Sustainable, healthy, learning cities and neighbourhoods[3]

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■ Abstract

This chapter presents the findings of the work of the Centre for Sustainable, Healthy and Learning Cities and Neighbourhoods (SHLC) that is funded via UK Research and Innovation as part of the UK Government's Global Challenges Research Fund (GCRF). The chapter is based on case study research conducted in two cities in each of the seven countries in the Global South.

The cities are Cape Town and Johannesburg (South Africa), Dar es Salaam and Dodoma (Tanzania), Kigali and Huye (Rwanda), Delhi and Madurai (India), Dhaka and Khulna (Bangladesh), Chongqing and Datong (China) and Manila and Batangas (Philippines). Based on an analysis of data drawn from planning and urban development policy documents in the respective countries over the last two decades, the case studies identify key ideas and policies that have shaped the delivery of public services, especially education and health care. The chapter focusses on four themes: urban inequalities, urban planning policies, understanding health and well-being and learning cities.

■ Introduction

This chapter presents the findings of research conducted by the Centre for Sustainable, Healthy and Learning Cities and Neighbourhoods (SHLC) which was based on case studies conducted in 14 cities. The cities are all in countries that form part of the Global South, which broadly refers to the regions of Latin America, Asia, Africa and Oceania that are outside Europe and North America and are mostly low or middle-income countries. The case studies were prepared by SHLC collaborators, that is Abrahams et al. (2018), Kundu, Pandey and Sharma (2018), Moshi, Msuya and Todd (2018), Delos Reyes et al. (2018), Shilpi Roy et al. (2018) and Jaganyi et al. (2018) and covered two cities in each of seven countries as indicated in Table 2.1.

This chapter provides some initial analysis of the case studies of each of the cities in Table 2.1. These case studies were based on extensive analysis of existing data (see Delos Reyes et al. 2018) drawn from 'planning and urban development policy documents for the last two decades, identifying the key ideas and policies that have shaped the delivery of public services', especially education and health care. The findings of the case studies are divided into four overarching themes: urban inequalities, urban planning policies, understanding health and well-being, and learning cities.

TABLE 2.1: Countries and case study cities.

Region	Country	Case study cities
Africa	South Africa	• Cape Town (parliament seat capital) • Johannesburg (major city region)
	Tanzania	• Dar Es Salaam (national city and financial centre) • Dodoma (regional city)
	Rwanda	• Kigali (capital) • Huye (regional city)
South Asia	India	• Delhi (capital) • Madurai (regional city)
	Bangladesh	• Dhaka (capital) • Khulna (major regional centre)
East Asia	China	• Chongqing (national city in the west) • Datong (regional, inland and north)
	Philippines	• Manila (capital) • Batangas (regional)

The University of Glasgow led the collaboration with nine research partners, and the project aimed at strengthening the 'capacity to address urban, health and education challenges in neighbourhoods across fast-growing cities in Africa and Asia' (Delos Reyes et al. 2018). The other collaborators are the Human Sciences Research Council, Ifakara Health Institute, Khulna University, Nankai University, National Institute of Urban Affairs, University of Rwanda, University of the Philippines Diliman and the University of the Witwatersrand.

■ Urban inequalities in the global south

Inequalities pose major contemporary development challenges. This is made explicit in the United Nations (UN 2015) SDG 10 that seeks to 'reduce inequalities within and among countries'. Inequality in the context of the SDGs relates to opportunity, income and power, and is experienced disproportionally by certain groups in society by virtue of their individual and situational characteristics. The nature of inequalities differs from one context to another. For instance, one region may have inequality in access to the labour market, whereas in other regions, inequalities may be more evident in housing markets

and access to services such as transportation, education or health. Such inequalities are often interlinked, and individuals may also experience social exclusion for multiple reasons and from multiple forms of opportunity. Furthermore, particular groups may experience the effects of the exclusion that inequitable access brings by virtue of their race, ethnicity, gender, class, caste and disability, among many other characteristics that they possess. Many individuals carry multiple characteristics that make them more likely to be socially excluded and experience inequitable opportunity (Tefera, Powers & Fischman 2018).

Inequalities are traditionally measured in economic terms such as income and consumption expenditure, which is the focus of this section. However, inequalities are also experienced, and can be assessed, through the lenses of access to education, and health and well-being, which are the foci of later sections in this chapter. We therefore seek to reflect the multiple factors that impinge upon inequality and how this shapes differences between cities, and within them at neighbourhood level. This is a perspective which, as Tammaru et al. (2016) argue, received relatively little attention in urban literature.

