations in the approaches to design and construction, as well as to step changes in improved health and productivity, greater efficiency in design and performance, low-carbon society and sustainable urban planning and management.

The application of smart infrastructure technologies and systems in cities of emerging economies will become increasingly important to reducing the costs and waste and increasing the reliability and quality of urban services, whether for water supply or health services. Building and making urban infrastructure networks smarter, using the application of simple app-based technologies and reporting systems, will be crucial for secondary cities in getting better

Figure 4.1. Smart phone app for reporting water system leaks in India

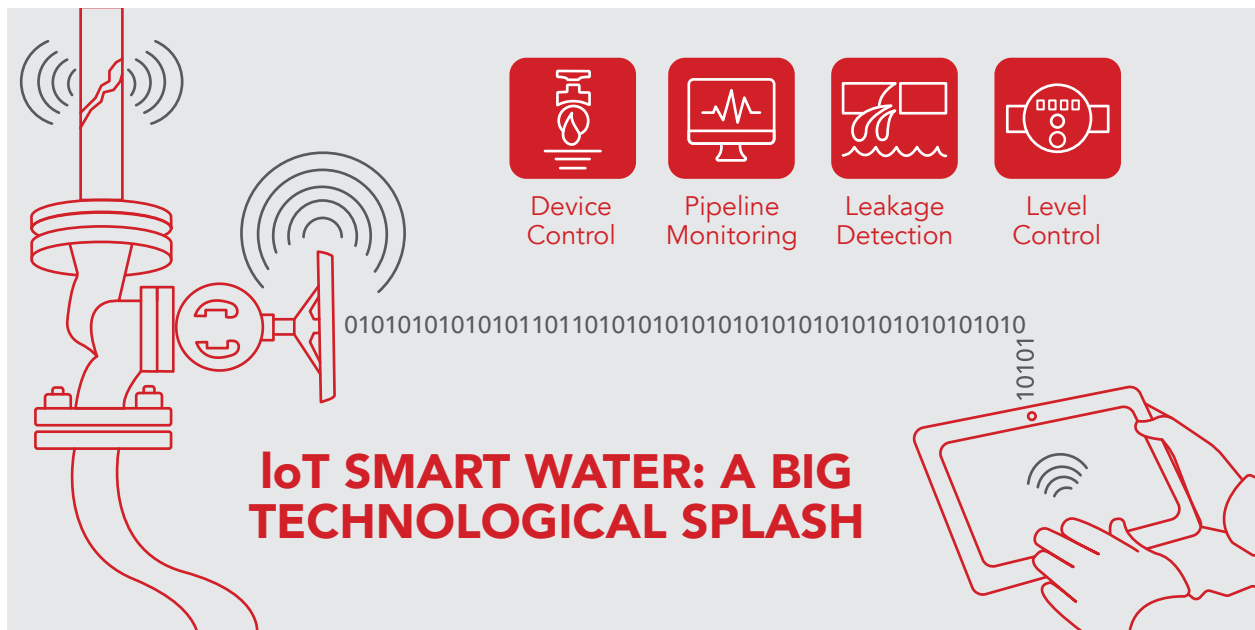
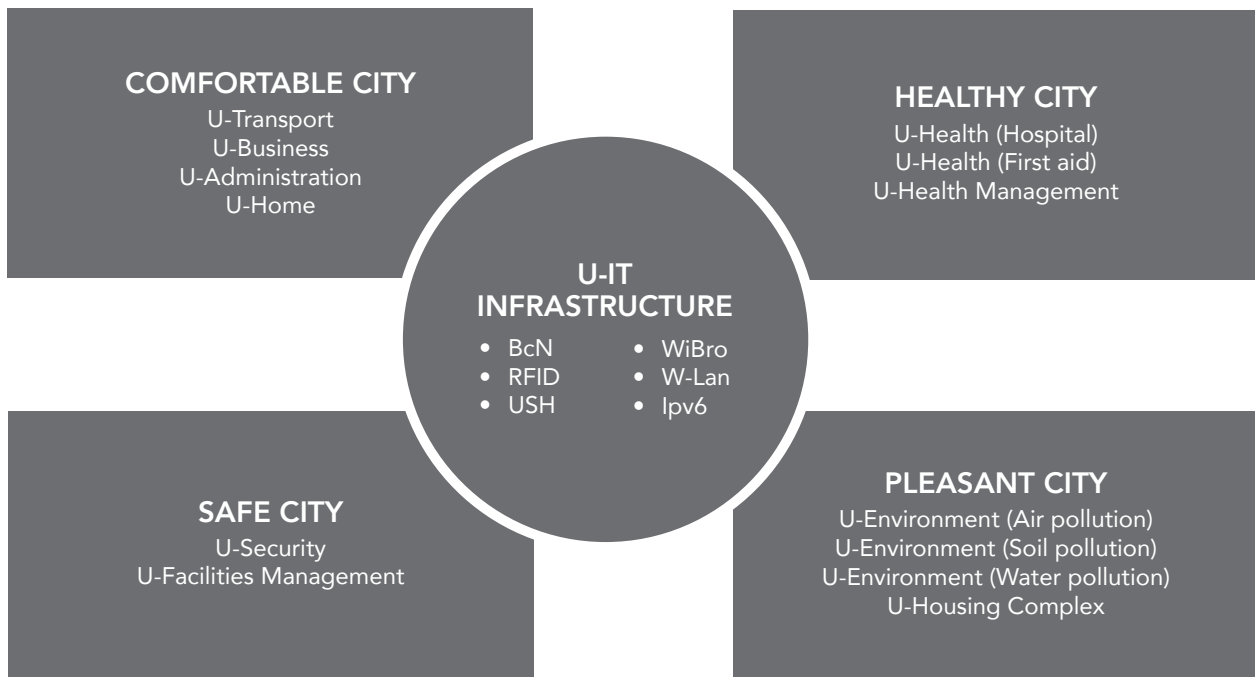


Figure 4.2. U-IT Cities Blueprint



BcN - Broadband Convergence Network
 RFID - Radio Frequency Identification
 USH - Unified Security Hub

WiBro - Wireless Broadband
 WiLAN - Wireless Local Area Network
 IPv6 - Internet Protocol version 6"

use, extending the life and efficiency of urban infrastructure. Smartphone reporting systems for reporting water leaks in India (Figure 4.1) and many other developing countries are significantly reducing losses and improving the quality of urban water supply. Tele-health services have enabled millions of sick people affected by COVID-19 to access medical services and to protect the lives of health workers.

The Republic of Korea has perhaps advanced the furthest down the road toward smart cities. Its smart city concept is inseparable from a broader concept of the "low carbon green city" with the ability to increase urban sustainability. Korea has a brand name for its smart cities: "U-City", in which the "U" stands for "ubiquitous". The Korean U-City Act, which was legislated in 2008, defines the U-City as providing U-City services anytime and anywhere, as a means to improve both the competitiveness of the city and the quality of human life, by utilizing infrastructures that were built with U-City technology. The key elements of U-cities are shown in Figure 4.2. The objective is to make cities more resource efficient and green by consolidating new information and communication technologies.

The U-City (or smart city) development in Korea has a distinctive origin, beginning in the 1990s with a series of national projects, which included the National Geographic Information System (NGIS) project, and within the framework of the five-year GIS Framework Plan from 1995. This created a base of geospatial data that was digitalized to create an integrated database system for the pursuit of better decision-making processes both at national and local levels. This effort was supported by the ministries in charge of land and infrastructure. The ICT agency provided full support for advancing R&D projects, creating jobs and markets for the GIS and ICT infrastructure, both nationally and internationally. These coordinated efforts from the 1990s laid a solid foundation for the future development of smart cities in Korea. The current overview of the various elements of a U-City is shown in the diagram.

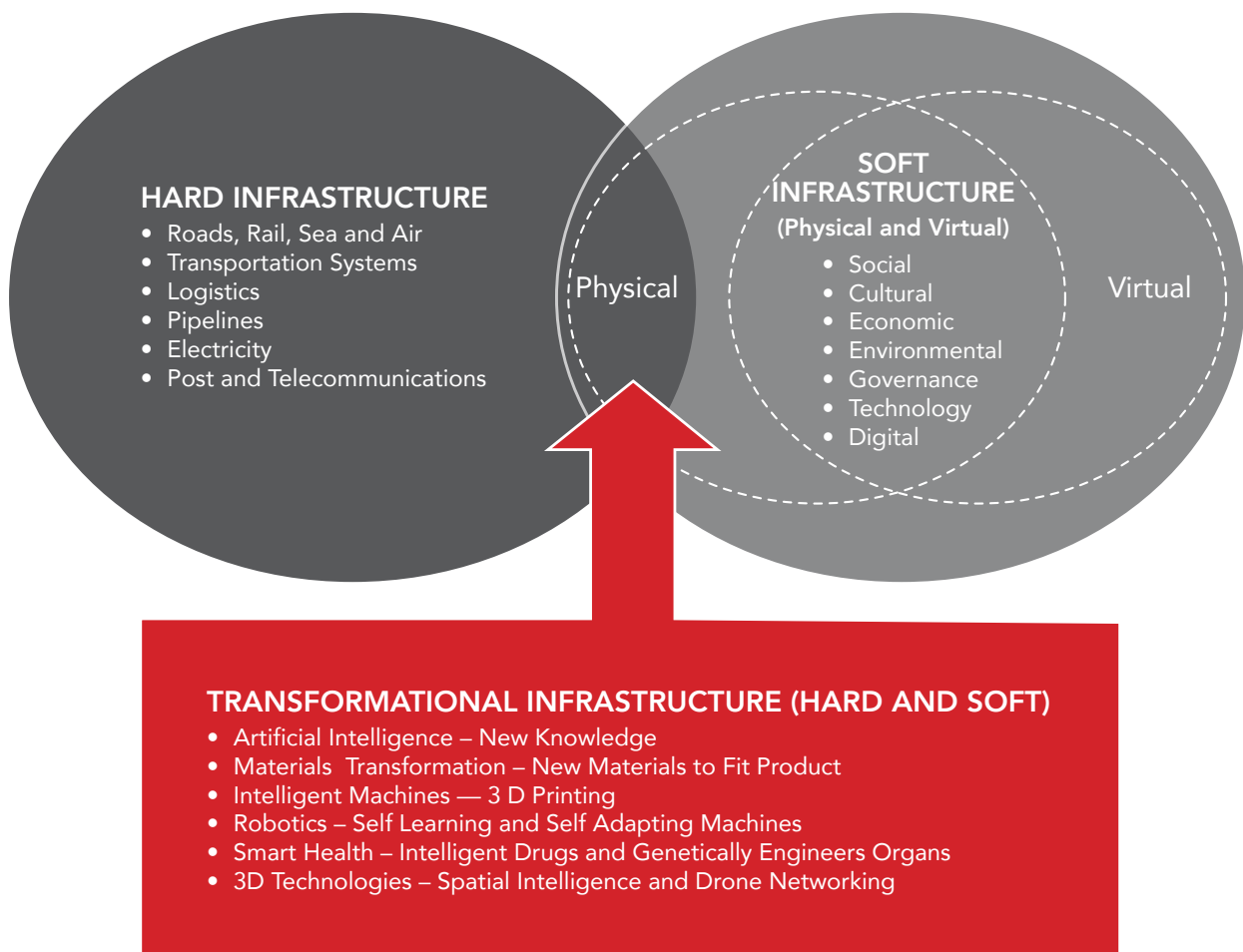
Korea's experience shows that fostering a smart city program goes beyond the narrow remit of a city government and requires active coordination among agencies to create an enabling environment. In the context of a post-COVID recovery, even more is required of cities and their supporting agencies at state/provincial and national levels.

4.2 Transformational Infrastructure

Given the need to respond to COVID-19 and the need to recover while building a sustainable and resilient economy, the task ahead is not just about being “smart” in relation to existing infrastructure systems. The task ahead is one of transforming those systems. To do this requires the effective and coordinated use of those forces that are already transforming the economy – but instead using them in ways that are inclusive and do not result in economically and socially disenfranchised groups. The advancement of knowledge, in materials and in other technologies and processes,

has created new fields of smart infrastructure that, when combined with resultant synergies, result in **transformational infrastructure** (Figure 4.3). This is a hybrid infrastructure merging hard and soft infrastructure to **add value** and to enhance the **development and diversity of economies**, improve wellbeing and restore the environment. Much transformational infrastructure is virtual: data in storage, which when merged, **synthesised and transposed** can be combined with the deployment of existing hard and soft infrastructure to enhance benefits to business, government, institutions and civil society. Transformational infrastructure will make **significant, observable impacts on the economic performance** of the

Figure 4.3. Hard, Soft and Transformational Infrastructure



city as a whole by taking information and data, and elements of soft and hard infrastructure to create completely new types of products and services to benefit many people. For this, more highly specialised smart infrastructure is needed.

There are unique opportunities for secondary cities to develop transformational infrastructure to support advanced hybrid industries, such as carbon fibre, hydrogen, precious metals, advanced materials, water, and energy applications — including local energy networks. Many of these depend upon resources and materials which some cities and hinterlands will have in abundance. The following section examines the investments required to activate a transition to a sustainable and resilient society.

4.3 Institutional Infrastructure

The first step in designing investments in smart infrastructure is to design the pieces of, and pathways, for a city's sustainable development.

To do this, a "city" has to understand its economy. An urban economy is rarely confined to one administrative district. Even if economic activities are confined to the city boundaries, there are multiple other institutions at other levels of government that will determine economic outcomes.

So, the first piece of smart infrastructure is the establishment of a body that is capable of comprehensively mapping and assessing the existing urban economy. The Asian Development Banks (ADB) *Competitive Cities* book and toolkit for a rapid economic assessment of cities have good methodologies for undertaking this mapping (Choe & Roberts, 2011; Roberts, 2015). Such a body could be at the level of the state/province, be formed by a consortium of local governments, or be led by the main city in an urban area.

Given the need to minimise the carbon footprint and to maximise the local resilience of urban development, city climate action plans (as shown in C40 Cities, 2018) provide the infrastructure investments and industry targets needed. While the energy and transport infrastructure required is straightforward in terms of design, given the resources, restructuring industries to be more energy efficient and resilient is much more

complicated, given the number of enterprises involved.

This implies that "institutional infrastructure" is required in several dimensions:

- An economic planning entity that develops pipelines of needed infrastructure and pathways for green enterprise development.
- An implementation planning body or bodies that is also proactive in terms of the implementation of infrastructure and support to new enterprises – such as a development corporation or knowledge park entity.
- A financing mechanism or mechanisms that can finance green infrastructure and green enterprise.

The ongoing COVID pandemic adds to the complexity and challenges in relation to each of these dimensions.

Taking each of these institutional infrastructures, in turn, we can see that there are models available to secondary cities that will enable them to implement the concrete investments in infrastructure that they need for sustainable and resilient development:

- **An economic planning entity that develops and operates pipelines of needed infrastructure and sets out and supports pathways for the growth of green enterprises at the level of the urban region.** Examples of such entities are rare, but may be found in Germany, with its city-region planning systems (for example, the Stuttgart Region Economic Development Corporation), and China, with its city Development and Reform Commissions. These entities have been pivotal in promoting green investments – both public and private. With COVID 19, the focus needs to be on planning for the generation of employment and resilience.
- **An implementation planning body or bodies that is also proactive in terms of implementing infrastructure and support to new enterprises – such as a development corporation or knowledge park entity.** The USA and China have useful examples of such entities in the

Research Triangle Park and the multitude of Eco-industrial Parks, respectively. With COVID-19, the focus needs to be on developing local area infrastructure networks which can be scaled-up for residential, commercial and industrial districts and managed in much the same way as eco-industrial parks.

- **A financing mechanism or mechanisms that can finance green infrastructure and green enterprise.** Australia and China have good examples of such entities in the Clean Energy Finance Corporation and the Shandong Green Development Fund, respectively. With COVID-19, innovative partnerships will need to be created to enable access to green finance funding in order to develop clean energy for residential, commercial and industrial districts.

The development and implementation of new planning, funding, financing and implementation mechanisms for transformational investments will require targeted fiscal transfers; the use of new funding instruments, such as land value capture; and, based on this type of funding, structuring vehicles for financing prioritized investments that will add in private sector participation and, where possible, community involvement in service delivery, operations and maintenance.

4.4 Remodelling City Services

Cities have developed, delivered and maintained services in the past through parallel silos of departments, institutions and public corporations without an integrated city vision. This results in a situation where all services tend to operate as independent systems, networks and devices, with each provider thinking only about its specific service requirements. The lack of integrated planning and budgeting, construction, delivery and maintenance has led to the duplication of many functions in these independently run services and systems, which cost cities globally billions of dollars. A remodelling of city services is required as we move into a post-COVID recovery period.

As noted in a report published by the Connecting Cities Advisory Board, "The future of Smart Cities goes to reuse resources in different services and think deployment in terms of common conceptual

management of resources (networks, databases, systems evolving from legacy to a new public management space model" (Jafari and Rodrigues, 2016, p. 35). Many secondary cities in emerging economies have a poor network of urban services, which are not well maintained and need remodelling in the way services are delivered and maintained.

The first step in remodelling city services infrastructure to develop smart cities involves mapping the physical and management infrastructure systems (Manville et al., 2014, p. 200). The next step is to model existing infrastructure management systems. Figure 4.4 (right), adapted from Jafari and Rodrigues (2016, p. 35) shows the existing model of hard and soft infrastructure management used for ensuring the delivery of urban services in cities. Infrastructure management models need to be overhauled to be much smarter and to recognise the multiplicity of organizations engaged in developing, delivering and maintaining the complex networks and systems of infrastructure needed to run modern cities – especially secondary cities.

The left side of Figure 4.4 shows the typical model of infrastructure management, which is strongly hieratically and vertically integrated and closed to community access. The right side of the figure shows the remodelling of management services that can be undertaken to ensure a more integrated approach to the planning, development, delivery and maintenance of urban infrastructure.

Remodelling the planning, development, delivery and maintenance of urban infrastructure in secondary cities requires a common definition of services that distinguishes between (final state services), i.e. the kind of sensors/meters/ that will be standardised and used for a specific type of service (e.g. fire, emergency) across the city, and parts or basic services, such as City Council ICT Department defining ICT Related Basic Service Intelligence, privacy, addressing and security issues and protocols related to the final state services. The first related to the actual delivery of services; the second to procedures and practices to ensure these are delivered to an expected standard, security or other protocol. According to Jafari and Rodrigues (2016), all basic services could be modelled in terms of a "standard city reference unit" that permits city government agencies, private and community services providers to "see most of the city's services in terms of repeatability" (Jafari & Rodrigues, 2016, p. 58).

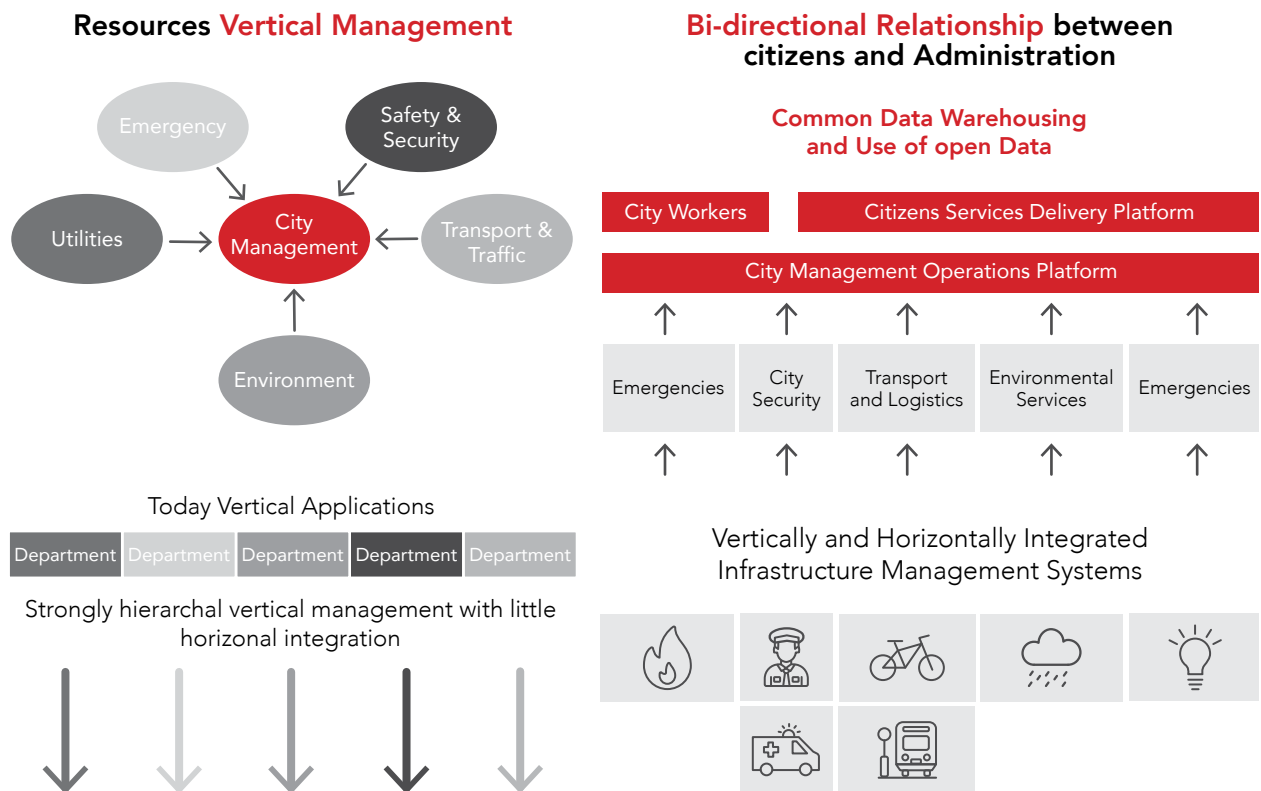
A clear definition of roles for ICT components of hard and soft infrastructure used by services providers, such as technical service users (police, firefighter, inspectors), corporations and private utilities (water, telecommunications, health, education) service providers should be defined and shown on a common-user management information system linked to a basic GIS, using commonly agreed definitions and protocols. Information collected for hard, soft and transformation infrastructure should be specified, for example:

- Physical parameters to be measured
- Kind of sensors/actuators that will be used for a specific service
- Position for each specific purpose
- How to install these devices in the streets
- The effectiveness of the user interface with stakeholders.

