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Topic Guide

Urbanisation and Economic Development:
Private Sector Linkages

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Abbreviations

ADB	Asian Development Bank
AfDB	African Development Bank
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GHG	Greenhouse gas emission
GNP	Gross National Product
IPCC	Intergovernmental Panel on Climate Change
MGI	McKinsey Global Institute
MTR	Mass Transit Railway
PPP	Public Private Partnership
PwC	PricewaterhouseCoopers
WB	World Bank
WEF	World Economic Forum

Executive Summary

In this topic guide on *Urbanisation and Economic Development: Private Sector Linkages*, we introduce readers to the available literature on the relationship between urbanisation and economic development, and then the relationship of these concepts to the private sector. It informs readers about the key debates and critical issues surrounding these processes as they unfold today with a view to answering two key questions: *What is the role of the private sector in promoting inclusive and sustainable economic development against the backdrop of rapid urbanisation? What does that mean in practice for policy-makers?*

The topic guide identifies five findings about the relationship between urbanisation and economic development that provide critical context for understanding the role of the private sector.

- Countries urbanise as they develop.
- Urbanisation is strongly correlated with but does not cause economic growth.
- Urban concentration has growth enhancing benefits.
- The correlation between the rate (and not the level) of urbanisation and GDP level is hard to determine.
- Regional trends impact the relation between urbanisation and economic development.

With these in mind, urbanisation promotes economic development, but does not cause it. It *can* provide a gateway to greater economic opportunity but does not necessarily do so.

Certain attributes of urbanisation generate positive economies of scale, including urban density, connectedness, and mobility, influence the relationships between urbanisation and economic development. These factors help determine whether urban form is characterised by informality, slums and congestion – and corollary economic, social and environmental harms – or with improvements to human development. Rather than thinking of the challenges associated with urbanisation as "necessary evils" to the process of urbanised economic development, they highlight that urbanisation can take different forms with very material development consequences: these challenges are symptomatic of poor public policy choices and fail to capture the full development potential of urbanisation.

In particular, public policy and investment choices with respect to infrastructure, land-use, ease of doing business and public institutions are critical to ensuring urban form is dense, mobile and connected.

Urban density, mobility and connectedness in turn generate economic development by facilitating growth of the private sector. They create a larger and more diverse labour pool and access to suppliers and specialised services for production, and a greater local market. Connectedness lowers information and transaction costs, and encourages innovation. Many of the factors that make cities economically vibrant, liveable and efficient generally also constitute the factors most relevant to attracting private sector development. That development, in turn, functions as a supplier of economic opportunity.

Likewise, although urban planning, infrastructure and investment in urban institutions are ultimate public sector driven, the private sector can be a critical 'partner' and 'investor' in delivering better urban form. Private investment in infrastructure is critical and needs to be scaled up – even if caution must be taken that such investment serves the public inclusively. Private sector involvement and engagement is also important to inclusive public policy, planning and investment, which can adapt and design variables that generate better urban forms and economic development patterns.

1 Introduction

In this topic guide on *Urbanisation and Economic Development: Private Sector Linkages*, we introduce readers to the available literature on the relationship between urbanisation and economic development, and their linkages with the private sector. It informs readers about the key debates and critical issues surrounding these processes as they unfold today with a view to answering two key questions: *What is the role of the private sector in promoting inclusive and sustainable economic development against the backdrop of rapid urbanisation? What does that mean in practice for policy-makers?*

1.1 Structure of the Guide

In Section 2, the guide sets out the meaning of urbanisation and economic development in the context of cities and lays out the key trends in urbanisation.

Section 3 provides a conceptual background to the relationship between urbanisation and economic development to unpack whether there is a causal link between the two, and if so what is the direction of causality. In so doing, it states five key propositions.

- Countries urbanise as they develop.
- Urbanisation is strongly correlated with but does not cause economic growth.
- Urban concentration has growth enhancing benefits.
- The correlation between the rate (and not the level) of urbanisation and GDP level is hard to determine.
- Regional trends impact the relation between urbanisation and economic development.

In Section 4, we examine a key set of variables: infrastructure, land-use, ease of doing business and institutions that influence the quality of urbanisation and its ability to facilitate economic development, particularly through growth of the private sector.

In Section 5, we discuss the role of the private sector as a 'supplier' of economic opportunity, and as a 'partner' and 'investor' in the relationship between urbanisation and economic development. In the context of the key variables introduced earlier, we focus in particular on private sector investment in infrastructure.

In Section 6, we focus on public policy tools to engage the private sector so as to deliver better—more inclusive and sustainable—urban outcomes.

Section 7 concludes.

The methodology for this guide mainly involves desktop-based research and a comprehensive review of the available literature.