◼ Inequality and its correlates in case study cities

Income or consumption expenditure inequality as represented by the Gini coefficient reveals the existence of significant inequality across the 14 case study cities (see Table 2.2), where city population size varies between 0.23 million and 26.7 million, with the exception of Huye, a small town in Rwanda with an urban population of less than 50 000. The average area of the cities is 370 km^2, with the smallest city size being 15 km^2 and the largest 1212 km^2. The average Gini coefficient is 0.41 and varies between 0.31 and 0.63. These values suggest that the magnitude of inequality doubles between the most (Dhaka) and the least

TABLE 2.2: Descriptive statistics of the case study cities, *c.* 2015.

Variable	Observations	Mean	s.d.	Minimum	Maximum
Population (million)	13	7.59	9.66	0.23	26.70
Area (km²)	13	369.44	405.69	15.32	1212.73
Density (person/km²)	14	17027.81	8820.96	565.00	33663.10
Pop. growth rate (annual)	13	2.55	1.63	-1.48	5.58
Poverty rate %	14	12.25	13.66	0.96	46.60
Unemployment rate %	14	11.50	8.61	2.90	28.20
Gini coefficient	14	0.41	0.10	0.31	0.63
HDI	14	0.67	0.09	0.48	0.76
GDP per capita ($)	13	6241.95	3650.50	1121.48	12697.15

Source: Florczyk et al. (2019); see also https://globaldatalab.org.
GDP, gross domestic product; HDI, Human Development Index.

(Johannesburg) equitable cities. Similarly, the case study cities show significant variations in poverty rate, unemployment rate, Human Development Index (HDI) and GDP per capita.

Table 2.3 presents correlation coefficients of selected socio-economic variables among the case study cities (*n* = 14). The direction of all coefficients is as expected. Inequality is positively correlated with the unemployment rate, city size and population growth rate, while negatively correlated with density, population size, poverty rate and the HDI. However, only the negative association between inequality and the unemployment rate is statistically significant. As expected, the HDI score increases with density and GDP, and decreases with the incidence of poverty.

Figure 2.1 presents the relationship between inequality as expressed by the Gini coefficient and unemployment rate. It reveals that higher unemployment is associated with higher income or consumption expenditure inequality. Johannesburg, Cape Town and Kigali have the highest share of unemployment and are also the most unequal cities in terms of income and consumption expenditure. However, Dar es Salaam has similar levels of unemployment but is a reasonably equal city. There are

TABLE 2.3: Correlation coefficients of socio-economic variables of the case study cities, c. 2015.

Socio-economic variables	Population	Built area	Density	Population growth rate	Poverty	Unemployment	Gini	HDI
Population size	1							
Built size	0.87***	1						
Density	0.61**	0.24	1					
Population growth rate	0.21	0.31	–0.15	1				
Poverty rate	–0.21	–0.28	–0.37	–0.46	1			
Unemployment rate	–0.17	0.13	–0.13	0.31	–0.19	1		
Gini coefficient	–0.23	0.13	–0.42	0.12	–0.08	0.82***	1	
HDI	0.38	0.41	0.56**	0.27	–0.82***	0.12	–0.01	1
GDP per capita	0.36	0.55*	0.04	0.20	–0.67**	–0.05	0.16	0.73***

Source: Florczyk et al. (2019); see also https://globaldatalab.org.
Note: Number of observations: 14; *, $p < 0.1$; **, $p < 0.05$; ***, $p < 0.01$.
GDP, gross domestic product; Gini, Gini coefficient; HDI, Human Development Index.
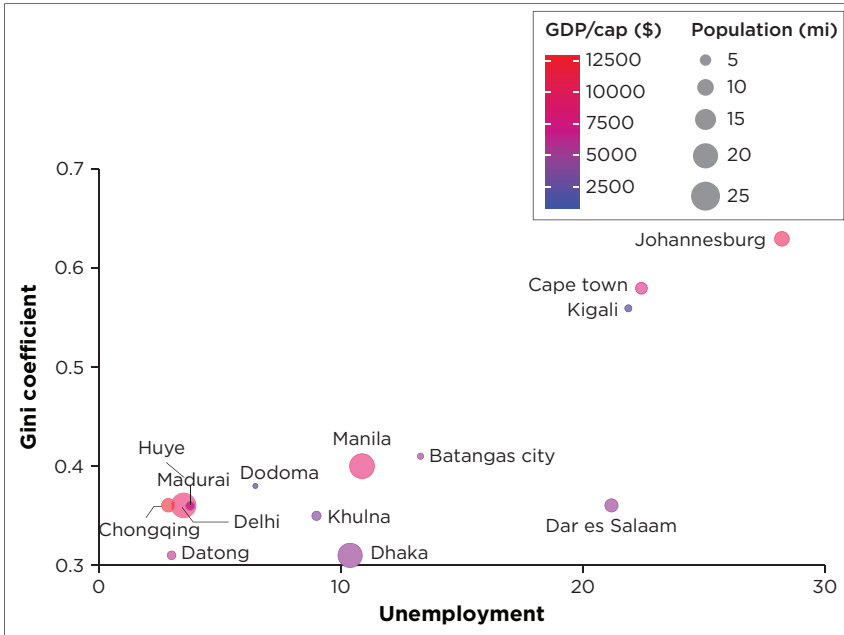
Source: Florczyk et al. (2019); most data come from https://globaldatalab.org.