It is not necessary for secondary cities in developing economies to purchase or design expensive management information systems; software for this is readily available through the World Bank. However, in adopting new systems, the collection of information should not be focused on the development of big systems, but on local area networks, especially local districts (comprising 5,000–15,000 people) where the risk of and vulnerability to COVID-19 and other natural hazards may be high. Care is necessary that information from local districts can be integrated into a larger city-wide system. By localizing and remodelling the systems for integrated services delivery, there is likely to be greater willingness within communities and ward offices of utility agencies in cities to want to run infrastructure and services more efficiently and to maintain them.

The macroblock/superblock (*supermanzana*, in Spanish) used in Barcelona (Gyrkovich, 2019) is a good model for local area management of infrastructure involving more integrated approaches to services delivery, which could be adopted to support post-COVID-19 recovery efforts.

Figure 4.4 Remodelling Management Arrangements for Urban Infrastructure



Adapted: Jafari, R. and T. Rodrigues (2016)



Macroblocks are defined theoretically as an “area of urban organization, from which a series of structured transformation strategies towards a new urban model, where mobility and reorganization of public space represent the first step”. They represent a population between 5,000 and 15,000 in an area without car traffic surrounded by high traffic streets. That permits a model/service in the Superblock area (i.e., sonometers/macroblock), and as a consequence, obtains a model for all the cities model as the addition of macroblocks.

— (Gyurkovich, 2019, p. 23).

4.5 Smartening Up Physical Infrastructure

COVID-19 has brought many secondary city leaders to the sudden realisation of how deficient and inefficient many existing infrastructure assets, technologies and maintenance systems are in the delivery of urban services. Replacing old run-down infrastructure is simply not an option for many cities, but fixing, adapting and applying new technologies and surgery to severely damaged or non-functioning parts of networks are, and these measures can significantly improve the delivery of urban services until such time as economies recover enough to generate taxes and revenues to pay for replacement infrastructure. Secondary cities must learn how to smarten up existing systems. Three critical steps are necessary to do this:

1. Audits of all public infrastructure, SOE, community and social assets.
2. Analysis of the technical, economic, and physical lifecycle of infrastructure assets.
3. Triage of assets, in the context of resilience against physical threats and the assessment of the structure of the economy (undertaken as outlined in the previous section), and the effect of transforming forces, and the preparation of a staged plan for reengineering and replacement of infrastructure assets over the long term.

The short-term focus of such planning will, as countries reopen their economies, be the opportunity to Build Back Better – promoting infrastructure and institutional solutions that will necessarily be more efficient and sustainable, if they factor climate considerations into the design. Further, fostering green and resilient economic development will provide a comparative advantage, as EU and other economies diversify their supply chains. Local governments and state enterprises are on the frontline of combating the COVID-19 pandemic in coordination with the national government, provincial/state governments, and other community stakeholders. They play a key role in delivering critical infrastructure and services and providing support to communities and livelihoods, but will likely face budgetary constraints in delivering a comprehensive response, due to declines in municipal revenues and the repurposing of transfers. Local governments will need support to adapt and reallocate their budgets.

To prepare for public health emergencies and other disasters in the future, local governments should consider what structures can support their cities and proactively engage provincial/state and national agencies to support them in planning and investing in resilient urban design and infrastructure and to develop and leverage place-based approaches:

- Plan for green and resilient local economies, including advice on fostering a labour-intensive green city economy, sustainable spatial growth, environment and public health, affordable housing, transit-oriented development corridor strategies, sustainable cooling approaches, distributed renewable energy sources, and green buildings; in relation to resilience, such planning should explore options to convert critical public spaces into centres for collection and distribution of basic needs such as food and water during emergencies.
- Provide local government support to health-related spending and social security, guidelines and ICT systems for rapid response and recovery, public awareness campaigns, post-disaster needs assessment, and community mobilization for awareness-raising and monitoring.

- Prioritise expanded roles for community centres, community-led small works, medical supplies and equipment, WASH investments, and operations and maintenance arrangements to include communities and the private sector.
- Provide pre-feasibility support to labour-intensive investments, including drainage systems, water supply and sanitation systems, solid waste management and waste-to-energy solutions, multi-purpose community centres, green/public spaces, inclusive public transport and other non-motorized transport options, green infrastructure design interventions and other nature-based solutions.

In promoting such approaches, consideration should be given to grant and concessional finance delivered through a facility that can be upscaled and made more commercially focused as the economy improves.

Over the longer term, the city should carefully consider the potentials afforded by the transforming forces for existing and future economic activities to capture more of value-adding activities locally. These potentials will vary significantly across different sectors, due to different economies of scale, but industry cluster analysis techniques (Ketels, 2017, p. 52) can provide a systematic methodology for undertaking this task.

4.6 Realigning Infrastructure for a New Economy

COVID-19 will change the way cities function and the demand upon infrastructure services in the future. More people in developing economies will work from home and conduct business and other social interactions using the internet. This transformation will be slower in developing economies but will follow the trends of advanced economies. Demand for central business office space is expected to fall. Economic activities are likely to become more decentralised – even in secondary cities. More goods and services will be purchased online. Local businesses, institutions and community services will become more information and technologically driven.



These changes will alter the pattern of and demand on existing urban infrastructure and have a profound impact on the requirements of future infrastructure networks to support a more dispersed pattern of employment and development in cities. The new economy that will emerge after the COVID-19 pandemic will be different and require the realignment of infrastructure planning priorities and budgets to the new kinds of jobs, facilities and services needed to support more sustainable models of development.

Secondary cities, in particular, will need to ensure that their infrastructure supports the efficient operations of national supply chains and local distribution and collection systems. As crucial hubs in national supply chains and distribution systems, the development of hard and soft facilities and management systems for logistics (collection, distribution, sorting and warehousing) must become a vital focus of infrastructure planning. Such planning will involve engagements with national industry uses of services and central governments, which will need to become primary funders of national components of strategic logistical infrastructure. This requires careful analysis of, sector by sector, physical infrastructure assets, maintenance and management needs.

Old and rundown systems and networks of local infrastructure in secondary cities will also require reengineering and realigned to the needs of changing post-COVID-19 economies. It will require cities to engage with central governments on "city deals" as used in the UK (KPMG, 2014) and Australia to improve, modernise and smarten up city infrastructure. City deals are partnerships negotiated between cities and national governments, with cities taking responsibility for managing projects and shared funds for operations and maintenance, where these support national development and logistics needs.

Secondary cities can do much to improve the management, development and use of hard and soft infrastructure. This will be challenging for cities in developing economies. Partnerships and new deals will be required between all levels of government to deliver on new and desperately needed infrastructure. However, secondary cities will need to improve their own management and reengineer much of their existing infrastructure. How they do this is up to them, but if they do not, do it, they will be playing catch up from a long way behind, as economies reignite post COVID-19.



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5

INSTITUTIONS & GOVERNANCE IN POST-COVID RECOVERY

BERNADIA TJANDRADEWI AND BRIAN H ROBERTS

Institutions (government, education, health and religion) are at the forefront of the post-COVID-19 recovery effort. Central government funding support for businesses – saving jobs, income, basic services, and other societal needs – has been the lifeblood in keeping national and local economies going and avoiding the collapse of civil society and order during the crisis. However, this support cannot continue indefinitely, as the level of public debt continues to rise.

As the health concerns of the virus abate, it will be local governments that are called upon to support post-pandemic recovery efforts. In this chapter, we examine the institutional and governance arrangements needed to manage post-COVID-19 recovery in secondary cities. We begin first with an examination of some of the challenges facing local governments and then proceed to a discussion on some short and longer-term governance and management reforms and arrangements necessary to restore and support the sustainable development of secondary cities.

5.1 The Challenges

Sub-national governments around the world have been actively involved in responding to local needs as a consequence of the devastating impacts of COVID-19. They have mobilised support and developed emergency facilities for health services, provided the necessary assistance for people to stay safe and healthy, and relief of local taxes and charges to keep business going. However, in these times of hardships, many governors, mayors and sub-national governments are not sure of what steps to take next in order to prevent and, hopefully, put a halt to the spread of this new pandemic until vaccines are readily available to all, especially the poor. Some useful publications (Arup, 2020) have been produced which provide guidance and support for local government post-recovery, but most of these relate to developed economies.

The ability of local governments in developing economies to provide and deliver essential public services for post-COVID recovery will be difficult. Incumbent institutional and governance arrangements even before the crisis were failing to deliver on essential public services and other community needs. With many local governments having limited capacity to raise additional capital from taxes and charges, central governments are likely to take greater control over the allocation of resources to support recovery efforts and set future development agendas – especially in developing economies. This is already affecting local governments, particularly in smaller towns and cities, in their capacity to provide funding and other assistance to support local recovery efforts.

Most countries have long-established institutional structures of government. Most have a strong hierarchical structural system of management arrangements for the delivery of public capital works programs, services, and revenue collection. These functions vary enormously in scope, scale, and devolution of responsibilities. Most countries have two or three levels of government, but others have more. The greater the layers of government, the more difficult it is for local governments to respond to post-COVID recovery needs. Regardless of the tier of local government, significant negotiations are required in securing central or provincial government resources, coordination, and support for programs to support both recovery and the future provision of public services.

The key institutional and governance issues facing COVID-19 recovery efforts and the long-term sustainable development of secondary cities are:

- Lack of clarity, trust and devolved responsibility in inter and intra-governmental institutional arrangements for development and services delivery
- A well-defined vertical system of institutional arrangements for fiscal transfers, infrastructure and services delivery, but a very weak system of horizontal integration and coordination between agencies at both the central and sub-national government and institutional levels
- Capacity, capability, weakness and inefficiencies in the delivery of infrastructure, public utilities, community, and other social services
- Lack of capacity and capability to raise revenue and capital for capital works and rehabilitation
- Rent-seeking, and often corrupt leadership and public officials
- Lack of accountability, transparency, inclusive and participatory planning, monitoring and evaluation of budgets, program activities and value for money of services.

The systemic failures within institutions and governance arrangements for secondary and other systems of cities are well known, and progress on reforms has been slow. The elimination of rent-seeking, corruption, nepotism and the influence of the political economy is difficult, even in countries with the most progressive reform agendas. However, recovery from the COVID-19 crisis and addressing long-term problems of climate change, managing waste and unemployment are issues that demand changes to institutional and governance arrangements and reforms. These are not likely to be radical at first, but incremental and focused on streamlining the processes of government and governance. Within a decade, block-chain technologies (Myeong & Jung, 2019, p. 11) and e-governance will fundamentally change the nature (especially the operations, transparency and accountability) of local government and

institutions in all countries, as we move into the age of the Fourth Industrial Revolution (PWC, 2017, p. 26).

Even in the poorest countries, local governments and institutions need to become more aware of the implications and impending impacts of this revolution that will sweep through national systems of cities. COVID-19 has already fast-tracked the wider applications of innovative technologies and information systems to deliver improved public services. These impending changes of e-governance will require corresponding adjustments and reforms to local government and institutional arrangements during the post-COVID recovery period.

5.2 Resilience Strategies¹

The resilience phase of recovery will involve the preparation of a series of targeted strategies and deliverables.

5.2.1 OPERATIONAL RESILIENCE

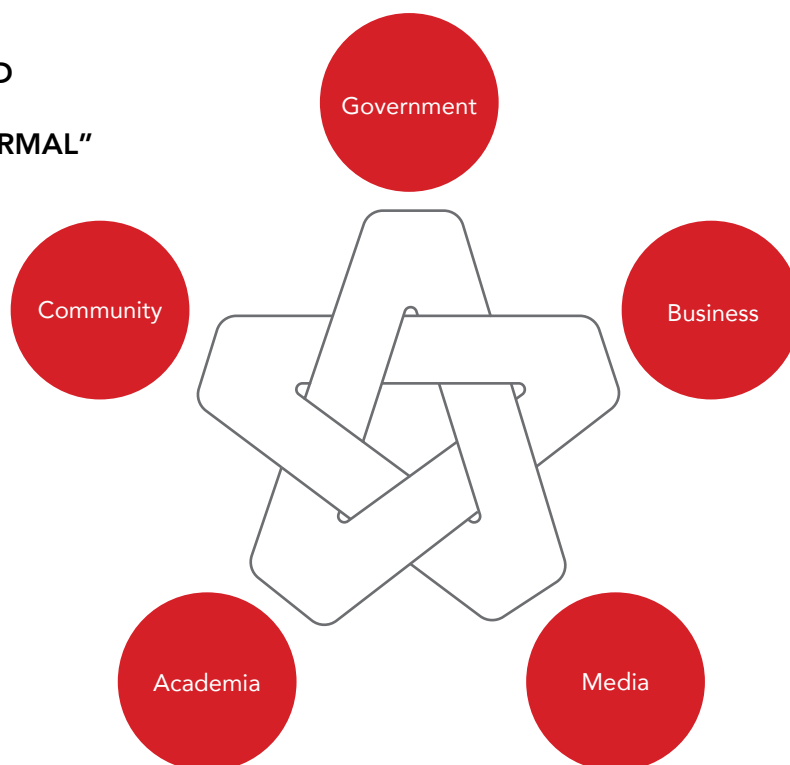
Now, more than ever local, local businesses, institutions, and communities will rely on local

governments to deliver the infrastructure and resources and maintain the enabling environment to support post-COVID-19 recovery. It is important to consider operational resilience in the face of the challenges facing these sector interests. Secondary city institutions should conduct organisation risk assessments of organizational arrangements for staffing, funding, planning and delivery of public services to get a clear view of the priority areas in need of change management support.

The risk assessment should be managed from the highest level within institutions (i.e., government, education, health, etc.) by putting in place a centralised risk management platform. There should also be a mechanism for inter-institutional coordination and collaboration. Clear messaging is necessary to create a central management and coordination point for the coronavirus pandemic response so that all community interests know where to go to get information and clear advice. The adoption of an emergency command and control structure, which organisations such as the Red Cross and Red Crescent adopted as a model for disaster recovery, is recommended. This structure could disband after the crisis, although it could be adapted for post-COVID development needs.

Figure 5.1 Penta-Helix scheme

WAY FORWARD TOWARDS THE "NEW NORMAL"



Source: United Cities and Local Governments Asia Pacific, Jakarta, (2020)

¹ Some material in this section draws upon the report on COVID-19: Local Government Response Plan for Victoria, Australia, by KPMG.



Once the central platform for coordination and contact is in place for local institutions, a structured program and project management capability to coordinate different priority activities should be developed. A governance structure for decision making around the pandemic should be put in place. It is important for local governments and institutions to assess the need for any short-term capacity requirements, and where these capabilities can be accessed, including the redirection of resources from other services facing lower demand, or the potential to partner with other third-party organisations and community groups. Communicating with the community is important, so setting up an emergency messaging

(text to the community) plan and bringing the mobile providers on board with execution of the plan is a priority for recovery efforts (KMPG, 2020).

A key to ensuring efficiency of operational, financial and services delivery, and to effect cost savings, will be the adoption of new models of institutional governance for a new norm. The structural arrangements of business operations lead to institutional silos, with agencies not sharing information, and to power cliques, resource wastage and underutilization, and poor coordination of services delivery. Secondary cities should move to adopt a model of collaborative governance, where decisions are made by taking into consideration wider interests rather than

only those of one or two powerful agencies. Collaborative governance involves establishing mechanisms that give agencies common-user access to information and data, plans and budgets, with agencies looking for ways to share and leverage resources to reduce transaction costs and ensure better utilization of assets and resources.

Collaborative governance may also involve non-government institutions, business and community interest groups being more engaged in public policy decision making and pooling their resources through partnerships and networking arrangements to create a critical mass of infrastructure, resources and services support in order to meet the needs of recovery and post-recovery efforts. The PentaHelix Scheme (PentaHelix, 2019) provides a useful framework for empowering local and regional authorities in the post-COVID-19 recovery phase to find innovative and cost-effective approaches to develop, finance, implement and improve sustainable energy and climate action plans (SECAP) that contribute to reaching national and European climate and energy goals and policies (PentaHelix, 2019): “PentaHelix stands for integrated development and focuses on five different stakeholder groups:

- Public authorities (local, regional, national and international)
- Industry (and businesses such as SMEs, farmers, trade, etc.)
- Academia (research and educational institutes)
- NGOs (associations, interest organisations, etc.)
- Citizens (house owners, car owners, commuters, etc.)”.

5.2.2 FINANCIAL RESILIENCE

Chapter 7 deals with the need for the prudent financial management of secondary cities during the COVID-19 recovery and post-recovery phases. Secondary city local governments should conduct an audit and risk assessment and revise short and long-term financial plans and budgets for three monthly intervals – based on different scenarios of local infection rates and other demands made on public finances.

Through this financial planning and review process, scenarios on income and revenue implications should be prepared that are



associated with the reduction in revenue-generating services, offset against the potential increase in community support packages, and the increase in demand in non-revenue generating services. The review period may be an appropriate time to review budgeting methods based and introduce new measures, such as zero-based budgeting, accrual and asset-based accounting and to ensure there is a real understanding of the cost and revenues to support key services and a clear benefits case for investments

— (PentaHelix, 2019).

There may be may need for further short-term funding for which arrangements will need to be put in place.

Local councils will also now need to be prepared to bring forward some investments, especially for capital works and asset management maintenance programs that will help fill lost jobs or generate high economic and employment multiplier effects in the local economy. Institutions will need to make significant changes to decision-making to implement the needed process, policy, and business model changes, to ensure they can continue to deliver essential services. Customer Service centres may need to be temporarily closed and move entirely online. These decisions need to be made quickly and effectively, with the right policies and processes put in place that do not put anyone at risk, and at the right level of investment to ensure sustainable solutions are put in place(PentaHelix, 2019).

5.2.3 SERVICE DELIVERY

Secondary city local governments should focus on continuous planning, reviews and updates on delivery and maintenance of all urban services. Essential services and priorities need to be defined clearly and understood in terms of current objectives, costs, key performance indicators, assets and resource allocations for each of the services. To assist this process, an impact analysis should be performed, with a focus on identifying the services to be scaled down due to health concerns or reprioritisation of resources (both human and financial). Creating a scenario analysis for essential services will help identify where there will be increases in demand and where a resource will be needed. Local governments should also consider any potential impacts on asset management and the associated maintenance programs (KPMG, 2020).

5.2.4 CUSTOMER AND COMMUNITY ENGAGEMENT

COVID has created a situation where much greater demand and use is being made of institutions and public resources for businesses and communities to see their way out of the crisis. This leads to crowding and overload of institutional systems, resulting in breakdowns and failure. These pressures have and will continue to change the way management and staff work in public institutions, so retraining and recruiting new staff around new processes and community engagement processes will need to be undertaken. Many businesses, local institutions such as childcare and CBO organisations and members of the community will be going to their local government websites for information. Face-to-face contact during the pandemic is undesirable, and overcrowding can be expected, so the use of websites and apps will be vital in providing the capacity to engage with the community and special interest and needs groups. A well-thought-out strategy for external communications to engage with communities is necessary, along with the program and funds for execution – and, where possible, cost recovery.

Types of services secondary cities should endeavour to provide include (PentaHelix, 2019):

- Assist with community education and communications plans.
- Register dangers with state alert services.

- Establish a distribution list with external agencies.
- On receiving alerts, notify the crisis director and pandemic team.
- Regularly monitor state health authority updates.
- Implement the pandemic plan and communications plan.
- Monitor pandemic advice from the relevant state health authority.
- Establish contacts with external agencies.
- Engage with the community via push notification (for community members that opt-in for the service).
- Identify the support that can be provided to the community, the elderly and the vulnerable.