FIGURE 2.1: Inequality versus unemployment in cities, *c*. 2015.

mixed relationships between inequality and population size or economic level. For instance, a relatively smaller city may have high inequality (e.g. Kigali), and a city with a low economic base may have less inequality (e.g. Dhaka).

◾ Inequalities beyond income or consumption expenditure

Inequalities exist in multiple forms from one case study city to another. Such inequalities are notably highest in African cities, particularly South African cities (see Figure 2.1). The content of SHLC city reports, together with other studies, suggest four major forms of inequality beyond income or consumption expenditure:

1. **Informal built environment –** Urban inequalities are clearly manifest in the built environment, particularly in the type of dwelling units and access to basic urban services, such as water and sanitation. In the Global South, a large share of the population lives in some form of informal housing. For example, in Kigali 80%, and in Delhi more than 50% of households live in informal units (Ahmad et al. 2013). Some of the built environments of the case study cities are composed largely of slums – arguably the worst form of informal housing. For instance, over one-third of the population of Dhaka and over a quarter of those in Manila and Madurai live in slums. 'Informal settlements are sites of struggle because of the large population, competition for resources and inadequate provision of services. Service delivery protests are a common occurrence' (Abrahams et al. 2018:71).

2. **Informal employment –** One of the reasons for the poor quality of the built environment is the poor socio-economic base of cities in the Global South. Many cities have high unemployment rates, as high as 28.2% in Johannesburg and 22.4% in Cape Town, which contributes to economic inequality. At least one member of Tanzania's 4.3 million households out of a total of 10.2 million engages in some informal sector activities, which accounts for the second-highest contribution to employment (Moshi et al. 2018). Similarly, one-fifth of employment in Johannesburg is in the informal sector, compared to the overall 10% of the South African total workforce that is in the informal sector (Abrahams et al. 2018). Workers in the informal sector do not enjoy the protection of labour legislation, other forms of social protection or benefits.

3. **Access to education and health care facilities –** Access to education and health care facilities plays a critical role in bridging inequity. In many parts of the world, there is at least basic access to such services irrespective of socio-economic status, and as a result, there are some prospects for reducing intergenerational inequality. However, considerable inequalities exist in access to health and education (at all levels) that is spatially determined, and this is particularly prominent in cities

in the Global South. The spatial component of exclusion is, of course, layered with many other factors. The India case study, for example, shows how caste dynamics limits access to education (Kundu et al. 2018).

4. **Absence of inclusive urban governance –** Inclusive (or good) governance is one of the most important factors for bridging inequality in the cities of the Global South (Baffoe, Ahmad & Bhandari 2020; Desai & Potter 2013:276). Given the limit on resources that cascade down to city administrations, it is usually the higher levels of government – national or provincial – that provide a more significant direct and indirect impact on addressing urban inequality. The Nobel Prize winner Joseph Stiglitz (2015) argues that inequality exists because of political choices that can be addressed through appropriate policies and programmes. Doyle and Stiglitz (2014) also provide compelling arguments for the elimination of inequalities contextualised within the Millennium Development Goals and SDGs, using economic, political and social arguments.

In summary, preliminary findings suggest that national-level inequalities are also reflected in cities. This is particularly the case in South Africa, as a consequence of structures developed during the apartheid era. Within the Global South, there is a wide variation in income or consumption expenditure inequality, which correlates highly with the levels of unemployment. Moreover, inequalities exist in multiple forms/sectors: built environment, economy, education and health care facilities and governance. Finally, we note that we cannot focus on one dimension of inequality to the exclusion of others, since each factor is likely to be both a cause and an effect. This has been noted by many researchers, including Doyle and Stiglitz (2014):

> [*H*]ealth inequality is both a cause and consequence of income inequality. Inequalities in education are a primary determinant of inequalities in income and opportunity. In turn, as we have emphasised, when there are distinct social patterns of these multiple inequalities (for example, those associated with race or ethnicity), the consequences for society (including social instability) are increased. (n.p.)

■ Urban planning policies

Across the globe, national governments use urban planning as a framework to transform visions into realities (Urban Times 2013). Urban planning policy is critical for reasserting urban space and territoriality, and also for providing direction and a course of action for urban development (United Nations Habitat III 2017). It especially provides an overarching integrated framework to tackle pressing urban challenges, including slum prevention and regularisation, access to land, urban mobility, basic services and infrastructure.

This section reviews urban planning policies of the six targeted countries: South Africa, Tanzania, Rwanda, India, Bangladesh and the Philippines. It adopts a comparative approach to summarise the major planning policy elements across the countries. Table 2.4 summarises the urban planning elements across the countries and highlights the planning strategies and systems, context, planning time scale and responsible bodies in each country.

■ Planning context and colonialism

Urban informality forms a major challenge within which planning policies in Asia and Africa are formulated. Spatial planning aims to address the ills of rapid urbanisation (fuelled largely by rural–urban migration), including controlling rising informal settlements, poverty and spatial fragmentation (Baffoe 2020). In the Philippines, for instance, urban planning proffers solutions to protect and enhance the rights of all citizens by reducing social, economic and political inequalities (Delos Reyes et al. 2018). In post-apartheid South Africa, planning and development strategies have focused on reducing spatial inequalities through the provision of basic services and infrastructure, job creation, governance and environmental protection (City of Johannesburg 2017). In India, planning aims to invest in large-scale urban infrastructure for sustainable economic growth and poverty reduction (Kundu et al. 2018). Similarly, in Bangladesh, planning

TABLE 2.4: Major urban planning policies across SHLC countries.

Country	Planning strategy	Timeframe	Context	Planning system	National spatial planning policy	National urban planning policy	Planning body
Tanzania	Master plans	Various (5 years, 8 years)	Ujamaa, urbanisation, informality	Decentralised but not autonomous	Strategic urban development (ended master planning era)	None	Ministry of Land, Housing and Human Settlement
Rwanda	Master plans	Unspecified	Genocide, rising informality	Decentralised but not autonomous	Kigali City Master Plan 2013, National Land Use and Master Plan 2011	National Urbanization Policy 2015	Ministry of Infrastructure
South Africa	Transit-oriented development, service delivery	5 years (4 integrated development plans since 2001)	Apartheid, spatial fragmentation, inequalities	Centralised/city level	Integrated development plan, spatial development framework	Integrated urban development framework	Department of Cooperative Governance and Traditional Affairs, city authorities
Bangladesh	Master plans	5-year plans, short-term plans, 20-year plans (long-term plans)	1971 Partition, urbanisation, poverty	Hierarchical multi-sectoral (decentralised but with little autonomy)	National Urban Sector Policy 2011	None	Planning Commission
Philippines	Codes and Acts	Unspecified	Urbanisation, informality, poverty	Hybrid top-down and bottom-up	National framework for physical development	None	Housing and Urban Development Coordinating Council
India	Short-term sector-specific development strategies	5-year Plans	Urbanisation, poverty, informality	Hybrid top-down and bottom-up (shared powers)	Various	National Urban Policy 2018	Ministry of Urban Affairs

Source: Baffoe (2020).

SHLC, sustainable, healthy and learning cities and neighbourhoods.

targets improvement in the living conditions of urban dwellers through physical development, protection of public health, education provision and poverty reduction (Roy et al. 2018). Likewise, in Tanzania and Rwanda, planning focuses on spatial transformation and regularisation as a strategy to manage informal settlements while boosting economic development. Therefore, across all the countries, rising informal settlements are a major challenge, and there are conscious planning efforts geared towards their eradication.

Meanwhile, a common determinant across all the countries is the influence of former 'colonial masters'. In almost all the countries, these colonial masters (Britain, Germany, Belgium and the Netherlands) dictated physical development, and their legacies have shaped post-colonial planning. For instance, they determined physical planning in Tanzania, Rwanda and South Africa, using land-use zoning and racial and residential segregation to determine what to build and in what place.

■ Planning approach

Across all the countries in the case study, planning tends to be reactive rather than proactive. Policies are formulated to tackle specific problems (e.g. slum upgrading, road construction and street lighting) without adequate future projections. This explains why spatial planning has achieved little success in these countries. Lack of problem diagnosis and recourse to long-term spatial plans are counter-productive and are non-starters in these countries. In post-colonial countries, for instance, planning aims to redress challenges resulting from the 1994 genocide (Rwanda), the Ujaama 'villagisation' programme that collectivised production (Tanzania) and apartheid (South Africa). The situation is a little different in the Asian countries: deteriorating economies, crime and social justice issues, rising informality, as well as poor infrastructure underscore the need for short-term planning policies in the Philippines, Bangladesh and India.