5.2.5 TECHNOLOGY CONTINUITY AND MOBILITY DEPLOYMENT

Covid-19 has created a dependency on telecommunications, bio-medical and product innovation technologies that will only increase in the future. The application of technology has helped to help identify many areas of weakness in institutional services delivery, but it has also identified smarter ways of doing things and saving money and other resources. Secondary cities' local governments should expect to see many back-office functions of staff revert to a remote working arrangement. This will require management to adopt more modern and agile ways of working and communicating collaboratively from home. Many local governments do not have the technology to support non-office-based and out-of-business-hours work. Quick decisions and action are necessary to shift the institutional workplace to a new model of running the organization, but it is critical that they also consider safety and security aspects that need to be addressed, which include the following:

- Specify tools, systems and policies to support applications of technology and home-based employment.
- Train and upskill staff to use and leverage new technologies through online learning and training.

- Step up online and phone help and learning resources to support users of services.
- Ensure that there are the right policies and controls around the new workplace model to ensure that it is sustainable and is not exposing the organisation to undue risk.
- Implement adequate security measures to combat cybercrime.
- Grants for micro- and small-sized businesses to help them move online or go digital
- Interest-free rate deferrals and payment on debts to institutions
- Relief of property and land taxes
- Support for the establishment of business networks for information, assets and resource sharing
- Use of community venues for emergency-response and temporary land-use activities.

Attention should be given to getting the necessary hardware to support a mobile workforce and e-based delivery of government services in order to prepare a secondary city local government for a new way of working. This applies particularly to secondary cities in developing economies, which will fall even further behind in their development status if they do not invest in the technologies needed to run a more digitally based economy. This calls for local government to develop a strategic technology plan for investments during the COVID-19 recovery phase to ensure that the organisation is well positioned for the future beyond the coronavirus pandemic. National governments in developing economies should invest in e-governance supporting infrastructure and technologies, giving them priority over other infrastructure in international aid and development assistance programs.

5.2.6 SHORT TERM ECONOMIC SUPPORT

Chapter 3 sets out a range of strategies for the resilience and post-recovery phase of COVID-19. There have been other tools developed (UN Habitat, 2020) which can help with local community economic support to rebuild and sustain the economic life of communities. There is an increasing range of guides and tools being released that can help aid secondary cities to reconfigure institutional arrangements to lay the pathway for a more prosperous future. Short-term measures required to maintain life support for local business, include the following:

- Temporary relief, deferment and waiving of charges and fees for new permits and licences, and easing processes to enable fast-tracking of permits and applications
- Rent rebates for tenants renting and occupying institutional buildings and land

These measures will have an impact on the financial position of local governments in secondary cities.

5.2.7 LOCAL GOVERNMENT ROLE IN PUBLIC HEALTH

Local governments are in an appropriate position to become key conduits for the flow of information from the national governments to the local level. However, the role of local government in public health depends on the level of decentralisation in the country. Local government's capability to prevent COVID-19's spread at a local level, monitor the movement of affected persons and treat the patients during and after the crisis will depend on health provisions, services and facilities in place, and how efficiently the health department coordinates with local government departments.

Many local governments have taken steps, even before a pandemic crisis hit, to develop or update emergency operations plans and identify and compile a list of key contacts at the local and provincial health departments, a list of healthcare facilities and hospital capacity and alternative care sites, and information on referral hospitals for patients. As the pandemic abates, it is crucial that local governments maintain the capacity to detect the movement of COVID-19 infections – transmitted through both migration and locally. Strong relations and coordination between local government and their surroundings can be one of the key factors in successful resource mobilisation, such as of healthcare workers and stocks of vital PPE supplies and other medical resources.

The areas of public health responsibility for local governments include assuring an adequate local public health infrastructure in terms of data

collection and monitoring, policy development, analysis and decision support, and timely communication. In particular, local governments have a responsibility to promote healthy communities and healthy behaviours through engaging with communities and, in times of a pandemic crisis, to ensure that measures to prevent the spread of communicable diseases are implemented.

At a broader level, local governments also have the responsibility to ensure that a clean local environment – air, water, land – is maintained, particularly with pollution and waste management measures to reduce disease vectors. Environmental hazards could also be a source of health concern that local governments need to keep in mind.

But the real test for local governments will be in the measures that they take in preparing for and responding to emergencies, particularly a repeat pandemic like COVID-19. These measures can include providing leadership for public health preparedness activities within a community, developing, exercising and periodically reviewing response plans for public health threats, and developing and maintaining a system of public health workforce readiness, deployment, and response.

Mayors and governors have been responding differently to the pandemic. As the closest government to the people, what city leaders do and the steps they take will determine how thousands or millions of lives can be protected. In Spain, for example, the mayors from seven large cities representing 8 million inhabitants released a joint declaration and called on central and regional governments to put social justice and improved investment in public services at the heart of the country's post-coronavirus recovery plan, saying the crisis has shown the need to "shield the most vulnerable." They stated that they were in the front line of the pandemic and were "taking an active part in the fight against the virus and its consequences" (Burgen, 2020).

The key role of local governments during the outbreak is to ensure that accurate information regarding the disease reaches their citizens. Simple guidance material in local languages is required for distribution to citizens to prevent the spread of COVID-19. Crucial messages must include the following: frequently washing

their hands with soap, not touching their faces with bare hands, wearing a mask when talking to and meeting other people, keeping a 1- or 2-m distance from peers, self-separating when experiencing symptoms, and cooperating with health authorities.

For a society that is accustomed to interacting with others on a daily basis, it may be challenging to apply "social distancing" for a prolonged period. However, this is unavoidable for the time being. Making citizens understand and cooperate with these recent changes will be one of the most challenging tasks local governments have to face.

5.3 Post Recovery Strategy

No one knows when the COVID-19 pandemic will end, or if the disease will mutate to return on a frequent basis. This uncertainty calls for a dual approach to crisis management and recovery: (i) Strategies for addressing immediate threats and impacts (adaptation); and (ii) Mitigation strategies and investment plans to be prepared for a similar type of event in the future. Local government management of current and post COVID-19 recovery through the next era of development is something that needs to be considered in the context of 10-year planning and budgeting. It will require a review of many current development plans and other management strategies to ensure they are more pandemic resistant and responsive in the future.

There are four key components of a post-recovery governance strategy which secondary cities need to consider carefully in planning for long-term sustainable and regenerative development.

5.3.1 INSTITUTIONAL CHANGE MANAGEMENT

Institutional/organisational structures and reforms of local governments in most countries have proved slow and difficult to implement. A more business-like corporate model of local government is needed so that cities become more responsive to the needs of communities, business and investors (and to the changes in society) in relation to consultation and engagement, public administration and services delivery and engagement in local economic development.

Organisational reform of local governments is a key factor to effectively handle the COVID-19 pandemic. The success of local governments in responding and mitigating COVID-19 can be illustrated from how quickly they adapt to new and emerging situations. Clear command and control structures or a “local task force” set up in local governments led by governors or mayors is important to ensure that all units of local governments are well coordinated.

Effective implementation of national policies related to COVID-19 will depend on the capacity and abilities of local governments. Subsidiarity of delegation from national to local governments will help in the successful implementation of policies on the ground. As the administrative body closest to the citizens, devolving to local governments will make the local programmes and strategies more effective, such as in citizens’ engagement, safety net programmes, provision of health services and facilities, local data, and so on.

5.3.2 INTER-GOVERNMENTAL ARRANGEMENTS

Devolution of powers from national to local levels is one of the most fundamental changes that can be affected by the way decisions are made for local areas and how public services are funded.

In a post-COVID-19 period, devolution of powers and funding from national to local government will be important because it ensures that decisions are made closer to the local people, communities and businesses they affect. Devolution will provide greater freedoms and flexibilities at a local level, meaning local governments can work more effectively to improve public services for their area, particularly in supporting the local economy to recover. The result will be more effective, better targeted public services, greater growth, and stronger partnerships between public, private and community leaders in local areas. Without devolution, decisions will continue to be made at the national level, separated from local realities and communities that they affect.

Revenue and fiscal transfers from national to local governments is a critical part of the devolution process. If local governments and private sector entities are to carry out decentralised functions effectively, they must have an adequate level of revenues – either raised locally or transferred from

the central government – as well as the authority to make decisions about expenditures.

Fiscal decentralization can take many forms, including, for example self-financing or cost recovery through user charges, co-financing or co-production arrangements through which the users participate in providing services and infrastructure through monetary or labour contributions or authorisation of municipal borrowing, and the mobilisation of either national or local government resources through loan guarantees.

The lack of clarity in institutional arrangements at the local levels may lead to considerable duplication of roles and responsibilities in acting for post-COVID-19 recovery. Governance and institutional arrangements need to be put in place that avoid these duplications and actively seek collective consensus in institutional and programmatic arrangements. Avoiding duplication and ensuring coordination among the different institutions and their roles/responsibilities is critical, especially between government agencies at the local level, between national and local government agencies, and between local governments and other local stakeholders.

Improved governance for COVID-19 recovery requires an integrated, long-term strategy built upon cooperation between government and private sector entities, and particularly local communities. Accountability and transparency are, therefore, critical technical and legal issues to produce local governments that are legitimate, effective, and widely supported by citizens in taking leadership for COVID-19 recovery actions, as well as a civil society that is strong, open, and capable of playing a positive role in politics and government.

As urban residents in COVID-19 affected cities are forced to stay closer to home, some architects and urban planners are rethinking urban design and infrastructure to promote a more local lifestyle and help people adapt to a post-pandemic world.

A well-designed “compact city” will significantly help in reducing commuting times, with infrastructure that facilitates localised lifestyles. Such design approaches will encourage people to adopt healthy lifestyles and remain fit with walkways, hiking trails, bicycle tracks, and at the same time, maintain social distancing requirements.

5.3.3 COLLABORATIVE GOVERNANCE

Collaborative governance will become the new norm for better coordinated and efficient planning, development, and service delivery in the post-COVID-19 era of development. “Collaborative governance, as it has come to be known, brings public and private stakeholders together in collective forums with public agencies to engage in consensus-oriented decision making” (Ansell & Gash, 2008). The current system of governance in both democratic and single-party political models of government have become highly bureaucratic, siloed, regimented, and internally competitive. This situation of narrow outlooks results in unrealistic goals and self-interests and pits national and local government agencies and institutions against each other over the allocation of limited public resources. The result leads to extensive waste and poor and inefficient spatial allocation of resources, with more powerful constituents and cities receiving an inequitable share of development, public funds, investment, and jobs.

The current model of governance arrangements, regardless of political ideology, is not sustainable. It does not help cities, especially secondary cities in the intermediary role they play as a logistics hub between rural and metropolitan

regions, to achieve critical mass and efficient infrastructure needed to drive the development of a more innovative, efficient, creative, and entrepreneurial local economy. Collaborative governance provides a means of accountable governance by broadening the level of inclusiveness and introducing wider peer-review, checks and balances processes into state and local government decision-making processes — especially associated with the planning, budgeting, and issuing of permits. The adoption of collaborative governance would not, however, absolve the government of the responsibility in making the final decision on matters where they are so mandated by law or regulation.

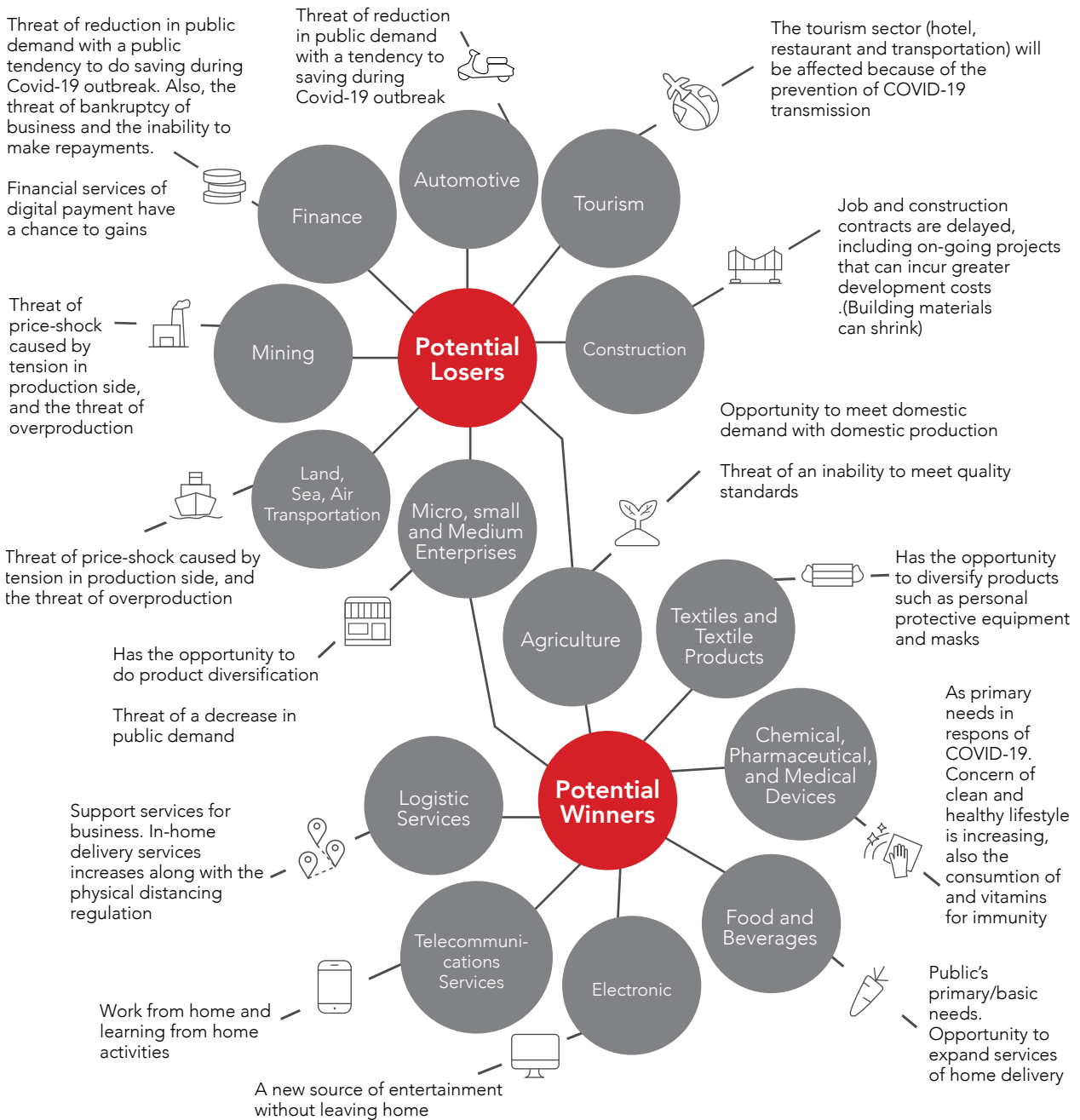
Collaborative governance models (see Box 2), which have their origins in the sharing economy, are widely used by the private sector as a means of identifying ways to solve supply problems and to reduce transaction costs to doing business, achieving scale to overcome competition to realise development opportunities, and solving common problems by using shared resources – especially for utility and government services. This would represent important and necessary institutional reform.

BOX 2

Australian Collaborative Governance Model for COVID-19

A model of collaborative governance set up to manage the COVID-19 crisis is the Australian National Cabinet (Menzies, 2020). Although challenging in its workings, it has introduced a hybrid model of governance where the prime minister and state heads of government, on an equal footing, meet to discuss collaborative ways to address issues related to the COVID-19 crisis – especially responses to health and economic issues – but leave the states and territories to implement these independently. The model has now been made permanent for post-COVID-19 economic recovery. The model could be replicated at the state level with regional councils and local governments to enable more localised collaborative responses to COVID-19 management and economic recovery.

Figure 5.2 Economic impact of COVID-19 in Indonesia



Source: United Cities and Local Governments Asia Pacific , Jakarta, (2020)

5.3.4 LOCAL GOVERNMENTS' ROLE IN ECONOMIC DEVELOPMENT

Local governments have a crucial role to play in creating favourable environments for economic activities and business development in their areas, which also requires working partnerships between the local government, private sector and consumers-community.

Economies have been severely affected by the COVID-19 pandemic due to, among other measures, lockdown and social/physical distancing

policies. Figure 5.2 illustrates the economic impacts of COVID-19 in Indonesia, with the potential "losers and winners" in the short-term (UCLG ASPAC, 29 May 2020). In responding to the slump in the economy caused by COVID-19, local governments have come up with various innovative incentives and strategies, including discounting taxations for companies, arranging digital platforms for small and medium enterprises (SMEs), outsourcing meetings' packages to local companies, and cooperating with local hotels as a place of quarantine/isolation (see Box 3).

Identification of economic sectors impacted by COVID-19 can help local governments to come up with relevant policies and actions. Tourism, for example, is the largest among the most critically affected economic sectors in the short-term.

While international borders are still closed, local governments have been targeting domestic tourists, for example, by applying health protocols that are starting to increase the number of domestic tourists in Jeju Island, South Korea for mountain climbing or trekking or by promoting the concept of “micro-tourism” in the Kansai region of Japan, where domestic tourists travel to destinations that are no more than one hour away from their homes.

5.4 Post-Covid-19 Restoration of Local Governance

Covid-19 has brought a greater awareness of the reliance of local governments and communities on the resources, institutions and powers of central governments. The pandemic has resulted in a de facto move towards the imposition of a centralised command and control model of government arrangements in many non-federal states to deal with the health crisis. There is a danger that these arrangements will become more permanent during the recovery phase efforts. Should this occur, many of the gains

BOX 3

Pursuing Digital Economy as an Alternative, Yogyakarta, Indonesia

COVID-19 has pushed local governments to be creative and innovative. Yogyakarta, known widely in Indonesia as “City of Education and Culture”, has come up with an innovative approach by embracing traditional markets and transforming them digitally, in an effort to bring buyers and sellers closer without having physical interactions between them (UCLG ASPAC, 15 May 2020). This action was taken to also respond to the economic turmoil, as there were 227 companies laying off their employees as of April 2020. According to Vice-Mayor Heroe Poerwadi of Yogyakarta, the plan for a digitised economy was made before COVID-19; however, the pandemic pushed the city to accelerate the execution of the plan before the planned schedule. As a result, 6 out of 30 markets in the city have registered through the Go-shop application. Sales are currently initiated through the Instagram application, which can embrace 100 groups of entrepreneurs. Yogyakarta City Government cooperates with online transportation, Go-jek, to deliver the products. Yogyakarta is also in the process of developing e-warung or e-kiosk applications to include 220 million vegetable sellers and 1700 cendol vendors and catfish ponds. The opportunities for a digital economy for SMEs in Indonesia are significantly high. Only 8 million units out of 60 million units of SMEs in the country have been connected through the internet. To boost the digital economy, the Government of Indonesia acts as a regulator, facilitator and accelerator towards the national movement of an additional 2 million units of SMEs to be connected to digital platforms by the end of 2020.

of decentralization policies for administrative and fiscal responsibilities, which began in many developing economies in the 1990s, will be lost. This will be a tragedy for decentralization and will slow down local the recovery and redevelopment efforts of secondary cities and regions for many years.

The crisis has shown how poorly equipped many local governments have been for managing crises, and it highlights the failure of crisis management in local governments. Most local governments have limited or no reserves set aside in sinking funds to deal with such events. The pandemic has revealed deficiencies in expertise, training and practice to plan and manage development, financial and natural hazard risk management. These are areas local governments in secondary cities must pay much greater attention to in the future.

Many secondary cities in developing economies have been left far more dependent upon the resources and directives of the central government than they were before the crisis hit. These are likely to recover slowly unless given greater administrative and fiscal decision-making responsibilities, resources and capacity building to get on with the job of restoring local economies and communities. The pandemic has shown that local governance and fiscal arrangements are very weak in many secondary cities, to the point that they will have to become more dependent upon central government in order to recover from the fallout of the pandemic. It is crucial that local governments, especially secondary cities, recognise this likelihood and work collaboratively with other cities to win back control of management, as well as a more equitable financial share of national income to support their recovery efforts.

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6

DISRUPTING DISRUPTION: COVID-19 & THE RESHAPING OF URBAN & LOGISTICS SYSTEMS

JAMIE SIMPSON²

6.1 Introduction

Urbanisation as we know it is about to change. Two key drivers of urbanisation, “subsidised” fossil fuels and supply chains spanning continents, have begun to wither away, and a third, the COVID-19 pandemic, has entered the stage. Their combined impact is likely to necessitate a re-think as to how cities can develop in a manner that is inclusive, resilient and “green”. Growing concern about the adverse impacts of GHG emissions (GHG) and the need to minimise non-renewable energy use is changing the way we think about moving goods and people, and how places of work and homes are powered.

² I am grateful for the suggestions and clarifications offered by Dr Nicholas Miles and Simon Ratcliffe; and my colleagues at IPE Global – Matthew Crighton, Tesfaye Hailu, Nikos Papachristodoulou, Saloni Shah, and Richard Slater.

More fundamentally, the climate emergency is driving a re-formulation of national and city growth models. How we promoted development in the past should not, and cannot, be replicated in the future.

Paralleling the climate emergency is the gradual, but increasing retreat of globalisation. Trade disputes, rising protectionism and geopolitical tension between the major economies and trading blocks of the world have stimulated the diversification and restructuring of supply chains, including reshoring of production. The current COVID-19 pandemic is “disrupting the disruption” associated with the fragmentation of the global economy and the growing climate emergency by forcing economic contraction, increasing debt and creating large-scale unemployment. The impacts of the pandemic, both in terms of public health and economic damage, are falling disproportionately on the global poor and more vulnerable, with informal settlements and urban slums especially exposed.

This chapter explores how the three drivers of contemporary urbanisation, the climate emergency, the retreat from globalisation, and the COVID-19 pandemic, interact and are most likely to affect the structure and functioning of urban systems. The paper focuses on the interdependency of urban, transport and logistic systems and the movement of goods as enablers of inclusive and resilient growth. Transport and logistics infrastructure service gaps are often critical factors impeding inclusive growth and urban productivity gains, with secondary cities typically the most exposed to these barriers to growth. The COVID-19 pandemic is likely to bring about a renewed focus on transport and logistic interventions that support sub-national and localised supply chains and the development of “city circular economies.” City circular economies recalibrate scale economies towards smaller but more resilient production networks and logistics systems.

6.2 Urbanisation, Cities and Logistics: Making the Connections

Experience demonstrates that urbanisation, the growing share of population living in urban cities, is necessary for national and regional economic development. Agglomeration economies, the co-benefits that are generated when households

and firms are located in close proximity, are central to urbanisation, whereby urbanisation contributes to prosperity. Scale and specialisation are also enabled through the proximity and connectivity that urbanisation facilitates. A virtuous process of development ensues through competition and dynamic efficiency gains.

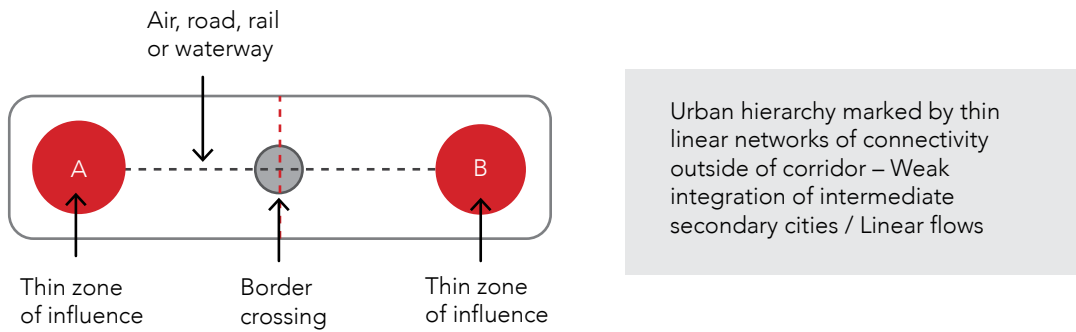
Furthermore, there are strong linkages between urbanisation and rural development through labour movements (rural-urban migration) and goods flows (urban demand for rural goods such as food, primary/semi-processed materials, water and ecosystem services). However, urbanisation does not inexorably lead to economic growth. A number of pre-conditions have to be in place, one of which is efficient growth enabling infrastructure, with energy and transport being of particular importance.

The efficiency of transport and logistics networks depends on the *effective combination of “software” (governance, regulation, standards and pricing) and physical assets (scale, quality and technical integration)* to make the networks operate and reduce the transaction costs of the transport function. With these networks and services in place, the share of GDP associated with cities is generally well above their relative share of the national population, and their role as engines of growth is often assured. When the pre-conditions for growth are not in place, the potential benefits of urbanisation are often lost. “Connected cities offer transportation and communications platforms that facilitate people’s civic and commercial interactions. Empowering such connectivity both within and between cities through sustainable, affordable, and digitally accessible mobility networks and payments systems will be a foundation of tomorrow’s efficient and inclusive global economy” (Khanna, 2017, p. 3).

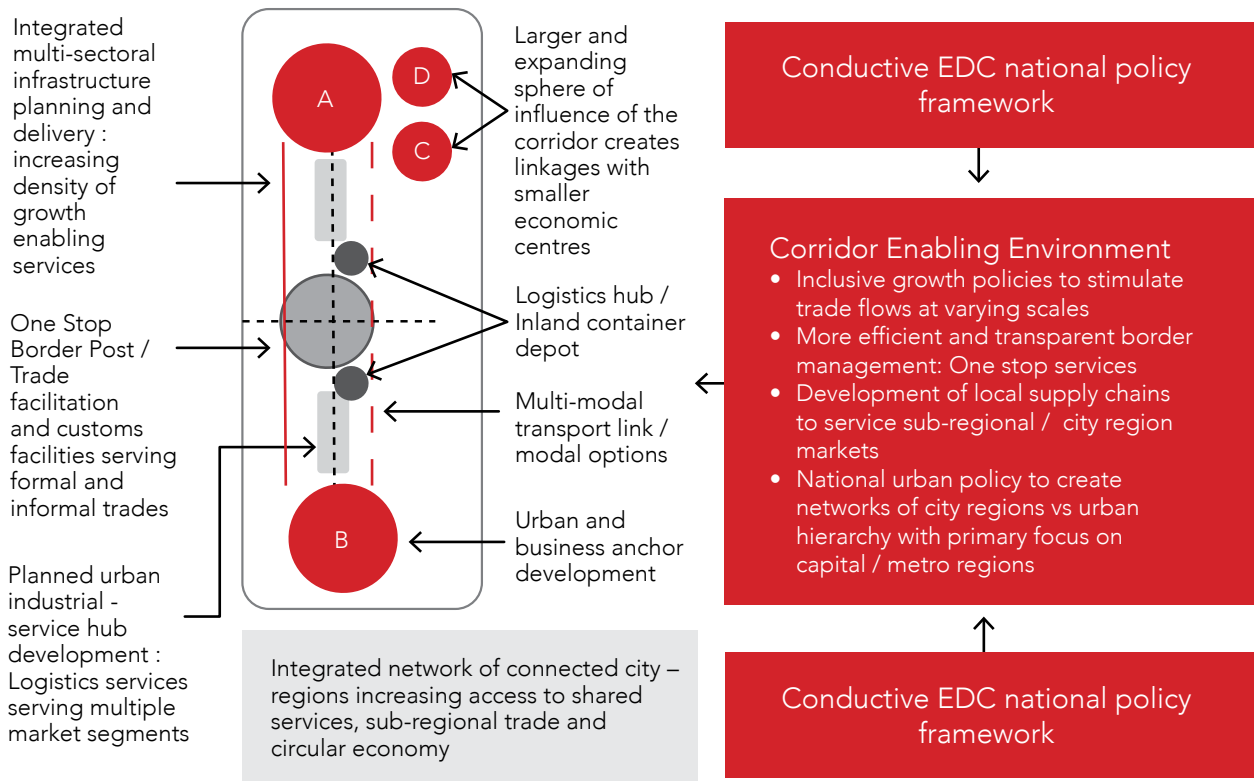
Efficient, secure and reliable multi-modal transport networks and logistics systems enabled with electronic data interchanges (EDI) and other web-based technology platforms are an increasingly important part of supply chains at all spatial scales, from global to city-region goods movements. Developing these transport and logistics networks is increasingly a core focus of economic transformation strategies. For example, the African Unions continental free trade area (CFTA) is being taken forward through multiple and linked economic development corridors (EDCs) designed to facilitate regional economic

Figure 6.1 EDCs and Urban Systems: Capturing Network and Efficiency Gains
 (a) Evolution of Corridor Development: Increasing density and economic connectivity

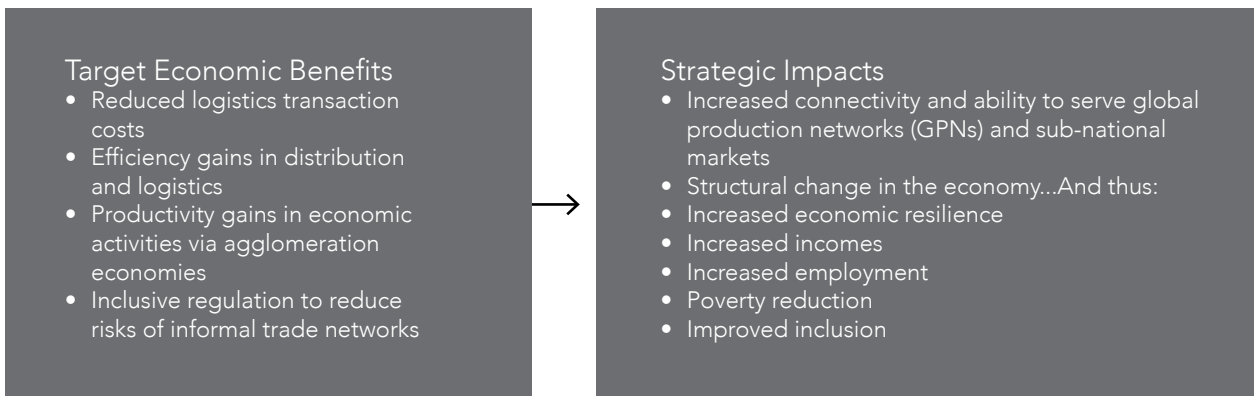
TRANSPORT CORRIDORS



ECONOMIC DEVELOPMENT CORRIDOR LINKING NETWORKS OF CITY REGION CLUSTERS



BENEFITS



Source: NJO Miles & J Simpson, adapted from the Intergovernmental Authority on Development (IGAD) Regional Infrastructure Master Plan research (2020).

(b) Creating Networks of Cities: IGAD EDCs



Source: IGAD (2014)

cooperation, integration and trade (see Figure 6.1 a). The EDCs are being developed within Africa's Regional Economic Communities (RECs) and will effectively create a network of cities to foster more efficient and deeper product markets and logistics chains across regional boundaries. Figure 6.1b illustrates the proposed EDCs and networks for the Intergovernmental Governmental Authority on Development (IGAD) spatial economy.

6.3 Dis-connected: Logistical barriers to urban network development and productivity

The critical interdependence between urbanisation, economic growth and the enabling role of efficient transport and logistics systems implies that

city-level productivity gains will be constrained if connectivity is poor. Inefficient transport and logistics systems are especially damaging for the urban poor and those working in the informal economy, raising the prices of basic goods and at the same time constraining access to markets required by small-scale producers and traders. The nature and extent of national transport and logistic system inefficiencies are evident in the World Bank's Ease of Doing Business and Logistic Performance Index (LPI) scores (Table 6.1). Poorer countries generally perform badly on transport and logistics regulatory frameworks central to efficient and reliable connectivity. Two bundles of factors, one at the national and one at the sub-national/local level, impede connectivity and constrain city productivity.

First, and largely independent of the COVID-19 pandemic, policy and market failures permeate many national transport and logistics systems

Table 6.1 Logistics Performance

REGION	WORLD BANK EASE OF DOING BUSINESS SCORE (2020) ¹		WORLD BANK LPI SCORE (2018) ²
	Score	Trading across borders ³	International Score ⁴
OECD High Income	78.4	94.3	N/A
Sub-Saharan Africa	51.8	53.6	2.45
South Asia	58.2	65.3	2.51
East Asia and Pacific	63.3	71.6	3.15

1. A high ease of doing business ranking means the regulatory environment is more conducive to the starting and operating of a local firm. The ease of doing business score measures an economy's performance within terms of regulatory best practice across 41 indicators.
2. Logistics Performance Index (LPI) combines qualitative and quantitative measures to assess logistics effectiveness.
3. The time and cost of exporting/importing – assessing documentation and border crossing compliance requirements.
4. Provides qualitative evaluations of a country in six areas by its trading partners.

in developing markets. There are often discontinuities in terms of timing, sequencing, planning, budgeting and the technical integration of national *economic* plans and the corresponding national *spatial and infrastructure* plans. In the case of Ethiopia's GTP II (Growth and Transformation Plan) there was an impressive effort to develop industrial zones (IZs) to attract manufacturing to encourage export-led growth in secondary cities to secure balanced regional development. However, critical investment in enabling economic infrastructure, including connectivity to global supply chains, was not sufficiently funded and developed in parallel. The result has been that much-needed job creation has fallen well short of expectations, as export growth did not take off.

Minimising the economic cost of transport should be a fundamental policy objective linked to developing an efficient and equitable system of secondary cities. However, transport and logistic services are frequently viewed as potential revenue sources for national governments, thus *increasing the cost* of goods to producers and consumers, with the urban poor most exposed to these inflated costs. In Egypt, customs require all import containers to return to ports empty, rather than encouraging full backhauls, thereby almost *doubling* the cost of inland transport to exporters

across the country. Leases and concessions for private cargo handling services often place considerable weight on payments to government rather than the lowest total cost to users; in effect, extracting rents and increasing the cost of food and other basic goods. Costs are also increased due to rent-seeking and corruption: high levels of customs inspections and clearance requirements increase time in transit and often command "facilitation" payments that are ultimately borne by consumers (see also Raballand et al., 2012). In summary, the scale and complexity of developing national strategic transport and logistics networks make them high risk and slow to implement at the best of times; the uncertainties of the COVID-19 pandemic is significantly elevating these risks.

Second, the COVID-19 pandemic is also exposing and exacerbating the vulnerabilities of local-level trade-enabling logistics systems. Busia, in Kenya, is the busiest cross border in the East African region. Formal trade between Kenya and Uganda is valued at US\$900 million annually, with a dense array of actors involved in the end-to-end value chain (WTO, 2018). Before COVID, an average of 900 trucks crossed the border daily, carrying grains, fruits and vegetables, and non-essential consumer goods. Thousands of women and young traders cross the border two to four times daily to exchange all types of commodities informally.



Since the COVID-19 pandemic, the Busia border has been closed for *informal* trade while greater screening processes and restrictions are put in place. Markets and shops have reduced trading hours, primarily limited transactions to food items, and have restricted trading areas, with the result that rental fees for trading space have escalated.

COVID containment measures, needed on public health grounds, are resulting in significant dislocation and loss of livelihoods. Informal traders are either returning to their villages or using unsecured border crossings, bribing security guards if needed, to sell their products. Traders selling perishable food items have limited access to suitable storage and logistics facilities and thus are under pressure to sell products within their shelf life; a basic logistic market gap experienced in many local markets across Africa (Hagos Gebreamlak, 2020). Paradoxically, public health interventions that create more formal regulatory requirements and restrictions may have the perverse effect of increasing risks to the poor. The

need for more formalisation of trade regulation, on public health grounds, may stimulate more informal “workarounds” and increase health risks. The pandemic provides an opportunity to develop, through collaborate efforts of traders and communities, new ways of organising trade-enabling logistics systems that are inclusive and more resilient.

6.4 Responding to COVID – 19: The Case for Secondary Cities

6.4.1 CONNECTING TO GLOBAL SUPPLY CHAINS IS HIGH RISK

The COVID-19 pandemic has thrown into sharp relief many development policy choices that are critical to the inclusive growth prospects of secondary cities; business, as usual, is not tenable.

The claim in this chapter is that there is a need for a renewed focus on logistic interventions that support sub-national and localised supply chains and the development of “city circular economies” that recalibrate scale economies towards smaller but more resilient production networks and logistics systems. In terms of *national urban economic policy*, the “going for growth” narrative centred on foreign direct investment and the creation of export processing zones (EPZs)/ special economic zones (SPZs), linking to global supply and logistics chains, needs to be carefully reconsidered. Demand and supply-side factors, in part amplified by the COVID-19 pandemic, are elevating the risks of export-led growth strategies to developed markets, including the following:

- The COVID *demand shock* in the rich consumer markets will suppress demand for consumer goods exports, reinforcing pre-existing stagnating demand owing to the 2008 financial crisis and growing trade tensions.
- The COVID *supply-side response* of rationalizing production capacity will mean investment in new and/or expanding factories will likely be deferred or stopped. Closure of existing factories is also a threat.
- The *restructuring of global logistics chains* to reduce movements, and in some cases, bring production systems closer to final end-user markets, will further increase risks of linking to global supply chains.

The location of factories producing for the global market no longer simply hinges on where labour is the cheapest. Furthermore, climate change risks and the urgent need for GHG mitigation is necessitating new ways of organising economic activity. The upshot is that the possibilities for manufacturing-led export growth built around EPZs and SEZs are likely to be much more difficult over the next three to five years (*The Economist*, 2020). Much needed formal sector job creation, direct and via local supply chains, will likely fall well short of labour supply growth. The case for creating global production centres underpinned by highly specialised and extensive logistics chains is eroding as COVID pandemic impacts become evident and the consequent social and economic risks are better understood.

6.4.2 CONNECTING SYSTEMS OF CITIES

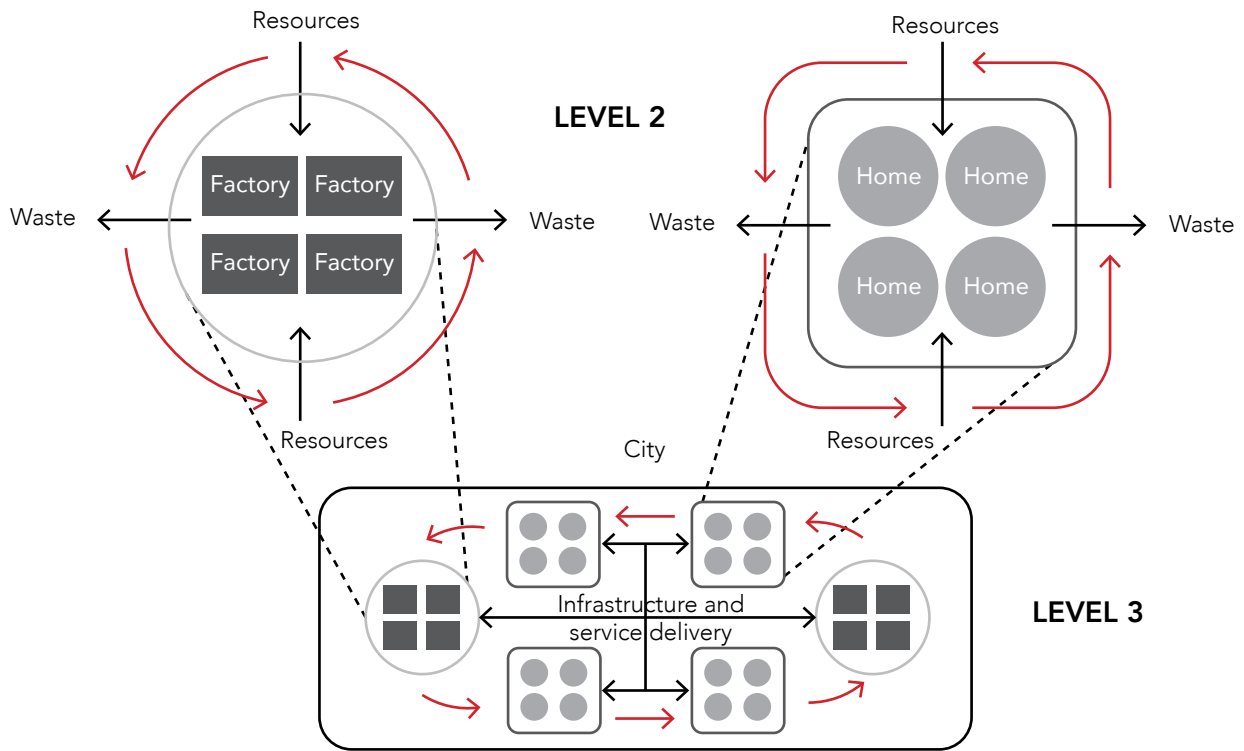
A new approach is needed that places greater emphasis on regional and sub-national/city-region production and logistics networks; including proximate international trade within regional economic communities in Asia and Africa. *Regional* trade promotion and economic integration remain important strategies to promote inclusive growth and stability among geographically proximate trading partners; scale and specialisation can be advanced by connecting more cities and people. Successful EDCs linking urban centres across international borders and within countries depend on effective institutions, regulations and incentives (the enabling environment), combined with efficient physical infrastructure networks. However, creating effective management authorities to coordinate corridor development often involves delicate political negotiations around joint planning, project preparation and budgeting; in practice, implementation is time consuming, and benefit streams are slow to take off. Relative to going global, the economic risks of these regional EDCs strategies may be lower but still comparatively high in terms of delivery and the scale, distribution and timing of benefits. The COVID-19 pandemic response requires even more urgency to get trade moving and create better and more secure jobs and livelihoods.