■ Planning systems and policies

Planning systems and policies differ somewhat among the six countries in the case study. In Tanzania, national guidelines on land management and planning are followed, usually in the form of master plans. Unlike Tanzania, planning in the Philippines is under the remit of national and subnational governments (Delos Reyes et al. 2018). In Rwanda, urban planning is in its infancy – a consequence of the genocide in 1994. However, in planning post-genocide Kigali, the government of Rwanda (unlike those in Tanzania and the Philippines) has embraced urbanisation as a strategy to drive modernisation and economic development (Ministry of Infrastructure 2015). The case in Bangladesh is that of hierarchical multi-sectoral development plans. Here the regulatory frameworks at the national and local levels shape urban planning and development (Roy et al. 2018). In federal India, the power to formulate policies and programmes is shared between the state and the central government. While state governments formulate their own plans, the central government provides the necessary guidelines and advisory services (Kundu et al. 2018). In South Africa, urban planning is mainly the responsibility of municipalities, within the broader context of national government policies.

■ Understanding health and well-being

As articulated in the UN's SDG 11, understanding and addressing urban health inequalities is a basic prerequisite for making cities inclusive, safe, resilient and sustainable. Health is multidimensional and is an outcome that is influenced by a plethora of situations. The health of the individual is directly or indirectly determined by the collective set of circumstances, where they are born, grow up, work and live, also known as the social determinants of health (Marmot 2005). With rapid urbanisation (mostly in developing countries), inequalities in health outcomes are becoming even more pronounced. Urban health is a complex issue that is shaped

by both multi-sectoral and multilevel determinants, which are mostly evident in proximal neighbourhoods (Harpham 2009). This complexity is the result of a range of environmental (both social and physical) and service factors that come into play in urban areas. In rapidly urbanising areas, these determinants are either not properly in place or are in their preliminary stages, hence not providing protective benefits (Wang et al. 2018).

■ Urban neighbourhood and health

Cummins et al. (2007:1835) argue that there exists a 'mutually reinforcing and reciprocal relationship between people and place'. Although the variation in the health and well-being of the people is mostly explained by individual characteristics, a significant contribution is made by contextual factors connected to the nature of the physical and natural environment (Pickett & Pearl 2001). Apart from the individual compositional factors (demographic, behavioural and psycho-social), contextual factors (such as social, physical and institutional environments) also determine the health outcomes of people (Bhandari et al. 2017). These factors not only make direct contributions, but the health of places is also the result of the interaction of people with their wider environment (Cummins et al. 2007).

A growing body of research highlights the close association between health and urbanisation (Aliyu & Amadu 2017; Hou et al. 2019; Leon 2008). The direction of this association is skewed, however, suggesting both negative and positive consequences of urbanisation on individual health and well-being. When urbanisation is planned, it tends to produce health benefits, while negative outcomes are highly likely when the city sprawls without a plan (Aliyu & Amadu 2017).

Evidence from low and middle-income countries suggests that most of their cities are hubs of economic growth and have helped lift millions out of poverty (Zhang 2016). Better economic status often leads to better health, which indicates that there are

health benefits in the move towards urbanisation in developing countries. However, not all sections of their populations benefit, and while cities in Africa and Asia are in the lead as regards rapid urbanisation, many are also far behind (compared to more developed countries) in devising strategies to address the high level of inequalities in population health and its wider determinants (Cobbinah, Erdiaw-Kwasie & Amoateng 2015).

■ Policy landscape shaping health and well-being

Governments increasingly recognise health as a key aspect in their development policies. Reports from Bangladesh have highlighted the fact that their constitution acknowledges 'adequate health care' as the basic right of every citizen. Reports from each country are mostly focused on exploring the role of policies in delivering health care services in urban areas. The role of global initiatives such as the Alma Ata Declaration on primary health care of 1978; the Bamako Initiative of 1988 concerning drug pricing; the Millennium Development Goals 4, 5 and 6 and, most recently, the SDGs (United Nations General Assembly 2015) are crucial in shaping the health policies of cities. Over and above these global initiatives are the national policies of each country.

Table 2.5 summarises the existing health policies that guide health care delivery in each of the countries in our study. It should, however, be noted that health care delivery is not the same thing as individual or even population health. As highlighted in the previous section, individual and population health is an outcome of the continuous interaction of multiple determinants, of which health care is only one.

■ Financing mechanisms

The total expenditure on health as a percentage of GDP traverses a wide range in our case study countries, as compared to China and the United Kingdom. Not all country reports were explicit about the situation around health financing.

TABLE 2.5: Current policies that shape health care delivery.

Country	National policy	Urban health policies (if any)
Bangladesh	• National Health Policy 2011	Urban Sector Policy (draft) 2014
India	• National Health Policy 2017	National Urban Health Mission 2013, which was later merged with national rural health mission 2005 to launch the National Health Mission 2013
Philippines	• The Local Government Code of 1991 • The Philippine Health Agenda for 2016–2022	None
Rwanda	• Health Sector Policy 2005 • National Community Health Policy 2008 • Fourth Health Sector Strategic Plan 2018–2024	National Urbanisation Policy 2015
Tanzania	• The National Health Policy 2017	*Private Hospitals Act* of 1977 *Private Hospitals Regulation (Amendment) Act* of 1991
South Africa	• *National Health Act* 2003	None

The percentage of national budget allocated to health also varies between the countries. The Philippines has the lowest proportion (3%) compared to almost 19% in Rwanda. Tanzania and Rwanda (currently at 10%) have indicated their countries' commitment to the 2001 Abuja Declaration, where African Union members agreed to raise their health budget to a minimum of 15% of each nation's national budget. In India and South Africa, two levels of government (centre and state) allocate a certain share of their own budget to health care. When the financing is put in the context of the share of the total GDP of the country, South Africa leads the league with over 8%, followed by Rwanda and Bangladesh is at the bottom (see Figure 2.2).

Over and above the financing government provides, much of the burden of health cost is borne by individuals themselves. In most of the case study cities, private for-profit institutions are the most common form of health service providers. The private sector mostly relies on out-of-pocket expenditure, and currently
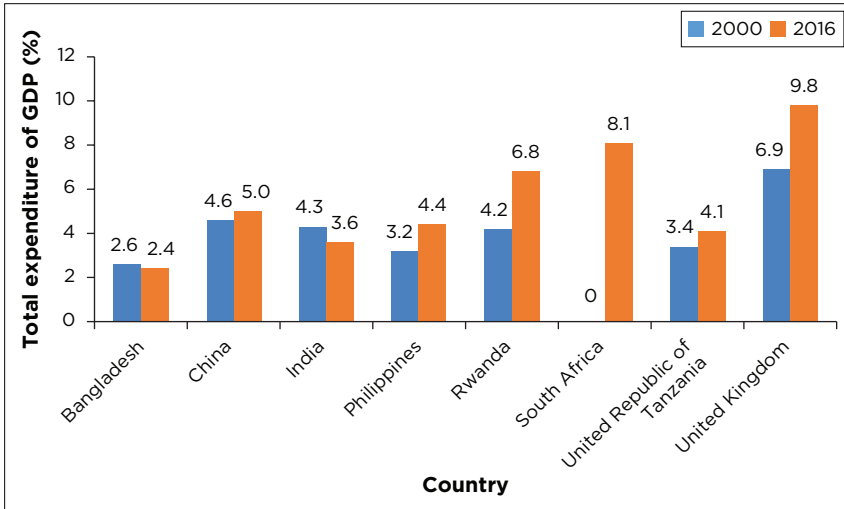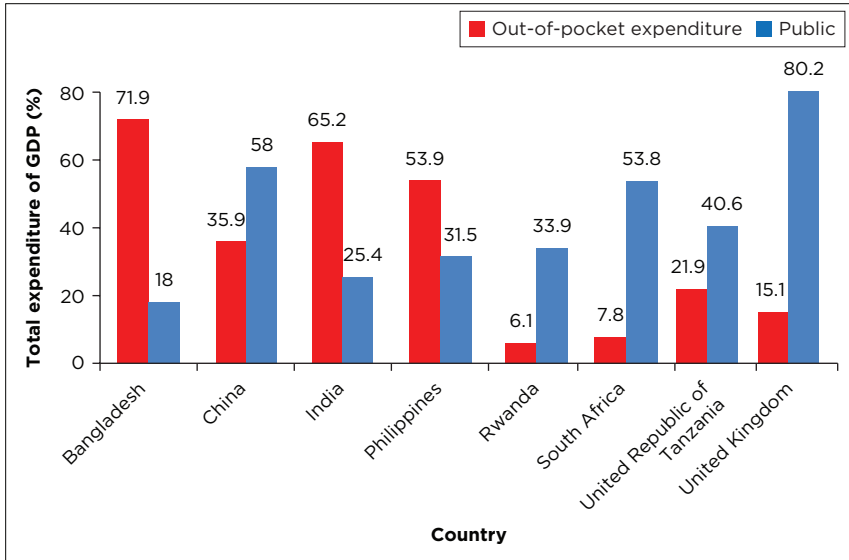
Source: WHO (2019).
GDP, gross domestic product.
FIGURE 2.2: Trend of total expenditure on health as a percentage of GDP.

this form of expenditure is significantly high in Bangladesh, India and the Philippines (see Figure 2.3). This form of financing is widely acknowledged as being a reason for increased health inequality/inequity in the cities.