6.4.3 BOTTOM-UP CITY NETWORKS ARE CRITICAL TO THE COVID ECONOMIC RECOVERY AND SUSTAINABILITY

Complementing regional trade strategies should be city-region/local economic development initiatives that improve everyday trade and logistics operations. The case for focusing more on city and local level interventions is supported by at least three basic considerations:

- First, city-region/local logistics networks are relatively easier to implement, as they depend on smaller scale, more manageable capital requirements and less complex systems and institutional arrangements.
- Second, they offer the potential to capture immense income and employment gains and address economic exclusion caused

Figure 6.2: Circular Cities: Localising exchange and resources flows



Source: Ratcliffe, S (2020), Circular Economies, Briefing Note, unpublished.

by lack of access to logistics services in secondary cities and smaller centres (as evident in the Kenya-Uganda cross-border example above).

- Third, they offer greater resilience relative to more large-scale centralised systems and directly address COVID-19 pandemic risks to food security and livelihoods.

There is a virtuous convergence of responding to the COVID-19 pandemic and re-thinking development pathways and logistics networks, given climate change risks. In particular, this can include developing “circular city economies” built around optimising energy and resource utilisation and viewing cities as systems of systems (see Figure 6.2). The Kalundborg Symbiosis in Denmark, a public-private partnership, is perhaps the leader in applying circular economy concepts to local economic development and inclusive green growth.³

In the case of secondary cities in developing countries, the COVID-19 pandemic is likely to bring about a greater focus on transport and logistic interventions that support *localised* supply chains necessary for efficient, safe and reliable market exchanges; this is especially the case where there is international trade. The circular city focus requires a reshaping of land use and infrastructure and logistics networks that places greater emphasis on affordable access to services configured for local markets. In the case of the Kenya-Uganda cross-border trades, new logistics systems are being explored, in consultation with communities and the private sector, to set up common-user logistics centres to reduce wastage and improve supply reliability (warehouses and climate-controlled storage); this should promote seamless intermodal transfer facilities to capture network advantages and smarter “last mile” connectivity that are so important to efficient rural-urban linkages and commodity markets.

³ Established in 1972, Kalundborg is an area-based development initiative built around “industrial symbiosis” whereby a residue from one company becomes a resource at another, creating a win-win for the environment and the economy. There will need to be careful consideration of the concept of the compact city and new spatial configurations of work and exchange with this circular framework that cuts across all city life; for example, the 15-minute city “Welcome to the 15 minute city”, Financial Times, 17 July 2020.

6.5 A time for new best practice led by secondary cities

The COVID-19 pandemic is fundamentally changing the context within which cities are developing. The prospects for inclusive growth and job creation are likely to be much more difficult over the next three to five years, if not longer; looking backwards for best practices may not be a good guide to what is needed in the future. The short-term pressures of lockdowns and reduced economic activity are in many ways reinforcing wider structural changes that were already in play. Central among these is the climate emergency and rethinking development pathways that are low carbon, more resource-efficient, inclusive and more spatially constrained.

National urban development policy frameworks need to place greater emphasis on promoting safe, secure, reliable and efficient transport and logistics systems to support access to markets and trade at multiple spatial scales. Development strategies that place *excessive emphasis* on linking to global value chains are fraught with risk and hostage to external factors beyond the control of local policymakers and communities. Notwithstanding demand-side risks, developing integrated large-

scale transport and logistics networks is complex, risk-prone and takes a considerable amount of time to implement.

The COVID-19 pandemic reinforces the need for sub-national and local level trade and economic development initiatives based on circular economy principles, which provide an incremental approach to building up-trade networks that can enlarge over time and more directly to meet COVID economic recovery needs. Controlling and regulating trade as part of the COVID-19 response needs to be inclusive and bring more traders into safe and secure environments – and not push these vital traders into more vulnerable positions. As part of this, transport and logistics systems need to be more accessible to the informal sector, where the majority of traders operate, to provide essential goods to consumers and producers. Food security is heavily dependent on safe, efficient, reliable and resilient logistics systems getting foodstuffs to consumers at affordable prices. Cities, and secondary cities, in particular, will be a prime “institutional cluster” driving the transition towards a new post-COVID economic paradigm. Local responses and solutions to severe risks – climate, environment, pandemics – are the most tangible at the city and neighbourhood levels where public institutions are closest and most accountable to civil society.

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7

FINANCING SECONDARY CITY RECOVERY & DEVELOPMENT

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The June 2020 Global Economic Prospects Report predicted a baseline forecast of a 5.2% contraction in global GDP in 2020 (World Bank, 2020a). The report notes that over the longer horizon, the deep recessions triggered by the pandemic are expected to leave lasting scars through lower investment, an erosion of human capital through lost work and schooling, and fragmentation of global trade and supply linkages (World Bank, 2020a, p.133). The global and national recessions will become much deeper if the pandemic cannot be kept under control or if financial stress triggers cascading defaults on domestic and international borrowing. Securing finance to continue to provide basic income support and other relief to support and rebuild national and local economies will be difficult, as it is likely nations will be repaying the debt for many decades to come. Given these challenges, this chapter addresses issues associated with the financing of post-COVID-19 secondary city recovery and development and offers some solutions.



The COVID-19 pandemic and the containment measures taken by national governments or state governments in federal countries have highlighted the conditions under which our societies actually function. We have become aware of the indispensable role played by certain categories of frontline workers whose contributions were often not recognised, to ensure the implementation of basic services, whether in the public sector (nurses, care assistants, garbage collectors, etc.) or in the private sector (staff of food supply centres). What the pandemic has also highlighted, although this has been less noticed, is the major role played by local and regional authorities in ensuring the continuity of public services and in undertaking a number of exceptional measures to support local economic actors and household incomes, paying particular attention to the most vulnerable throughout this crisis. This has been the case all over the world⁴ but has undoubtedly been particularly important in the intermediary cities of developing economies.

Many national governments are in the process of designing their national stimulus and recovery

plans in response to COVID-19. A lot of these policy measures would require an increase in fiscal expenditures, which need to be accompanied by specific provisions for devolution of support to state and local governments in order to be effective. Generally speaking, the often-considerable financial support mobilised by national governments to alleviate the effects of the crisis and containment has for the most part been directed to businesses and households and has only very rarely supported the crucial action taken by local and regional governments. It is high time to recognise their role in the socio-economic recovery process and to place local and regional governments at the heart of the reconstruction and development of cities.

Financing the recovery and development of intermediary cities involves deepening the processes of decentralisation and strengthening the capacities of local authorities in the development and management of territories. Through such responses, it is imperative that they are given greater decision-making powers and the necessary resources to enable them to steer

⁴ See the series of Live Learning Experience (LLE) sessions conducted by UCLG during the pandemic (UCLG, 2020).

the reconstruction and development processes at the local level. Local and regional authorities are the central public actors capable of having a comprehensive and integrated approach to local development, going beyond sectoral responses and having the capacity to coordinate recovery actions across various public and private actors in their territory. Their legitimacy to do so is anchored in their role as the level of government closest to the citizens. Thanks to this proximity, they are also more efficient and potentially more equitable (because they operate under greater public scrutiny) than national governments. Their assessment of local needs for public services is much more accurate and they can more easily than national governments mobilise local systemic and ad hoc solutions to ensure their provision (labour-intensive works, use of local materials, etc.).

The COVID-19 crisis has put a magnifying glass on well-known challenges with respect to local financing systems: the limited capacity of local authorities to pilot local development on their territory, due to their weak financial autonomy; the paucity of their own income; uneven and volatile intergovernmental fiscal transfers; and the extremely limited (if not purely impossible) access to credit and capital markets to finance the infrastructure and equipment essential to the development of local economies and people's livelihoods.

Based on these assumptions, this chapter addresses three key questions central to financing post-COVID-19 recovery and development for secondary cities:

- What are the characteristics of local government finances in developing economies? What has been the immediate and expected medium-term impact of COVID-19 on local government finances generally speaking?
- How should local governments approach the financing of their recovery planning to Build Back Better? What should be the recommended national responses to support local governments to adapt and transform towards economic resilience?
- What should be the role and responsibilities of development institutions to support these transformations?

7.1 Local government finance in developing economies and the impact of COVID-19

Over the next 30 years, the world's urban population is expected to increase by more than 2.5 billion, reaching almost 6.5 billion people by 2050. More than 90% of this growth will be in African and Asian countries (UN DESA, 2014). Intermediary cities are expected to account for between two thirds and three-quarters of this growth, while facing two major problems: a dramatic lack of infrastructure and services and the precariousness and vulnerability of their economic base.

In Africa and developing countries of Asia, it is estimated that over the next 30 years investments of around 5% of GDP⁵ will be needed to meet the demand for infrastructure, housing, equipment and public services generated by urbanisation. Moreover, 80% of employment in developing economies (especially in intermediary cities) is provided by micro and small enterprises, more than half of which are in the informal sector, making local economies particularly sensitive to systemic shocks such as COVID-19 (McKinsey & Co, 2020).

The COVID-19 outbreak may affect local governments' fiscal position from both the expenditure and revenue side. On the expenditure side, local governments may suffer severe consequences from this initial phase of virus propagation that pushes up health service demand and public order spending, due to lockdowns. Social protection spending, on the other hand, maybe affected for much longer, depending on the persistence of the economic crisis. On the revenue side, local governments may experience a fall in revenues due to the weakening of economic activity and tax policy changes.

In this context, local authorities have limited financial leeway to bounce back from the economic crisis created by COVID-19. In 2016, the average public expenditure by local and regional authorities in Africa was around 285 PPP\$/capita, compared with an average of 5890 PPP\$/capita in OECD countries. Less than a quarter of African local governments' expenditure is devoted to capital investment, compared to around 50% in OECD countries. The figures are comparable in the least developed countries of Asia (OECD, UCLG, 2019).

⁵ That is about US\$90 billion per year in Africa (ICA, 2017) and US\$1.7 trillion per year in 45 developing countries in Asia-Pacific region (ADB, 2017).



Overall, intergovernmental transfers account for around 50% of the resources of local and regional authorities across the world (OECD, UCLG, 2019). But situations are extremely diverse in this respect, depending on the country and region. For instance, in Asia-Pacific countries (excluding OECD countries), national government grants and subsidies represent 70% or more of local government resources in Indonesia, Sri Lanka or the Philippines and only around 20% in India, Malaysia or Cambodia (OECD, UCLG, 2019). Similarly, in Africa, national government grants and subsidies represent 90% of local government revenues in Kenya, Tanzania and Rwanda, up to 96% in Uganda, around 25% in Senegal, Namibia and Eswatini, and barely 4% in Zimbabwe (OECD, UCLG, 2019).

The extreme dependence of local governments on state allocations is a sign of the very limited power they are given to collect their own revenues and, often combined with the irregularity and poor transparency of transfers, is a considerable obstacle to the exercise of their responsibilities and their ability to act. At the other extreme, the low weight of transfers and the importance of

taxes (which is only in rare cases accompanied by the power to set their base and rates) can be interpreted as a lack of concern to redistribute public income to local governments and therefore as a limited consideration that national governments give to the role of local governments in public action. In many countries, in Africa and Asia, decentralisation has made significant progress in recent years (UCLGA and Cities Alliance, 2018; UCLG ASPAC, Cities Alliance and UNDP, 2018). Nevertheless, it must be recognised that the increase, but also the issue of stability and predictability of local government resources, remains one of the major challenges facing the developing world.

Finally, with regard to local and regional authorities' access to credit and financial markets, the situation is also particularly alarming. The debt of local governments represents 13% of GDP and almost 17% of total public debt on average in OECD countries, but it is almost nil in most African countries, except South Africa and Nigeria. In non-OECD Asia-Pacific countries, excluding China and India, it represents on average only 0.7% of GDP and 1.4% of total public debt (OECD, UCLG, 2019).



The inability of local governments to access financial markets in most developing economies has multiple causes, ranging from drastic constraints or even the prohibition of local governments from taking out loans under national legislation, and the precarious and unstable financial situation of local governments offering insufficient repayment guarantees to credit institutions, to the poor technical and financial quality of projects that could be submitted for financing. Combined with their very limited income, these structural limitations in access to private financing constitute a major obstacle to the investment capacity of local governments. By limiting the ability of local governments to provide infrastructure, equipment and services, these constraints, in turn, limit their ability to generate their own income (via taxes and duties) and, in a vicious circle, perpetuate their relegation.

The economic fallout of COVID-19 for local governments includes a considerable disruption and contraction in economic activity, a steep decline in government and business revenues, loss of jobs and countless losses of livelihoods for informal daily wage earners. Alongside these

challenges, local and regional authorities have been in the frontline of crisis management and have had to act on several fronts. First of all, they had to ensure the continuity of the supply of basic services (water, sanitation, waste collection, safety and security), services for which demand often increased because of the lockdown and their extension in many cases, through ad hoc solutions, to the most vulnerable communities.

Moreover, local and regional authorities have been led to support the efforts of health systems (supplying health centres with health and prevention equipment), to develop awareness-raising activities (information campaigns), and to support the implementation of barrier and public hygiene measures (e.g., by setting up water points and public handwashing facilities in underprivileged neighbourhoods). Finally, a large number of them have put in place social support measures for the most vulnerable households, mostly those from the informal sector that have been totally deprived of resources during the crisis (needing food aid, exemption from payment of service bills, etc.).

These initiatives, of which there are many examples (UCLG-LLE, 2020; UNCDF, 2020; Metropolis-Cities for Global Health, 2020; OECD, 2020), have generated additional expenditures and have weighed heavily on the finances of local authorities. At the same time, their resources have been severely affected by the non-collection of taxes, charges, and user fees due to the cessation of economic activities and the sharp drop in household incomes.

This unprecedented financial pressure on local and regional authorities is likely to continue and even deepen in the post-crisis recovery phase. United Cities and Local Governments of Africa (UCLGA) estimates that the budgets of African local and regional authorities are likely to be reduced by 30% to 60% in the near future, severely compromising the provision of local public services. The situation is, even more, worrying with regard to their investment capacities, which could fall by 50% to 75% depending on the region in the least optimistic scenarios – intermediary cities being those most affected by the fall in their investment-related revenues (UNH, UNECA, UCLGA, UNCDF and Shelter Afrique, 2020).

Firstly, in developing economies, the structure of taxes and duties is highly reliant on elastic sources of revenue. Property taxes, deemed to be more stable in a context of economic crisis, account for nearly 40% of the resources of local and regional authorities in high-income countries, but just over 20% in the least developed countries (OECD, UCLG, 2019). The valuation and collection of these taxes are particularly weak in intermediary cities in developing economies where cadastres and land registers are notoriously absent. Similarly, taxes on services and fees account for nearly 13% of local government resources in high-income countries, compared to only about 4% in low-income countries in Africa and Asia (OECD, UCLG, 2019). The majority of local governments' own sources of income in secondary cities come mainly from taxes on local economic activities (patents, business taxes, local development taxes, taxes on taxis and motorcycles, etc.). These have been particularly impacted by the shutdown imposed on local trade and service activities. Added to this, the fall in household incomes resulting from the quarantining of local economies also has had an impact on the payment of taxes and duties of all kinds. These combined effects have led and will certainly continue to lead in the immediate post-crisis period to a significant contraction of local authorities' own resources.

Secondly, as has been said, local and regional authorities in developing economies are in the majority of cases extremely dependent on intergovernmental transfers. These transfers are often subject to severe constraints on their use, which make it impossible to mobilise them flexibly for purposes other than those for which they were intended. This lack of flexibility is a considerable obstacle to covering the exceptional expenses that local authorities are facing in response to the crisis. In addition, it is very likely that these transfers will be significantly reduced in the coming period due to the impact of the crisis on national budgets (increased national debt servicing, lower income tax collection, lower VAT yield, etc.).

Finally, the deterioration in the financial situation of local authorities will constitute an additional obstacle to their access, where possible, to financial markets – not to mention the vast majority of cities for which borrowing is today legally impossible and for which such a prospect will become even more remote.

7.2 Strategic considerations for financing local government long term recovery from COVID-19

Vital municipal efforts to implement plans for future recovery will not come to fruition without a solid foundation of financial security and the prospect of future revenue collection. Intermediary cities that currently struggle to access the existing global architecture for municipal finance must be empowered to utilise a range of mechanisms to support building back better economically from COVID-19. While new finance developments do occasionally materialise, such as risk mitigation and derivative tools, the vast majority of municipalities will typically enact some blend of grant and own-source financing, with a minority of more creditworthy municipalities combining these with private or public equity, standard commercial or concessional debt.

What can – and needs to – change is making these funding options available to as wide a variety of local government as possible, especially intermediary cities that historically lack the capacity to pursue sophisticated fiscal tools. This urgent need means both raising the awareness of policymakers as to how these financing

mechanisms work and then giving them the skills and resources to understand how to apply them within their local context. Ultimately, local governments have policy options which can build their capacities incrementally over time to access the level of finance necessary for the development of future infrastructure. Municipalities can take action now by adapting their legal and administrative circumstances in order to position themselves for future financing success.

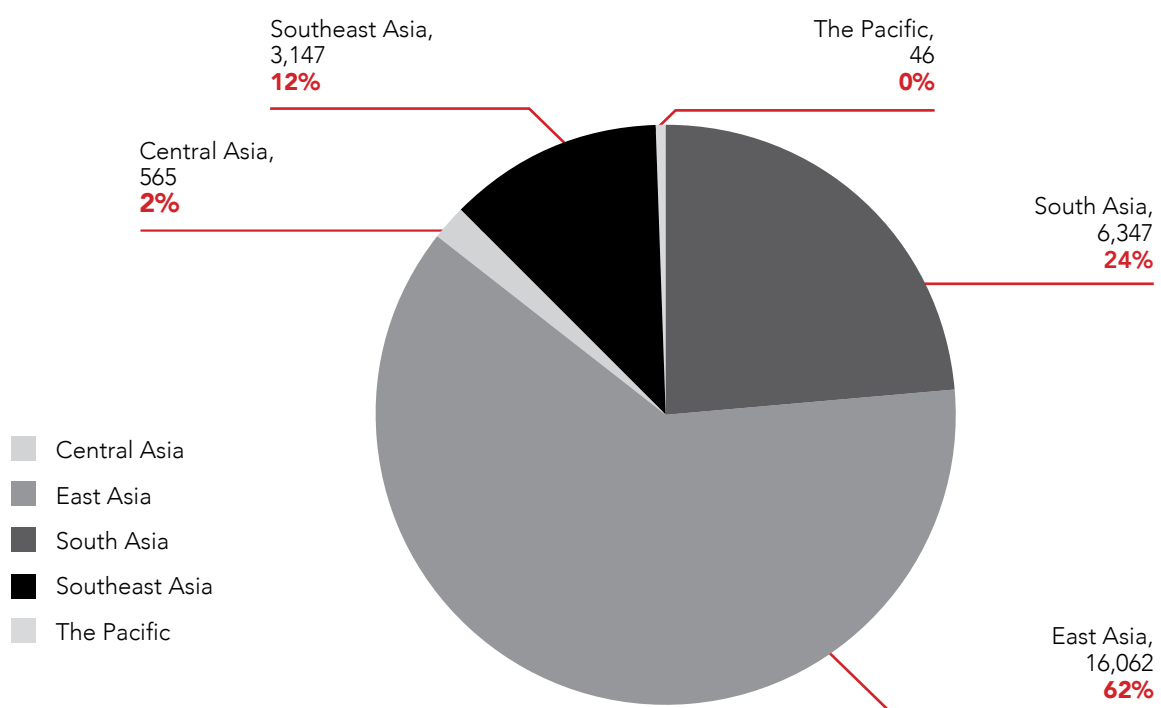
However, even if appropriate resources and enabling tools are eventually provided to municipal finance officers, it is important to note such a scenario does not mean that all financing solutions will automatically become available. Cities in fast-growing regions, such as Asia Pacific and Africa, face increasing demand for investment in infrastructure that induces growth, such as roads and transport systems, as well as environmental investments, such as water and sanitation critical for COVID-19 response. Further, given the scale of financing required for needed investments, and the limited nature of government grants and own-sources of finance, it is imperative that these public resources be leveraged with private finance.

Taking the Asia-Pacific region as an example, although a definitive urban infrastructure financing gap measurement does not exist for the region, one can approximate the scope of

the need (Figure 7.1). The Asian Development Bank estimates that the region's developing countries need to invest US\$1.7 trillion annually to keep their current growth pace, with the government covering 40% of the bill and the private sector footing the rest. With the current annual investment at around US\$881 billion, the gap is around US\$819 billion or just under half of total need (Asian Development Bank, 2017). In turn, such estimates are hampered by their omission of slum upgrading and public housing, which may account for the bulk of municipal spending needs in fast-expanding Asia-Pacific cities.

In order to meet this yawning infrastructure gap which will be similar in other developing regions such as Africa, new local-level initiatives supported by an appropriate legal, city planning and financial framework will be required, as indicated in the New Urban Agenda (UN-Habitat, 2016). Improvements in traditional local government revenues sources will play the most significant part in helping finance this infrastructure gap, but there are also future pathways that policymakers should consider. These pathways are complementary to existing needs to secure transfers from central government proportional to cities' contribution to national GDP, improve creditworthiness to access international finance and develop bankable projects that will attract multilateral institutions.