◼ Service landscape

In all the case study countries, national policies define and guide the provision of health care services in urban areas. Due to the different models of governance, responsibility for the provision of health care services differs between the countries. In some countries, such as Rwanda, most urban citizens are served by public health facilities, while in most other countries private facilities are mostly the first (and only) point of contact. However, it is evident that there is a multiplicity of service providers in all case study countries, with the private sector mostly concentrated in the cities.

Source: WHO (2019).

FIGURE 2.3: Major forms of health expenditure.

As mentioned earlier, governments are increasingly recognising health as a key aspect of development policies. In the meantime, urban health is also entering the policy debate. The provision of private health care may have added the number of service providers and improved access to the services, but its socio-economic consequences are to be explored. The common observation is that the private sectors are either unregulated or are inadequately regulated.

Cities in developing countries are going through a rapid transition in health provision. The transition is taking place both in health problems (shift from infectious/communicable disease to a bigger burden of non-communicable diseases) and the health system as a whole (Elsey et al. 2019). Health-related data that address and represent these changing trends could be useful in guiding the next level of research. However, some of the key issues that need investigation are changing health care needs

(epidemiological transition) and environmental attributes (both built and natural).

■ Learning cities

The concept of 'learning cities' is a relatively recent addition to the international development agenda, albeit a concept with a long history, particularly in the Global North. The UNESCO Institute for Lifelong Learning (UIL) has in recent times taken a lead in using the concept of learning cities as a vehicle for promoting lifelong learning. UIL (2015a:9) defines a learning city as one that effectively mobilises its resources in every sector to:

- promote inclusive learning from basic to higher education
- revitalise learning in families and communities
- facilitate learning for and in the workplace
- extend the use of modern learning technologies
- enhance quality and excellence in learning
- foster a culture of learning throughout life.

UNESCO claims that learning cities offer numerous benefits, from the promotion of '[i]ndividual empowerment and social cohesion' to '[e]conomic development and cultural prosperity' and, perhaps most broadly, '[s]ustainable development' (UIL 2015a:10; also see 10–13).

UNESCO has also sought to incorporate the concept of learning cities into the SDG agenda, tying the concept to a more comprehensive list of development objectives, and stressing the central role that lifelong learning within families, communities, towns and cities can play in their realisation (UIL 2017). China is a clear leader in using the learning cities concept as a driver for policy and practice in its cities. Beijing conducted the first of UNESCO's International Learning Cities conferences in 2013, and its Municipal Office of the Leading Group for the Efforts of Building a Learning City in Beijing has formulated a number of mechanisms to evaluate the performance of the learning system (including enterprises, villages and government agencies) at the district and sub-district level.

Despite such efforts, there are at least three clear obstacles to incorporating learning cities into the sustainable development agenda in the Global South. The first centres on education outcomes (see Nesterova & Young 2020:32, 35–36). As illustrated in Table 2.6, four general trends can be identified from across the seven case study countries: improved enrolment in primary and secondary education, higher completion rates, improved literacy and greater gender equity. School enrolment is expressed in net rather than gross percentage, and gender equity is expressed in gross primary rates.

TABLE 2.6: Education outcomes by country.

Country	Enrolment	Completion	Literacy	Gender equity
Bangladesh	Primary: 51.6% (1970) – 91% (2017) Secondary: 16.5% (1976) – 63.7% (2017)	Primary: 44.6% (1976) – 67.8% (2010)	29.2% (1981) – 73.9% (2018)	0.49 (1970) – 1.07 (2018)
China	Primary: 92.8% (1987) – 89% (1997)	Primary: 100.4% (1989) – 98.3% (2009)	65.5% (1981) – 96.8% (2018)	0.73 (1974) – 1.01 (2018)
India	Primary: 61% (1971) – 92% (2013) Secondary: 61.6% (2013)	Primary: 39.5% (1971) – 94.3% (2017)	40.8% (1981) – 74.3% (2018)	0.64 (1971) – 1.15 (2017)
Philippines	Primary: 96.8% (1976) – 94% (2017) Secondary: 46.2% (1972) – 65.6% (2015)	Primary: 85.8% (1981) – 108.6% (2017)	83.3% (1980) –98.2% (2015)	1.07 (1976) – 0.96 (2017)
Rwanda	Primary: 55.1% (1973) – 95% (2018) Secondary: 35.9% (2018)	Primary: 21% (1971) – 86.5% (2018)	38.2% (1978) – 73.2% (2018)	0.77 (1971) – 0.99 (2018)
South Africa	Primary: 67.7% (1973) – 87% (2017) Secondary: 51.2% (1994) – 71.9% (2017)	Primary: 77.1% (1991) – 87.3% (2016)	76.2% (1980) – 87% (2017)	0.99 (1970) – 0.97 (2017)
Tanzania	Primary: 70.3% (1980) – 81.3% (2018) Secondary: 24% (2016) – 26.5% (2018)	Primary: 20% (1971) – 68.7% (2018)	59.1% (1988) – 77.9% (2015)	0.66 (1970) – 1.03 (2018)

Source: World Bank (n.d.); a similar table is presented in Nesterova and Young (2020:35–36).