Figure 7.1 Regional Infrastructure Financing Gap in Asia and the Pacific¹





If local governments are to be empowered to take proactive decisions on infrastructure, rather than perpetuate the status quo as passive recipients of scattered grants, these financing tools must go hand in hand with reforms to improve both assigned and own-source revenues. The intergovernmental fiscal transfer rules would need to be transparent, formula-based and predictable, without which planning at the local level would become impossible, especially in cities where the size of assigned revenues is large. Further, apart from the absolute size of the transfers, the internal distribution between cities should be rule-based. Further still, these reforms are a necessary first step for empowered local governments to leverage these public finance sources with private sources, as potential lenders would base credit decisions on the stability of the fiscal transfer rules.

A crucial dimension of these much-needed reforms is to provide local governments with stronger agency responsibility and control over the fiscal chain to redress the national fiscal imbalance. This calls for giving them the increased capacity to modify (diversify and widen) their local fiscal base so that they are brought in line with their – predominantly informal – underlying economic bases.

Official development assistance (about US\$150 billion per year) and migrant remittances (estimated at US\$550 billion in 2019) can be powerful financial levers to support these transformations and contribute to the financing of infrastructure. Before the crisis, remittances flows were likely to become the largest source of external financing for low- and middle-income countries (World Bank, 2020b). It is difficult to project their evolution in the coming period

but, even if they remain a major source of financing for developing economies, they will be far from sufficient to fill their infrastructure gap. Renewed innovative financing mechanisms will be instrumental in mobilising these external resources in support of the indispensable access to financial markets.

7.3 Financing the Post-Pandemic City

COVID-19 is a socio-economic crisis that calls for unprecedented policy responses at the global and local levels. In addition to being a severe health crisis that is upending people's lives, it is wreaking havoc on urban economies and societies at a global scale through containment measures put in place to control it. When designing local government recovery plans from COVID-19, it is important to analyse policy measures, taking account of the financing and implementation constraints already faced by at the sub-national level. In particular, an assessment of the fiscal space available for increasing public expenditures should be conducted, as it largely determines local governments' capacity for action. Based on that, more specific studies still need to be conducted to assess the role of macroeconomic policies, in particular, fiscal policies, in supporting local government recoveries from COVID-19 that are in line with the 2030 Agenda for Sustainable Development and the New Urban Agenda, and the related implications for fiscal balance and debt management.

National and local governments – and particularly intermediary city municipalities – should consider utilising (and adapting to their unique circumstances) four specific policy options in combination with traditional financing schemes, to help meet their infrastructure development needs, post COVID-19:

1. **Construct a sound legal system and fiscal devolution framework**, as this forms the foundation of a solid financial structure. This foundation is not just to ensure the legitimacy and implementation of the government's work, but also to protect the rights of local people and gain trust from the public. It is also essential to make sure that local regulations and policies are in line with the regional and national frameworks.

2. **Consider taking steps – such as establishing strong intergovernmental relations – to support fiscal decentralisation initiatives.**

Decentralised fiscal autonomy can provide cities with the opportunity to raise their own revenues, as well as greater responsibility not just for delivering local goods and services, but also for constructing transparent municipal financial management systems such as open budgeting and expenditure information sharing in their COVID-19 recovery.

3. **Consider how progress may be measured in relation to municipalities' ability to finance themselves** in the COVID-19 recovery phase. Metrics can indicate the degree to which local governments are becoming more financially autonomous. National and local government could report on progress in relation to such key performance indicators and set targets for achieving financial autonomy goals. To properly build these metrics, transparent information must be produced and made publicly available at the country level on local government finances. In most developing countries, information on this is either scarce and scattered or does not exist. Informed dialogue and sound policies are based on shared, accurate information.

4. **Learn from "best fit" practices.** It is still important to keep in mind that there is no "one size fits all" when it comes to local governments seeking to finance their infrastructure and utility service needs. Development partners can support this by supporting regional networks of cities to support evidence-based recommendations and learning, providing technical assistance and providing advisory services for targeted support to COVID-19 economic recovery planning with both local and national governments. Development partners should also coordinate their efforts in support of local government financing, and reconsider ways of supporting them directly, as well as playing a critical role in leveraging private finance through innovative mechanisms, such as blended

finance or pool financing. Recent initiatives such as the International Municipal Investment Fund (IMIF), a third-party Fund set up by the United Nations Capital Development Fund (UNCDF) and United Cities and Local Governments (UCLG) in collaboration with the Global Fund for Cities Development (FMDV), or the Africa Territorial Agency (ATA) set up by UCLG-Africa offer inspiring models that should be enhanced and scaled up. There is an urgent need to address the huge infrastructure gap by increasing the provision of resources to local governments (UCLG, 2020a).

Progressive measures are already being implemented at the national level in Asia. In China, in early March 2020, the central government allocated nearly US\$5 billion in general grants to Hubei Province (where the city of Wuhan is located). The Hubei Provincial government has full discretion on the spending of these grants, following general policy guidance at the national level (OECD, 2020). In the Republic of Korea, a supplementary budget adopted in March 2020 to respond to the COVID outbreak includes special support for Daegu City and North Kyongsang Province, which are the two areas hit hardest by the pandemic. Measures include for example the building of an endemic care facility in the southeast region of the country, where the hardest-hit localities are located, the strengthening of disease prevention by increasing, for example, negative pressure rooms, support to small retailers and SMEs and special support to local economies (OECD, 2020). Similar initiatives have also been taken in various African countries. In South Africa, extraordinary funds were granted to local and regional governments to mitigate cash flow problems and support cities responding to the pandemic. Local and regional governments were also enabled to act outside their budgeted frameworks on areas that are a priority to address the immediate knock-on effects of the crisis (UCLG, 2020b).

Build Back Better also benefits from regional and sub-regional collaborations and partnerships. Regional cooperation remains vital, as it enables collaborative efforts, exchange of best practices and lessons learned and careful examination of the short- and long-term impact of implemented or anticipated COVID-19 restrictions. It is also indispensable to continue bridging the infrastructure divide, ensuring that no country or territory is left in the fight and recovery alone. Likewise, policy actions that are aimed at strengthening a region's preparedness to cope with future pandemic shocks, such as establishing a regional local government emergency fund, also rely on regional cooperation for their success. The COVID-19 response framework of the UN Economic and Social Commission for Asia and the Pacific (ESCAP) is one example that promotes regional and sub-regional solutions pursued through collaboration with UN Resident Coordinators and regional UN entities, partnerships with sub-regional intergovernmental organisations, such as Association of Southeast Asian Nations (ASEAN), think tanks, the private sector, local governments and city networks, such as United Cities and Local Governments Asia-Pacific (UCLG ASPAC), civil society organisations, and through ESCAP's own inter-governmental and multi-stakeholder mechanism such as the Commission Session and the Asia-Pacific Urban Forum (ESCAP, 2020).

The road forward to finance the "post-pandemic city" is challenging but not impossible. Better preparing cities to help finance themselves in a feasible way should be the goal of all national governments in the post-COVID-19 world. The recovery phase of COVID-19 gives further impetus to the Addis Ababa Action Agenda resolution aimed at strengthening local initiatives with respect to the financing of basic public goods. Development partners should play a key role in assisting national and city governments with the promotion of this chapter's core basic agenda that improves the leverage of capital and promotes economic resilience and sustainability. The time for linking municipal demands with domestic finance has come and this calls for the responsibility, resolve and commitment of all actors at all levels.



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8

PROMOTING RESILIENCE TO SHOCKS & STRESSES

JOSEF LEITMANN

This chapter looks at why cities, and especially secondary cities, need to enhance their resilience to shocks and stresses including pandemics, disasters and climate change. The chapter begins by looking at why cities are important as sources of pollution and the reasons why it is essential to reduce their vulnerability to a range of threats, including pandemics.

It then drills down on the implications of COVID-19 for urban resilience. Finally, options for strengthening the resilience of secondary cities are outlined as part of a strategy for sustainable recovery.

8.1 Why bother about cities and especially secondary cities?

Cities are key sources of pollution and waste that have both local and transnational consequences. At the same time, they are increasingly vulnerable to shocks and stresses, including pandemics. Secondary cities in the developing world are the most vulnerable while also being the fastest-growing urban areas. And the poor and vulnerable are increasingly concentrated in cities. Together, these factors are posing a growing constraint on the ability of lower-income secondary cities to grow and prosper.

Urban areas are critical for both the global and local environment. They constitute the most significant source of GHG emissions, pollution and demand for non-renewable resources. According to UN-Habitat, cities consume 78% of the world's energy, which accounts for 60% of global GHG emissions. When the lifecycle consequences of urban consumption of non-energy goods and services are included, the C40 Cities organization calculated that emissions were 60% higher in the 79 cities studied (C40 Cities, 2018). At a minimum, UN-Habitat now estimates that **70% of all carbon emissions are city-based** (UN-Habitat, 2020). In addition, liquid and solid wastes from cities, as well

as urban air pollution, have environmental and health consequences that affect both urban and peri-urban residents.

Rapid urbanization. More than half of humanity lives in cities today. By 2030, 60% of the world's population will live in urban areas. And the world continues to urbanize, with up to 1.4 million people per week moving into urban areas (UN DESA, 2014). Over 60% of the land projected to become urban by 2030 has yet to be developed (Elmqvist et al., 2013). Almost one billion new housing units will need to be constructed to house the world's growing population by 2060 (Bilham, 2009). Finally, this rapid urbanization is concentrated, as the majority of the world's 3.9 billion urban dwellers reside in developing countries, where most future urban growth is also expected (UN DESA, 2014).

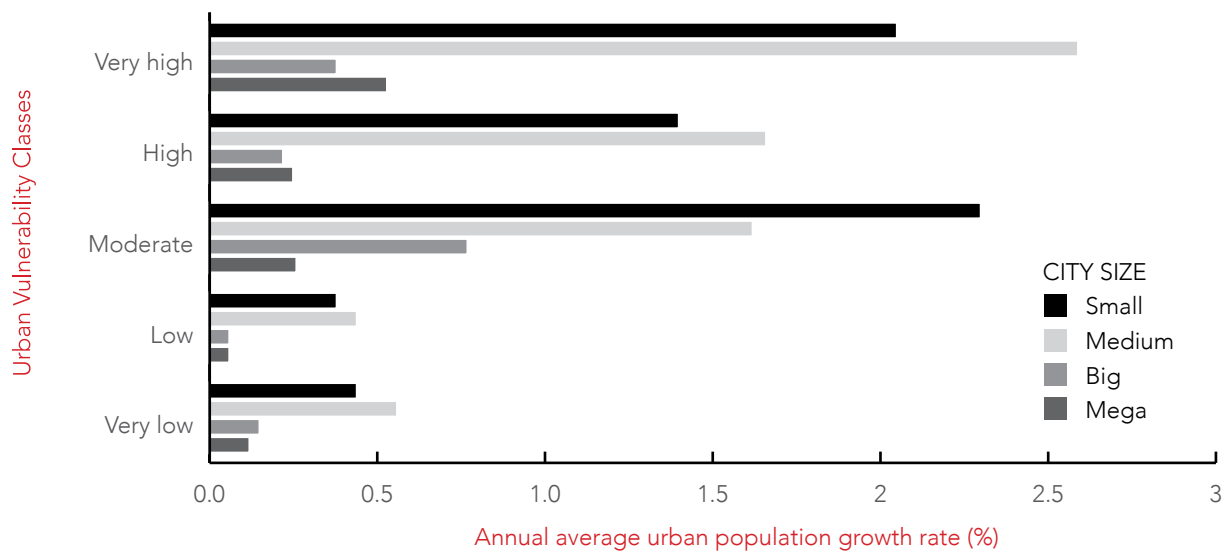
Much of the fastest urban growth in the developing world will be experienced in small and medium-sized cities.⁶ By some estimates, secondary cities are expected to grow by more than 32% between 2015 and 2030 – equivalent to 469 million more residents (Birkmann et al., 2016). A significant portion of developing country cities considered to be in a “very high” urban vulnerability class are small and medium-sized cities growing at an annual average rate of approximately 2% and 2.6%, respectively (see

Figure 8.1: Kibera informal settlement in Nairobi, Kenya



⁶ Small and medium-sized cities are defined as between 300,000 and 500,000 and 500,000 and 5 million, respectively.

Figure 8.2: Growth Rates According to Relative Vulnerability and Proportion of Urban Population (2000-15)



*Vulnerability is measured by the Urban Vulnerability Index in five classes (very low to very high). Source: Elmqvist et al., 2013

Figure 8.2). These cities have to make critical investment, land and planning decisions in the near future. This creates an opportunity where cities can pursue risk-informed development to accommodate growth in a manner that increases resilience (Brown et al., 2012).

Growing concentration of economic activity in cities. Globally, large cities generate about 75% of the world’s GDP, and this will increase to 86% between 2015 and 2030 (UN-Habitat, 2011). In low and middle-income countries, rapid urbanization is generally associated with rapid economic growth. This usually leads to a higher concentration of people, assets and economic activity in urban environments. In fact, cities in the developing world often account for a much greater share of GDP than that of the national population. Consequently, growing urban populations and wealth are increasingly exposed to losses from shocks and stresses.

Increase in expected losses in the urban environment. Global average annual losses from natural disasters are predicted to reach US\$415 billion by 2030 (Bughin et al., 2016). Assuming an average 80% wealth concentration (UNISDR, 2015), urban losses could reach US\$332 billion per year. This figure is only for disaster impacts and underestimates the economic consequences of inadequate resilience because (a) damages and losses from other shocks and stresses are

not included (e.g., conflict, pollution, congestion, epidemics, accidents, building collapses, and terrorism); (b) the assessment does not include economic impacts on the informal economy; and (c) welfare effects and productivity losses are not included.

Differential impact on the poor. Poverty is urbanizing and the urban poor, especially those in informal settlements, are increasingly faced with risks to their lives, health and livelihoods. More than 880 million urban residents were estimated to live in slums in 2014, an increase of 11% since 2000. Regionally, a third of city residents in South Asia and 56% in sub-Saharan Africa live in informal settlements (UN-Habitat, 2016, p. 247). Slums generally have lower levels of infrastructure and services and are more exposed to hazards of varying types. In addition, the majority of internally displaced people and refugees are increasingly settling in cities and represent a special class of vulnerable people.

Risks faced by the urban poor relate to their limited economic base, location, low access to risk-reducing infrastructure and services, as well as inadequate governance and disaster risk management. First, the urban poor often cannot afford safe housing and lack assets to cope with shocks and stresses. Next, many poor neighbourhoods are located in or close to hazardous zones, which impose adverse costs on

their residents. Third, poor cities and communities are usually deficient in basic infrastructure and services that can substantially reduce exposure to natural and artificial hazards. In this sense, the resilience of the urban poor is heavily tied to the quality of governance and government capacity to properly plan and manage public infrastructure required to reduce the risks faced by their lower-income residents. Finally, disaster risk management requires that local governments engage with households and communities at risk; however, the urban poor are often without voice or underrepresented in such consultations.

Failure to invest in urban resilience can reverse development gains by sending millions back into poverty. Up to 77 million urban residents could fall back into poverty by 2030 in a likely scenario

of high climate impacts and inequitable economic growth (World Bank, 2017). This is a conservative estimate based on a low poverty line that does not consider the impacts of disasters. The primary drivers of increased urban poverty will be higher food prices and the costs associated with an increase in waterborne diseases. Most of the increase in urban poverty due to climate change will be concentrated in the cities and towns of South Asia and Sub-Saharan Africa.

So, we need to worry about cities because they are both the earth's major driver of climate change and other types of pollution and they are vulnerable to multiple shocks and stresses because of how they concentrate people, poverty and assets. We especially need to focus on secondary cities in developing countries because they are

Table 8.1: Classification of Urban Hazards

NATURAL	TECHNOLOGICAL	SOCIO-ECONOMIC
Drought	Building collapse	Business discontinuity
Earthquake	Chemical Spills	Corruption
Epidemic/pandemic	Cyber threats	Demographic shifts
Extreme temperature	Explosion	Economic crisis
Flooding	Fire	High unemployment
Insect infestation	Gas leak	Labour strike/unrest
Severe storm	Industrial accident	Massacre
Tsunami	Oil spill	Political conflict
Volcanic eruption	Pollution event	Social conflict
Wildfire	Poisoning	Supply crises (e.g., food, water, housing, energy, etc).
	Radiation	
	Transport accident	Terrorism
	System breakdown (e.g., ICT, WASH, energy, health, etc.)	War

Source: Adapted from UN-Habitat's City Resilience Profiling Tool; based on classification of hazards by EM-DAT & Prevention Web

rapidly growing and have a low coping capacity to manage this growth, but they also have the potential to invest in resilience and minimize risks as they expand and develop.

8.2 Implications of COVID-19 for urban resilience

The term “urban resilience” has many definitions; most involve the ability to manage a broad range of shocks and stresses that may occur in a city. There is not yet a standard definition of urban resilience; this paper defines resilience as the ability of a system, entity, community, or person to adapt to a variety of changing conditions and to withstand shocks, while still maintaining its essential functions (Leitmann & Joy-Santos, 2016).⁷ Notably, resilience refers to the ability of a system to maintain or quickly return to desired functionality following a disruptive event (whether natural or human-induced, predictable or unpredictable). It incorporates the ability to avoid shocks and manage risks, while being able to constantly adapt to change. While not a substitute for broader approaches to sustainability, greater resilience improves long-term sustainability by ensuring that current development gains are safeguarded for future generations.

Recently, the definition of resilience has broadened to encompass the ability to not only withstand natural hazards, but also shocks and stresses due to technological, social, economic, political, and cultural changes (see Table 8.1). Nevertheless, experience from climate change adaptation and disaster risk management may be adapted and applied to the other hazards (and vice versa; Leitmann & Joy-Santos, 2016). Epidemics and pandemics like the COVID-19 outbreak are one of many natural, technological and socio-economic shocks and stresses facing cities.

Epidemics and pandemics can be seen through the lenses of resilience and natural disasters. In the resilience literature, outbreaks of disease are treated as a shock to the urban system. In disaster risk management, an epidemic or a pandemic can be viewed as a slow-onset disaster, similar to an extended period of flooding or drought and ensuing famine. A major caveat is that natural

and anthropogenic disasters are usually localized, whereas the COVID-19 pandemic has national and international impacts on health, economic performance, supply chains, etc. An exception would be disasters of national proportions, such as the Haiti earthquake or intense storms in Small Island Developing States, which result in damages and losses equivalent to 50% to 150% of GDP.

The short-term implications of the pandemic for urban resilience are mixed:

- Climate change has benefited, with an estimated 19% reduction in GHG emissions due to reduced energy and other resource consumption (Cicala et al., 2020).
- Similar reductions have occurred in other urban-based pollutants and natural resource consumption by cities, both due to the drastic downturn in economic activity.
- Urban air quality has improved, which will yield longer-term health benefits, and transportation congestion has been greatly reduced, which normally would yield productivity gains. A working paper published by the U.S. National Bureau of Economic Research calculated that the reduction in pollution has led to a 25% decrease in deaths from illnesses like asthma, lung disease and heart disease (Cicala et al., 2020).

There are three main implications in the longer term. First, the short-term benefits could possibly continue if the economic recovery is slow, and public health restrictions continue. Second, there is an enormous opportunity to “build forward” with low-carbon and climate/disaster-resilient investments in infrastructure, services, systems, and changed behaviours. Third, there is the risk that already-overstretched secondary cities will not have the informational resources, management capacity and financing to realize such investments.

8.3 Options for building forward

Secondary cities in the developing world can capture this opportunity to build forward and

⁷ While similar to the 2009 UNISDR definition included in the Sendai Framework: “the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to, and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions,” the definition of resilience is slightly broader to address a wider subset of shocks and stresses. This includes stresses generated by natural phenomena, technological hazards, and socio-economic risks.

enhance their resilience by (a) investing in preparedness for multiple and overlapping threats; (b) developing needed managerial and institutional capacity; (c) designing and building more resilient infrastructure and systems; (d) overcoming the barriers to financing new investments; and (e) consolidating sustainable development.

8.3.1 PREPAREDNESS

The experience of responding to the COVID-19 crisis in many secondary cities has highlighted the inadequate level of preparedness to respond to crises. To help improve the situation, the following actions will be required:

- **Develop and/or update emergency plans:** cities typically have plans and standard operating procedures to respond to a number of expected threats. These rarely anticipate and include “black swan” events such as the coronavirus and its socio-economic consequences. City planners should engage in lessons-learned exercises to identify how their emergency plans performed and identify gaps that need to be filled. Updated plans should also anticipate situations where multiple hazards occur and require a simultaneous response.
- **Identify and focus on the most vulnerable:** cities and community organizations can work together to pre-identify groups (e.g., female-headed households, children, the elderly, the disabled, refugees and migrants, informal sector workers) and geographic areas (e.g., low-income neighbourhoods, disaster-prone areas) that can be especially vulnerable to shocks and stresses and develop policies and programs to protect them.
- **Prepare appropriate policy and legal instruments:** public institutions should develop procedures that can be activated when emergencies strike, in order to protect livelihoods, basic services, food security, etc. This will require the development of policies and, in some cases, legislation to empower municipal authorities to respond rapidly and effectively.
- **Mobilize and stock resources:** in order to respond at the outset of an emergency,

cities should work with regional and national authorities to stockpile supplies of critical resources such as food, medicine and temporary shelters. Human resources also need to be rapidly mobilized and supported after an event, e.g., first responders, doctors, nurses, and case trackers in the case of COVID-19.

- **Improve coordination and communications:** interagency coordination within a city administration and between the city government and other actors (local stakeholders, regional and national authorities, international partners) can be challenging during regular times and especially complicated during a crisis. Standard operating procedures, drills and simulation exercises should take place prior to an event to develop and test coordination and communication mechanisms. Ex-post evaluations can also help to identify areas for improvement following an emergency.
- **Develop a monitoring and evaluation system:** information is critical during and after a disaster or other emergency. Officials and the public need to know what is happening on the ground and how well the response is performing in order to adjust policies and programs, ensuring that no one is left behind. This can be done by developing and testing a monitoring and evaluation system that is able to rapidly give decisionmakers and citizens a reliable picture of what is going on.

8.3.2 CAPACITY

The COVID-19 crisis has exposed weaknesses in the capacity of local governments, and especially secondary cities in developing countries, to understand, respond to and manage events. Three areas of improvement are needed.

First, information is needed about key threats and their potential impacts to set priorities and target groups of people and/or geographic areas for a response. A variety of tools exist to help cities to conduct this analysis including City Scan and City Strength (World Bank), the City Resilience Index (Arup and Rockefeller Foundation) and the City Resilience Profiling Tool (UN-Habitat). A more extensive list of tools is available at <https://www.resilienceshift.org/tools/>.



Second, municipal institutions in secondary cities need to develop or enhance three levels of capacity: (a) immediate response to emergencies in order to save lives and minimize damages and losses; (b) planning in order to implement a resilient recovery from the shock or stress, and (c) longer-term management of the recovery. The capacity to respond means that the city has the ability to pursue the measures discussed in the previous section on preparedness. The capacity to plan requires the city to build on the information about key threats in order to design a recovery that is both effective and resilient. The capacity

to manage involves local government's ability to finance, implement, monitor, and evaluate a recovery program.

Third, a city will need coordination mechanisms within and outside of government in order to plan and implement post-COVID-19 recovery. A secondary city needs an institutional arrangement that allows it to work effectively across siloed line agencies, e.g., through a recovery "czar", a recovery agency or executive committee, and/or a multi-agency operations centre. Non-governmental groups could use existing coordination mechanisms, e.g., an NGO network

or a chamber of commerce, to coordinate with municipal-led recovery efforts. And then there is the need to coordinate with larger recovery actors and initiatives at the regional and national level.

8.3.3 INFRASTRUCTURE

There are numerous opportunities to build or upgrade infrastructure that is risk resilient as part of the recovery process. A particularly effective approach is to consider nature-based solutions that integrate or substitute green approaches to coastal protection, watershed management, flood control, etc., for traditional “grey” infrastructure. More details can be found in Chapter 4 of this volume on hard and soft infrastructure.

As a segue to the next section on finance, an estimated US\$1 trillion is needed annually for infrastructure in emerging markets and developing economies to sustain economic growth. A premium of 9% to 27% over total investment needs (US\$90–270 billion) would be required each year to make this low investment carbon and climate resilient. This cost is heavily weighted against the developing world: infrastructure spending needs (including capital and operations and maintenance) range from a high of 35% of GDP in fragile low-income countries to 10% in middle-income countries (all figures from Leitmann and Joy-Santos, 2016).

8.3.4 FINANCE

There are major constraints to mobilizing private capital towards new investment in urban resilience. The argument that secondary cities in the developing world “just need access to global capital markets” to invest in resilience-increasing activities fails to recognize that many of these cities are constrained by other factors that reduce their access to credit for climate-adaptive or other urban infrastructure investments:

- i. **Lack of government capacity:** Capacity constraints include the inability to plan and implement resilience investments; inability to generate sufficient revenue to meet existing obligations and maintain on-going programs, adversely impacting their creditworthiness; national legal and regulatory systems that deter private investment; political uncertainty; and general challenges to infrastructure development.

- ii. **Lack of private sector confidence:**

This is driven by some of the capacity constraints (financial regulations and complexity, the governance framework including corruption, political uncertainty, absence of financeable proposals) as well as lack of data and standards to benchmark asset performance.

- iii. **Challenges in project preparation:**

Here, the main limit is budgetary constraints that keep cities from investing in resilience, including high upfront project preparation costs. This, combined with capacity constraints, mean that there are few “bankable” urban resilience projects that are developed and presented to the market for financing.

- iv. **Financing challenges:**

The issues here revolve around dependence of cities on intergovernmental transfers, low capacity to raise revenues for investments, limited funding for local entrepreneurs and SMEs, lack of creditworthiness, and foreign exchange risk.

Mobilizing private capital is the best bet for closing the financing gap. Traditionally, infrastructure investments have been financed mainly with public funds. However, public resources are not sufficient to finance the higher level of investments needed to build new infrastructure, maintain and improve what is already in place, and promote resilience. Conversely, investment capital seems to be abundant: US\$106 trillion of institutional capital is currently available, in the form of pension and sovereign wealth funds (Leitmann and Joy-Santos, 2016). At present, though, only 1.6% of capital expenditure is directed to infrastructure (Leitmann and Joy-Santos, 2016). However, institutional investors and sovereign funds have indicated strong interest in considering a broader set of investment opportunities to improve low returns.

8.3.5 SUSTAINABILITY ENVIRONMENTAL SERVICES

The Local Governments for Sustainability (ICLEI) Secretary General recently noted that, “During the pandemic, communities and governments have recognized benefits of decreased air pollution, reduction of emissions of pollutants and

waste, revitalization of natural assets, increased solidarity among communities, transboundary collaboration among institutions, decentralization and localization of food and energy production, public ownership of services” (van Begin, 2020). This provides a tremendous opportunity to pursue more sustainable development pathways:

- ✓ **Low-carbon growth:** The low emission development pathway curbs climate change, creates new economic opportunities and improves the health of human and natural systems. Specifically, local and regional governments should reduce environmentally harmful pollutants and GHG emissions from heating, cooling, lighting and food systems, and reduce noise. They would lower GHG emissions in all activities, especially in transport, waste and buildings. They should aim for carbon neutral infrastructure and operations by mid-century, and usher in a renewable energy era, by committing to 100% renewable energy, divesting from fossil fuels and using nature-based solutions. Finally, they would need to promote sustainable passenger and freight mobility, prioritize clean fuel policies and electric vehicles from renewable energy, and give priority to people-centred mobility solutions.
- ✓ **Nature-based solutions:** The nature-based development pathway protects and enhances biodiversity and urban ecosystems, which underpin key aspects of local economies and the wellbeing and resilience of our communities. Specifically, secondary cities would prioritize healthy local environments, in which air, water, soil and other natural resources that sustain life and health are protected and nurtured. They should invest in projects, programs and policies that unlock the potential for nature to provide essential services and new economic opportunities by applying nature-based solutions, using blue and green infrastructure and promoting green zones.
- ✓ **Circular development:** The circular development pathway and new models of production and consumption build sustainable societies that use recyclable, sharable and replenishing resources to end the linear model of produce, consume,

discard. Developing country cities would encourage equitable access to resources and create closed-loop urban and peri-urban systems. This could be done by (a) supporting new local economies that are productive and not extractive, where resources are exchanged and not wasted; (b) prioritizing sustainable waste management and working with the business sector from early-market engagement to the delivery of solutions that support local sustainability goals and that meet the needs of all citizens, and (c) using procurement power to green economies.

- ✓ **More inclusive development:** Equitable and people-centred development help build more just, liveable and inclusive urban communities and addresses poverty. Local and regional governments should do so by: (a) ensuring that the natural and built environment in and around cities improves liveability and safety, promotes human health and mitigates disease; (b) seeking secure and safe access to food, water, energy and sanitation for all, and clean air and soil; and (c) supporting human-centred, safe, socially and culturally cohesive communities, where diversity and distinct identities are woven into the social fabric. (ICLEI Montréal Commitment, 2018)

8.4 Conclusion

Increasing resilience is good economics. A recent World Bank report (2017) concludes that global wellbeing losses could be reduced by US\$100 billion per year in current dollars if cities and countries implemented a “resilience package”. This package varies by country but typically consists of a mix of better financial inclusion, development of disaster risk and health insurance, increased coverage of social protection and scalable safety nets, contingent finance and reserve funds, and universal access to early warning systems. Similarly, if countries were to Build Back Better following disasters by accelerating the pace of recovery, using stronger standards to resist more frequent and intense events and inclusively reaching all affected populations, annual welfare losses could be reduced by up to US\$173 billion (Hallegatte et al., 2018).



All of these options should be considered as part of a recovery planning process and strategy that is prepared in a participatory manner to guide recovery. The UN recommends that this process should:

- **Look at the response through an equity lens:** Secondary cities that are already lagging (and their most vulnerable groups) have been particularly affected, and they should be prioritized to avoid longer-term impacts on development.
- **Focus on people's enhanced capabilities:** This approach would allow for both a focus on public health and economic activity while also helping build resilience to future threats.
- **Follow a coherent multidimensional approach:** A systemic, rather than sectoral, approach should be taken that seeks to promote low carbon, climate-resilient development. A recent survey in 14 countries found that two thirds of the population supports prioritizing climate change during the post-coronavirus recovery (UNDP, 2020).

Cities, and especially the rapidly growing secondary settlements in the developing world, are critical to the local and global environment, increasingly concentrate growth and assets, and are experiencing growing losses from shocks and stresses, all of which disproportionately impact the poor. The COVID-19 pandemic is similar to a slow-onset disaster which has undermined the ability of secondary cities to reach their sustainable development goals. However, this crisis is an opportunity for these urban areas to build forward by investing in preparedness, developing capacity, building more resilient infrastructure, and consolidating sustainable initiatives. This silver lining can produce economic and other dividends for the current and future residents of secondary cities.

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9

BUILDING SMARTER, EQUITABLE AND INCLUSIVE COMMUNITIES

BRIAN H ROBERTS

The COVID-19 pandemic has changed, globally, the whole nature of personal engagement and interaction in civil society. No longer is it acceptable, or safe, to engage in social contact and behaviours the way we used to. As a consequence, personal and social isolation, vulnerabilities, tensions and uncertainties within communities have become more widespread. These effects have been most profound in cities in developing economies, where the capacity to socially distance is difficult, and the lack of social safety nets force low-income workers to secure an income by working in conditions of high-risk exposure to the disease. The pandemic has made it increasingly difficult for people in communities to interact and go about business as usual. In short, it has created a crisis and state of fear, anxiety, and tension that has affected every aspect of society and community.

COVID-19 has set back the development of many countries and communities and taken a severe toll on the world's economy. But it is the most impoverished nations, where hunger, illnesses and economic despair have become so widespread that are being affected most, and in which economic and institution systems are least equipped to support recovery efforts. The World Bank (2020) baseline scenario modelling on poverty is that COVID-19 will push more than 71 million people back into extreme poverty, based on a measured international poverty line of US\$1.90 per day. This figure is highly likely to be underestimated. The road for recovery for developing economies will be difficult, further increasing inequities in the development of nations and reducing the likelihood of meeting many of the SDGs targets. While the economic recovery from COVID-19 will be challenging, the social impacts of the pandemic are likely to take much longer to overcome, and societal risk will remain high.

This chapter examines the vulnerability and challenges of communities in secondary cities in developing and post-industrial economies as they recover from COVID-19. It explains how these communities will need to become more self-reliant and smarter if they are to recover from the pandemic, given that the capacity of many central and local governments and communities to support recovery efforts will be extremely limited. Specifically, the chapter suggests some approaches that secondary cities in developing economies could take to restore confidence in communities. It outlines some initiatives to enhance local self-governance and foster greater self-reliance to aid recovery efforts through the creation of smarter communities, learning and social safety networks, improvements to wellbeing, and building new forms of social capital.



9.1 Situational Analysis

Much of the responsibility for addressing the COVID-19 crisis has been led by central governments. Local governments have also played a significant role; however, their capacity to secure the necessary public resources to combat the spread of the disease and to support future recovery efforts is limited. Most local governments are not in a position to increase revenue collection from local taxes, charges, and rents, and to repay loans because of the worsening economic and employment situation. This situation presents significant challenges to recovery efforts of intermediary and smaller cities. Given these constraints, local governments and communities in secondary cities will need to become **smarter in the way of doing things**. They will have to learn how to do more with less in delivering community services, become more self-sufficient and self-reliant, and adopt new governance systems to manage the challenges of post-COVID-19 recovery.

The long-term impact of COVID-19 on communities is impossible to predict; however, what will likely emerge out of the crisis is a more telecommunications literate and dependent society. The development of the internet, mobile and smartphones, and associated social media and video conferencing, even before COVID-19, had already begun to accelerate the rapid movement towards virtual communications, networking and gatherings. Increasing use of non-physical interaction and transactions between people, as a proportion of total exchanges, can be expected to rise. New forms of interactive communications and technology, such as 5G, are expected to bring even faster revolutionary change in the way people in communities, institutions and organisation communicate, function and behave.

Despite the effects of rapid changes in communications and technologies, the importance of physical contact and transactions in local communities will remain high. What will emerge from COVID-19 is a new hybrid and smarter approach to community engagement, communications and development, combining the physical with the virtual domains of communication and interaction. These changes call for a rewrite of the approaches to communications and community development – something that will be particularly challenging to communities in developing economies with poor and sparse communications networks. The inherent danger of the Fourth Industrial Revolution economy that will emerge post COVID-19 is that it will lead to

even greater social and community disparities and division than before the crisis. This brings into focus the need for recovery efforts to address the impacts of technological and work changes on poverty and inequity – especially within systems of cities and local communities.

9.2 Building Smarter Communities

Building smarter communities is an approach many cities, towns and rural communities have adopted in using the internet and online communication in pursuit of sustainable development. However, this is a narrow definition of smartness. Smartness is not just concerned with being able to use technology. Smartness is also an attitude involving changes in practice, support for innovation and willingness turn challenges into opportunities.

Low-level technology user communities can be smart – especially when it comes to sustainability. Part of the challenge local communities with low level and poor internet services face is how to become smarter. The critical issue for this is enhanced connectivity. Connectivity (economic, social, physical and intrinsic) affects the way local communities function, behave and perform. Smart communities are those where, despite differences, people can work together to cooperate and collaborate to resolve common sets of problems and be creative and innovative on matters of common economic, social, institutional and community concern. By acting collaboratively, through a range of formal and informal governance mechanisms and arrangements, through virtual interactions using the internet, it is possible to create safer, cleaner, stable and progressive smart communities.

Building smarter communities can become a focus for local governments to organise local community responses to COVID-19 recovery. Given the limited public resources of all levels of government, many will be stretched to support the recovery effort for many years to come. Thus, it is vital that central and local governments support initiatives and tools for building smart, self-organising communities. The Smart Community Development Framework (SCDF) developed for local communities in Guatemala (Fagundes Veiga Ribeiro et al., 2016) provides a useful tool for secondary cities in poorer countries to create smarter communities as a response to supporting post-COVID recovery efforts.

9.3 Measures to Support Community Post COVID Recovery Efforts

Despite local communities having limitations on capabilities, knowledge and resources to support post-COVID recovery efforts, there is much they can do. These include mobilising resources to leverage existing and develop replacement social and economic capital stocks within communities and extended networks. These networks include the diaspora and professional, labour, association, sport, cultural and personal networks.

The following outlines some suggested measures local governments and communities in developing economies and cities could initiate to support and aid post-COVID recovery efforts.

9.3.1 RESTORING AND BUILDING SOCIAL CAPITAL

The close relationship between civic engagement and good governance and its link to social capital has been recognised for some time (Putnam et al., 1993). Social capital presupposes that connectedness or closeness of social networks and contacts can produce stronger relationships and generate obligations and sanctions binding on people living and working in communities to work together for the mutual advantage or benefit of all. Key elements of social capital are generally given as trust, reciprocity and mutuality; social networks; shared norms of behaviour; and sense of commitment and belonging. The building of connections and trust contacts are made by people while going about their daily business and, increasingly, by telecommunications. Similar to other forms of capital building, it is productive and exists as a stock, fund or resource of goodwill or mutual obligation that can be used or called upon by communities. But in some communities, it may not exist to any great extent (Lorenz, n.d.).

COVID-19 has damaged these relationships, leaving many individuals and communities in a state of anxiety, divided, uncertain and with a breakdown of trust. It has severely depleted social capital stock by curtaining business, social and other forms of physical connections and transactions that help build and maintain it. Social capital is something that takes a long time to establish and build up but is very easily destroyed by events linked to violence, war and

pandemics. Rebuilding trust and lost social capital in local communities and encouraging them to become more self-reliant are some of the greatest challenges facing post-COVID-19 recovery efforts.

A focus of local governments in post-COVID-19 recovery must be to retain, and rebuild, as much as possible, the loss of capital stock of local communities. This can be done in ways as discussed below.

REDUCING THE SPREAD OF FAKE NEWS

Fake news and misinformation have become a particular problem in undermining trust and knowing what to do to combat the disease in poor communities. Many people in poorer communities rely on word-of-mouth information, which is often misinformed or obtained from local social media networks and found to be fake. As part of community trust-building, local governments may need to support local media networks and services, using hard and soft media distribution means, to provide reliable public information to communities, in the hope that this will be absorbed and applied and passed along through tacit learning: that is informal communication between members of the community. The role of religious leaders in rebuilding trust and social capital will be crucial to support pandemic recovery efforts.

DIASPORA NETWORKING

A good opportunity for secondary cities is to extend and leverage the development of social capital through diaspora networking. Members of the diaspora are often better educated and informed and remit billions of dollars annually to their home countries, which in turn trickles down to support local households and the development of local businesses, property development and building construction, trade and tourism industries. The collective harvesting exchange of knowledge, expertise and skills from the diaspora to local communities is a smart way to stretch and leverage the development of social capital.

Secondary cities could look to developing this pool of shared social capital by developing virtual networked communities of interest between local business, associations and organisations and members of the diaspora. These could operate at both neighbourhood and city scale to include

communities of interest in health and education; building construction; trade and commerce, tourism, sport, culture and education. Diaspora networks are a valuable means of mentoring the development of social capital in local communities to support COVID-19 rehabilitation efforts. Their most valuable contribution is to inject new forms of capital needed to support learning, creativity, innovation and risk management.

SOCIAL CAPITAL AUDITS

Social capital audits (SCA) are a tool that can be used to support post-COVID-19 recovery efforts. SCAs provide information which can be used by local communities to create a better understanding of the resources and capacity needed to self-organise and develop local responses to combat the spread of the disease, to support rehabilitation efforts, and to help local communities monitor the health of their social capital on a regular basis. The first step in conducting an SCA is to use a simple checklist tool of social capital stock. A tool developed by Lorenz (n.d.) provides useful measures linked to elements of trust, reciprocity and mutuality, social networks, shared norms of behaviour, and sense of commitment and belonging within communities.

9.3.2 SOCIAL INFRASTRUCTURE AUDITS

Social capital stocktakes can also be supplemented by social infrastructure audits. Social infrastructure comprises the facilities, spaces, services, information and data which support the day-to-day social activities, quality of life and wellbeing of local communities. These facilities include health and aged care; education; green, blue and recreation; arts and culture; social housing; justice and emergency services building; equipment and other tangible assets. Conducting social infrastructure audits of social assets is vital to post-COVID-19 recovery, as many are poorly documented, maintained and utilised. Given the crucial role many of these assets will play in recovery efforts and the future development of communities, it is essential that local government have knowledge of these and the extent to which these are utilised, operational and maintained. The Australian Infrastructure Audit 2019, discussed in Chapter 4 referred to the process of conducting social infrastructure audits (Infrastructure Australia, 2019). The process can be adapted easily for application in developing economies.

9.3.3 MOBILISING CADRES

An unfortunate reality of many communities in large and secondary cities around the world is that these are controlled by cadres, mafia, political and ideological groups and criminal cartels. Establishing proper formal, transparent and accountable governance arrangements within communities ruled by these groups to respond to managing the spread of the disease and recovery efforts will be extremely difficult without the engagement of these informal organisations. Mafia-type arrangements and cooperation with governments to prevent the spread of the virus is already occurring in local communities in many countries, including Afghanistan and Brazil (Sieff et al., 2020). While it is inevitable that these groups will continue to operate and profit from the crisis, the fight to combat the disease, maintain order and rebuild business confidence will require governments to find ways to engage with these informal cadre groups. Involving and working with cadres on post-COVID-19 recovery efforts can provide a platform to help restore and develop trust in local communities. It could also allow these relationships and community governance arrangements to continue, and be transformed in the future into more formal, transparent and accountable community governance arrangements.