There are, however, notable exceptions in the trend towards improved enrolment in primary and secondary education, and improvement is not linear. Primary enrolment in Tanzania increased dramatically from 49.4% in 1998 to 96.7% in 2006 before falling to 81.3% in 2018. Rwanda and the Philippines have also regressed from 2014 and 2016 respectively, though less dramatically than Tanzania. Major disparities also exist: the Philippines's primary completion rate of 108.6% in 2009 far outpaces Tanzania's of 68.7% in 2018; China's literacy rate of 96.8% in 2018 considerably exceeds Rwanda's of 73.2% in the same year and gender equity in primary education is inconsistent, with a slight overrepresentation of students who are men in South Africa and a stronger presence of students who are women in India. India and Bangladesh have similar figures for enrolment, literacy and gender equity, but diverge sharply in primary completion rates at 94.3% in 2017 and 67.8% in 2010, respectively. Financial commitments are similarly uncertain, as several countries have experienced notable reductions in total government expenditure on education as a percentage of GDP, including Rwanda, from 5.7% in 2001 to 3.1% in 2018; Tanzania, from 4.5% in 2010 to 3.4% in 2014 and India, from 4.4% in 1999 to 3.8% in 2013 (all data in the paragraph from World Bank 2018). Such trends do not suggest progress towards a point at which resources across all sectors are mobilised to offer foundation-level skills and knowledge that would provide the basis for a learning society based on lifelong learning.

The second obstacle to incorporating learning cities into the sustainable development agenda in the Global South is that data at the city and (particularly) neighbourhood level remain difficult to come by (Nesterova & Young 2020:38). This is an obvious impediment to an understanding of the role of lifelong learning in sustainable cities and neighbourhoods; our capacity to move beyond rhetoric towards systematic methods customised to local priorities and measuring progress against indicators that would determine whether a learning city is a reality. Indicators and

measurement tools do exist but need refinement (see Lido et al. 2016; Lido, Reid & Osborne 2019; Osborne & Hernandez 2020) and cultural contextualisation. Yet, the lack of reliable data remains more problematic. In the context of China, a report on efforts to create a more operable learning city index in Chinese cities is illustrative (UIL 2015b).

The third obstacle is that important questions remain around the role of institutions in the promotion of learning cities. According to UNESCO, '[s]trong political will and commitment', '[g]overnance and the participation of all stakeholders' and the '[m]obilization and utilization of resources' are all crucial (UIL 2015a:11). The UNESCO Global Network for Learning Cities has published a set of guidelines for building learning cities focusing on devising a plan, creating 'coordinated structure[s] involving all stakeholders', using 'celebratory events' to launch and support the process, ensuring accessibility, implementing monitoring and evaluation and securing funding sustainability (UIL 2015c:1).

The extent to which such descriptions match the realities of urbanisation in the Global South, and the attendant challenges that these processes present, is uncertain. Inclusive governance, high levels of equality, technocratic efficiency and financial stability are not universal, suggesting that lifelong learning at the city level will be pursued in dramatically different institutional environments defined by diverging social, economic, political, organisational, legal and historical realities – if, indeed, it is pursued at all.

■ Conclusion and recommendations

McGhie (2019), among others, refers to the declaration by the UN in 2015 on 'Transforming our world: The 2030 Agenda for Sustainable Development', and emphasises that sustainable development 'recognises that eradicating poverty in all its forms and dimensions, combating inequality within and among

countries, preserving the planet, creating inclusive and sustainable economic growth, and fostering social inclusion' are all interdependent (United Nations General Assembly 2015:n.p.). Urbanisation can help drive sustainable development. However, within cities, poverty and inequality are at their most acute and, in lower- and middle-income countries, rapid growth due in part to rural-urban migration poses challenges of global proportions. Responding to urbanisation requires an understanding of the 'complex relations between sustainable cities, education and health at the level of neighbourhoods. Sustainable cities depend to a considerable extent on a population with the resilience and resources that health brings, and on relevant learning' (Wang & Kintrea 2019). Equally, access to health care and quality education depend on the sustainable development of cities and the neighbourhoods within them.