9.3.4 COMMUNITY CHARTERS

As a way of engaging local communities and trust-building to support COVID-19 recovery efforts, local governments can move to encourage the introduction of community charters. "Community Charters are rights-based documents which set out the things and assets needed in a local area which residents agreed to be fundamentally important to the health and safety needs of their community, and related rights and responsibilities. These "assets" may include such things as a clean environment, needs of children, housing, and community stability, food and personal security, a healthy economy and trustworthy elected representatives" (Community Chartering Network, 2018).

A good example is the Falkirk Charter (Concerned Communities of Falkirk, 2014), which has led other countries to peruse this type of charter, as a means of setting community aspirations for the way local communities respond to future crises. Community charters are not likely to work



in situations where personal and societal risks (e.g., violence) are high, and they could prove useful in bringing communities together in post-industrialised secondary cities, where endemic poverty, unemployment, and aged-care public health concerns may be a problem.

9.3.5 SOCIAL SAFETY NETWORKS

Central governments around the world have adopted a wide range of safety net mechanisms to try to support communities during COVID-19. Many poorer nations are facing a desperate situation and cannot ensure that safety nets will continue to provide the services and resources that local communities and households need. In many developing economies, secondary cities, and regional and rural areas community services have collapsed, or national governments have run out of funds to continue supporting social security benefits.

International official development assistance (ODA) agencies have recognised this problem. Assistance from ODA is switching quickly in

response to the need for budget support for social safety nets in order to maintain basic medical and food supply. These funds are nowhere near sufficient to support and maintain healthy communities. As a result, communities and households in cities and communities will need to become much more self-sufficient and self-reliant with what they get from aid and development assistance.

One way to overcome these shortfalls is to develop stronger local infrastructure for collaboration by the building of social safety networks where affected households and community groups work more collaboratively to mutually support each other. This will be challenging and will require the involvement of many communities of interest. Stakeholders will need to communicate across religious, cultural, ideological and prejudice boundaries to find integrated systemic solutions to local resource and services needs in order to support the maintenance and development of communities. The crisis calls for strong and compromising leadership within communities of interest groups.



Ways in which local communities can begin to develop social safety networks (Moss Kanter & Litow, 2009) include the following:

- Adopting smarter solutions for in-home monitoring for health status
- Neighbourhood information and social networking sites
- Neighbourhood e-auctions, bartering and free give-away websites
- Online spiritual, loneliness, financial and domestic violence guidance
- Public libraries as information portals
- E-learning via cell phones.

In communities with less advanced use of mobile phone and internet-linked technology, this can be done by providing public information notice boards, through local newspapers, and by using leaders of organisations involved in sport, religion, cultural and women's interests.

RURAL-URBAN SOCIAL SAFETY NETWORKS

Secondary city communities can play an important role in supporting rural and regional development involving post-COVID-19 recovery efforts. Connecting and extending secondary city local urban communities to rural communities provides a way of extending social safety nets to highly vulnerable and impoverished small town and rural communities, which may have very limited access to public services. In this respect, secondary cities can play a crucial role in connecting urban and rural communities to extend social safety networks.

9.3.6 LEARNING COMMUNITIES

Learning communities (LC) provide both aspirational and practical space and a structure for people to align around the need to engage in more shared approaches to group education and learning (Goodyear et al., 2006; Harvard University, 2020). This connects people who can play a role in convening change across community interest sectors, disciplines, and geographies to work together in proximity, both physically and virtually.

Learning communities enable shared learning on successful and unsuccessful approaches and, in so doing, accumulate knowledge. They also promote a more action or adaptive approach to learning and problem-solving in response to challenges facing local communities. This approach supports a wide range of leadership skills, which are essential in mobilising local resources and committing groups and individuals to action. Finally, the LC approach “accelerates progress toward change at scale. It facilitates fast-cycle learning, measure results to understand what works for whom, and bring together the key stakeholders who can achieve systems-level change” (Harvard University, 2020, p. 77).

A key element of the approach to community learning is to support continuous learning, within and across specialised areas of learning interests. Techniques used for community learning will also be helpful to teach community groups and individuals how to unlearn. This is crucial to supporting post-COVID-19 development, as it will be necessary to unlearn many unhealthy habits, customs and unsustainable or dangerous practices now and in the future to reduce the spread of infectious diseases and maintain higher standards of community public health.

Secondary cities, in particular, could gain significant advantages in developing their social capital, skills base and innovation climate during post-COVID-19 recovery by adopting programs which support the advancement of LCs. This could be aided by the development of community colleges (noted in section 3.1) which seek to align formal learning within the education systems with the economic and social needs of communities. The real value of LCs in developing embedded and tacit learning processes by providing a framework for the structuring of knowledge and its transfer within local communities.

9.3.7 BUILDING HEALTHY COMMUNITIES

The crisis has drawn to the attention of governments the need to work more closely with communities on improved public health and personal hygiene issues. There are two basic strategies governments have taken to the development of healthy cities and communities: mitigation and prevention. The first involves action to address immediate health concerns and risks. The focus is on the provision of basic infrastructure

and health services. The second strategy applies preventative measures to address the likelihood or severity of future health risk events.

Building healthier cities and communities require a willingness to forge the necessary connections in political, economic, and social arenas in an integrated approach. It requires a commitment at all levels of government and communities to the creation of a health-supportive environment, the achievement of a decent quality of life, meeting basic sanitation and hygiene needs, and access of all to healthcare (World Health Organization, 2020). One of the challenges of creating a healthcare supportive environment during and after the pandemic will be the focus on mental help. Depression, anxiety, suicide and domestic violence have all risen because of COVID-19, with the effects greatest on urban communities. Local governments and communities themselves need to develop strategies and other actions to address these problems and dangers well after the threats of the COVID virus have passed.

9.4 Conclusion

Lockdowns, social distancing and restricting interactions between people have had an enormous psychological and economic impact on cities and their communities. People feel increasingly anxious, nervous, tired and uncertain about the future, especially those living in urban communities. A lack of confidence pervades local communities in all COVID-19 affected countries. Rebuilding confidence in local communities is an important step to recovery efforts. It will require substantial support from governments and institutions and leadership from people living or working in local urban communities.

Secondary cities in both developing and some post-industrial economies face more significant challenges in rebuilding and creating smarter cities and communities, compared to metropolitan regions. They tend to receive significantly less per capita share allocation of funds for local government expenditure, infrastructure, health and education services and have weaker governments. All of these factors work against secondary cities being able to mobilise to Build Back Better and create stronger and smarter local communities.

Local communities in secondary cities have little choice but to become more self-sufficient and

learn to do more with less in public resources as the crisis dissipates. There is much that local communities in secondary cities can do on their own to restore and rebuild economic and social capital and capacity in order to return towards some semblance of their former state of economic prosperity and wellbeing. However, conditions will never be exactly the same as before – too much has changed.

This chapter has sought to identify opportunities and measures for local communities in developing and post-industrial economies to become more self-organising and self-sufficient in their

response to post-COVID-19 recovery and future development. These measures call for strong local government and community leadership, to be bold and have a willingness to take risks, and for community interest groups to become more collaborative in their efforts in rebuilding local communities. COVID-19 is tragic: but it does provide a unique opportunity for interest groups to come together, regroup and become more self-reliant and self-sufficient and to restore prosperity and wellbeing to local communities in secondary cities. It is up to local governments in these cities to allow and encourage them to do that.

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The background of the page is a photograph of a market stall. On the left, there are stacks of produce, including green and yellow bell peppers. In the center, a person wearing a white t-shirt is visible, though their face is not clearly shown. The overall scene is brightly lit, suggesting an outdoor market environment.

10

SYNTHESISING THE KNOWLEDGE & IMPLEMENTING THE CHANGE

BRIAN H ROBERTS, JOSHUA DRAKE

This book comprises a collection of vignettes outlining ideas and arguments about how secondary and intermediate cities can recover from the impacts of COVID-19 and adopt a pathway towards more sustainable and regenerative development. The structure of the book has allowed for explorations of nine key sub-themes to the recovery, based on the evidence and opinions of experts in each field.

Despite the immense challenges, there is room for optimism and perhaps a view that communities and governments have recognised the benefits of reduced air pollution, reduction of emissions of pollutants and waste, revitalisation of natural assets, increased solidarity among communities, transboundary collaboration among institutions, and localisation of food and energy production. They have also experienced the value of global access to digital services and communications and the importance of multilevel governance in responding to crisis (ICLEI, 2020). There have also been plenty of examples of progressive measures used by local and regional governments, including the quick shifts of administrations into crisis management mode, investing in public services such as public transport and electric and non-motorised mobility, the digitalisation of services and rolling out solidarity programs.



On this basis, there is perhaps a chance that the change brought about by COVID-19 can be leveraged, and that the recovery process can accelerate the positive and progressive transformations of human development that are needed. These transformations are towards a more equitable, renewable, fairer model of development and prosperity that works for all, including those cities, regions or people who are vulnerable and marginalised. The challenge should be to restore economic activity without simply restoring old patterns of environmental degradation and inequality.

10.1 Synthesising the knowledge

The following represents a summary of the arguments and ideas outlined in each chapter of this book.

Broadly speaking, three key principles should guide the recovery: rehabilitative development, sustainable development and regenerative development. Rehabilitative development involves efforts to salvage and restore damaged physical, economic, governance, and social

systems and assets needed to support the normal functions of cities and societies. Sustainable development involves actions to better orient actions towards meeting human development goals (such as the SDGs), while simultaneously sustaining the ability of natural systems to provide the resources and ecosystem services upon which the economy, culture and society depend. Regenerative development refers to the establishment of future systems of development that have a greater ability to respond and recover from shocks, which can be accomplished in part by using the information learned from the pandemic.

A reassessment of urban strategy and the common assumptions of urban growth models is necessary to rebalance the current “big city bias”.

The value of agglomeration economies may be dwindling, given the reduced capacity of large cities to meaningfully compensate or protect vulnerable populations from the negative consequences of living close together. Small and intermediate urban centres can be seen as platforms for a wide spectrum of interventions necessary for more resilient cities and the achievement of regional stability and security within national economies. A focus on small and intermediate urban centres would imply stronger, potentially more sustainable linkages between the urban and rural (agricultural) sectors. National and local governments can achieve this through their economic and spatial planning efforts to allow secondary cities to match local infrastructure and services to the future skills and capabilities needed from small and medium-sized businesses and leading national and international firms and industries.

Secondary cities can address their local economic recovery through a four-step framework, with an emphasis on fostering equitable economic growth (EEG). This begins with “triage”, a diagnostic exercise of local and national government public officials, business and community leaders to assess the extent of damage, what parts of the economy are most affected and vulnerable, and which factors need varying levels of attention to restore the economy back to health and a basic level of efficiency. The second phase of recovery involves formulating strategies for rehabilitation and adaptation in local economies to restore things to the way they were. Notably, this includes rehabilitation of public infrastructure and public services. Once a local economy is sufficiently rehabilitated and

stable, the third phase requires reengineering to set out a road map and pathways for a new model of sustainable long-term economic development. This should involve for example more legitimate recognition of the role of the informal sector and investing in sectors and skills that leverage local strengths. The final phase is the “transformation” itself: local economies are moving beyond COVID-19 recovery and are able to leverage the changes of the first three stages to create positive transformations (i.e., moving beyond planning, design, and financing to the construction of the assets and new economic and social infrastructure). These transformations, for instance, can be in more viable social protection systems, more legitimate recognition of the informal economy, more participatory approaches and LED, enhanced access to public goods and services, greater engagement of the urban poor in civil society to ensure that growth is equitable, and more smart cities approaches. Throughout all stages, we advocate a strong emphasis on strengthening access to public goods and services for the urban poor. This builds on the theory of change and programmatic work of the Joint Work Programme for Equitable Economic Growth in Cities (JWP-EEG), which demonstrated that fostering equitable access to public goods is the optimal pathway to achieving equitable economic growth – something which was true before COVID-19 and remains even more important now (Cities Alliance, 2020).

Diverse types of hard and soft infrastructure will require enhancement and support to boost the recovery of secondary cities.

The advancement of knowledge and technologies has created new fields of smart infrastructure that create synergies resulting in “transformational infrastructure” – that is, hybrid hard and soft infrastructure that value-adds and enhances the development and diversity of economies. This is crucial to attracting new knowledge and technology-based businesses and jobs to secondary cities in these regions, such as carbon fibre, hydrogen, precious metals, advanced materials, water, and energy applications — including local energy networks.

Governments, local businesses and communities will need operational resilience to be able deliver the infrastructure, services, resources and enabling environment to support post COVID-19 recovery. COVID-19 has created a series of institutional challenges and placed greater demands on systems of governance,

creating more mistakes and system breakdowns. Local authorities can instigate organisational reforms and should look to improve customer and community engagement, the use of technology, financial resilience, and their role in public health. Secondary cities should adopt models of collaborative governance to share and leverage resources and for decision making, taking into consideration wider interests.

For transport and logistics networks, a new approach is needed which places greater emphasis on localised supply chains and networks, “circular economy principles” and more inclusive and regional trade regimes.

Focusing on regional, subnational or city-level logistics networks will offer the potential to capture income and employment gains and address economic exclusion caused by a lack of access to public goods and services in secondary cities. Relatedly, circular economy principles should be employed to develop cities based on optimising energy and resource utilisation and viewing cities as “systems of systems”. These approaches offer greater resilience relative to more large-scale centralised logistics systems, and they simultaneously address both COVID-19 recovery and climate change risks. In addition, there is a need to control and regulate trade to ensure its inclusivity, to bring more traders into safe and secure environments, and not push these vital traders into further vulnerable positions. As part of this, transport and logistics systems need to be more accessible to the informal sector, where the majority of traders operate to provide essential goods to consumers and producers.

Financing the recovery will involve deepening the processes of decentralisation and strengthening the fiscal capacities of local authorities. National and local governments should consider utilising four specific policy options – in combination with traditional financing schemes – to help meet the infrastructure development needs: (i) Construct a sound legal system and fiscal devolution framework, as this forms the foundation of a solid financial structure. (ii) Establish strong intergovernmental relations to support fiscal decentralisation initiatives. Decentralised fiscal autonomy will allow cities to construct transparent municipal financial management systems, such as open budgeting and expenditure information sharing, in their COVID-19 recovery. (iii) Consider how progress in fiscal autonomy can be measured (i.e., using

metrics should indicate the degree to which local governments are becoming more financially autonomous). (iv) Look to inspiring models for “best fit” practices in financing infrastructure and utility needs, for example in leveraging private finance through innovative mechanisms, such as blended finance or pool financing.

Secondary cities can enhance their resilience to future shocks, pandemics and disasters by investing in preparedness, developing institutional capacity, and building more resilient infrastructure. Emergency plans must be developed and updated, with a focus on the most vulnerable (e.g., female-headed households, children, the elderly, the disabled, refugees and migrants, informal sector workers) and geographic areas (e.g., low-income neighbourhoods, disaster-prone areas). Cities should mobilise and stock resources, improve coordination and communications mechanisms, as well as develop emergency monitoring and evaluation systems.

The importance of restoring social capital in cities must be recognised in order to build smarter, more equitable and inclusive communities. To achieve this, secondary cities can begin by undertaking social capital audits to assess “social capital stock” – in other words, to provide information and measurements linked to elements of trust, reciprocity and mutuality, social networks, shared norms of behaviour, and sense of commitment and belonging within communities. Other advisable actions to undertake include mobilising cadres, introducing community charters (i.e., rights-based documents which set out the things and assets needed in a local area that residents agree are fundamentally important to the health and safety needs of their community), developing social safety networks and learning communities (i.e., by connecting people who can play a role in convening change across various community interests).

In summary, this chapter has synthesised some of the key messages outlined in the chapters of this book. Managing change involving the transformation of cities and urban systems to support post-COVID-19 recovery efforts will be difficult. It will require new and innovative approaches to recovery efforts and changes to the planning and approaches to retrofitting and development of cities. There is already an extensive body of literature and other material available to guide and support post-COVID-19 recovery efforts in cities, but this is primarily



focused on large cities. This book has sought to add to that knowledge, however, with a specific focus on secondary cities.

10.2 What Needs to Change

The following are the crucial areas of change that are considered necessary to support post-COVID recovery efforts and the future sustainable development of secondary cities.

Model of Economic Development: *Sharing economy, value-added trade, localization, glocalization, self-sufficiency, clusters and networks of cities, new subnational markets, re-empower local communities and economies (Farlane, 2020); facilitate and optimise local trade, capture and retain local value; do more with what we have; ensure that stimulus benefits filter down to poor local communities.*

Model for Planning and Urban Development: *Integrated planning, budgeting, reporting productive capacity of assets, serviced land and housing.*

Model for Social Development: *Equity, inclusiveness, self-organizing support systems, community development.*

Model for Environmental Sustainability: *Environmental and waste management, restoration of environmental services, catchment management.*

Model of Urban Governance and Management: *Collaborative governance, partnerships, urban management systems, transparency, accountability, urban finance, e-governance and blockchains.*

Model of Logistics Management: *Intermodal facilities, co-location of services, co-sharing for freight and passenger vehicle use, smart systems.*

Behavioural Change: *health and hygiene practices, waste management and sanitation, preventative medicine, multi-culturalism and cultural sensitivity, respect for public goods.*

Recognition of Their Role

The role and importance of secondary cities in national supply chains and production systems trade and other forms of exchange have never been properly recognised. This must change by giving greater focus in national post-COVID-19 recovery efforts to supporting the development and better management of secondary cities.

Secondary Cities Becoming Change Agents

Secondary cities can play a vital role as agents for change – especially in management – in supporting national, regional and local post-COVID-19 recovery efforts. This could also include mentoring of smaller cities, towns and rural hinterlands in close proximity to manage change.

10.3 How do Secondary Cities Make the Change?

Making change in secondary cities and regions will require a collaborative effort to bring together external and local agents of change in a concerted effort. But the success in making change depends heavily on the quality and workability of the relationship between organizations, institutions, businesses and community, as well as setting out a clear and acceptable community agenda for change. Managing change requires local governments, institutions, organizations and communities of interest groups to learn the skills

and competencies to stimulate, facilitate, and coordinate the change effort.

The following six mechanisms should be considered in implementing the change.

Explaining the Need for Change: *Leaders need to prepare for change explaining to communities what changes are necessary. Without community support for change it will be resisted and it will not happen. This will lead to cities lagging behind the leaders and playing catch up.*

Preparing the Governments, Institutions, Business and Communities for Change: *Community engagement, education, consultation and discussion, community understanding, willingness and ability to change.*

Developing an Agenda for Change: *Key agenda issues for change, change agents time frames, opportunities, risks and benefits and costs.*

Plan for Change Management: *Overall directions of change; sector, institutional, business and community interest group plans and directions for change.*

Building the Platform for Change: *Priorities, governance arrangements, resourcing the changes, change agent leaders, managing laggards.*

Monitoring and Evaluation Change: *Benchmarks and performance indicators, adaptive responses.*

10.4 Embracing Opportunities

Bringing about change, especially economic and social change in communities, is often challenging. It will be resisted, disruptive, complex, and it will require substantial effort; however, change also opens up opportunities for new discoveries, creativity, and improvements, and it can introduce more sustainable ways to do things. It is important that the approach to post-COVID-19 recovery in secondary cities not only wins community support for change, but builds the platforms and support mechanisms to realise opportunities that result from change. Change has the potential to make secondary cities more creative, innovative and entrepreneurial places for economic, social and cultural development.

For secondary cities to realise new opportunities for sustainable and regenerative development that will emerge out of COVID-19, they need to identify and embrace the following:

New-Norm Economy Activities: *Identifying the new norm localised economy activities such as sustainable energy, 3 Rs, restoration of environmental services; health and education; ITC based manufacturing and logistics.*

Collaborative Governance: *Institutional organizational reform and governance; sharing and pooling resources, community partnerships and self-organizing systems, devolution of functions to local communities.*

Sustainable Urban Development: *Energy and water efficient housing, industries and Public buildings; planned urban expansion and redevelopment; Smart Infrastructure and integrated land use and transport systems.*

Urban Management: *Local government, institutional and community planning and management of public assets, infrastructure, roads and urban services; facilities, parks and gardens; conservation areas and heritage buildings; protection of encroachment on utility corridors and development control.*

Community Education and Development: *Improving literacy, numeracy, knowledge networks, skills and competencies to support neighbour employment, trade and community services.*

Mobilizing and Empowering the Poor: *Support for developing communities of interest, networks, microfinance and information for the urban poor to enhance connectivity, micro-business development and strong and better-organized community leadership to support business, marginalised and vulnerable groups.*

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