Box 1: Key definitions

Urbanisation

Urbanisation is the gradual shift of relative populations from rural to urban areas. We measure the level of urbanisation crudely by the percentage of population residing in urban areas, and the rate of urbanisation as the percentage increase in urban population (UN, 2015). The sources of urban population growth include: rural to urban migration; natural increases in the population already residing in urban areas, and the urbanisation of rural and peri-urban settlements. From a demographic perspective, urbanisation has a people-centred focus (McGranahan and Satterthwaite, 2014). Urbanisation is a process that changes fundamentally people's relationships with economy, ecology and space (Granoff et al., 2014).

For the purposes of this topic guide however, we approach urbanisation from an economic perspective. We concentrate mainly on urbanisation's connection to the structural transformation of the economy. Urbanisation occurs when the sectoral composition of the economy changes from agriculture to industry and/or services (Henderson, 2003) and labour moves from less productive to more productive sectors (in terms of sectoral contribution to Gross Domestic Product, GDP) located typically in cities.

Urban area

Is a location with high population density and built up features compared to the surrounding area. Urban areas typically refer to cities and towns, although can also apply to associated industrial zones and related infrastructure.

Economic growth

Economic growth is related closely but is distinct to economic development, and is defined as a '*quantitative* change to or expansion in a country's economy' (WB, 2004). It is 'conventionally measured as the percentage increase in GDP or Gross National Product (GNP) during one year' (ibid).

Economic development

Economic development is defined as a '*qualitative* change to and restructuring in a country's economy in connection with technological and social progress' (WB, 2004).

Despite the broader conceptualisation, economic development is often ultimately measured by an increase in per capita GNP or GDP to account for an increase in economic productivity and average material wellbeing of a country's population (ibid). In this topic guide we therefore use economic growth as a proxy measure for economic development, although provide some discussion regarding the distribution ("inclusiveness") of benefits with urban populations.

2 The urban context

2.1 Cities

'Cities have been the world's economic dynamo for centuries, attracting skilled workers and productive businesses and benefiting from economies of scale' – MGI, 2012

This section focuses on cities (as opposed to towns or other urban agglomerations), because of their significance in the processes of urbanisation and economic development.

Within the broader economic narrative, cities are regarded as 'engines of growth'. Reports by the McKinsey Global Institute (MGI) and PricewaterhouseCoopers (PwC) emphasise the centrality of cities in economic growth (Dobbs et al, 2012a, PwC 2014).

This is primarily because no country in the world has been able to develop without the growth of its cities (WB, 2009). 'The confluence of capital, people and space unleashes the benefits of agglomeration, with greater social and economic interactions creating a fertile environment for innovation in ideas, technologies, and processes' (Granoff et al, 2014). By 2025, MGI estimates that the top 600 cities will account for nearly 60% of global GDP with only 25% of the world's population (Dobbs et al, 2012a).

Already the 90 largest Chinese cities account for over US$6 trillion: the size of the national economies of Germany and France combined. Cities in India generate two-thirds of national GDP, 90% of tax revenues, and the majority of jobs, with just a third of the country's population (NCE, 2014).

The 2009 World Development Report on *Reshaping Economic Geography* identifies higher *densities*, shorter *distances*, and lower *divisions* as the variables underpinning the economic success of cities. Similarly, the African Development Bank's Urban Development Strategy (2011) identifies the large and diversified pool of labour, the greater local market, easier access to suppliers and specialised services, lower information and transaction costs, more diversified contact networks, and an environment that encourages innovation among the variables that increase the potential productivity of cities.

Cities are gateways to international markets and agents for domestic production and consumption (WB, 2009a). City residents tend to spend significantly more than rural ones. For example, in 2010 China's urban residents spent 3.6 times more per capita than their rural counterparts. Every rural resident moving into cities is estimated to increase consumption by an average of US $1,600. Multiplying this by the 10 million rural citizens expected to be absorbed into cities in a single year will translate into a huge rise in consumption and hence create greater markets and investment opportunities (TP, 2013).

But, urbanisation is not always economically advantageous (McGranahan and Satterthwaite, 2014). Cities can be hubs of prosperity offering enormous opportunities, but can also become hubs of poverty posing enormous challenges. The benefits outlined earlier come with associated costs (economic, social and environmental) that reduce the overall

competitiveness of cities. Urban sprawl alone costs the US economy an estimated $400 billion per year (NCE, 2014).

Urban poverty is a major problem. It is estimated to affect approximately one third of all urban residents, or one quarter of the total poor in developing countries (Ravallion et al, 2007). In India, for example, roughly 75% of urban dwellers live in bottom income segments, earning an average of US $1.80 a day (MGI, 2010).

Often this is because the rates of urbanisation in developing countries are not accompanied by the corresponding 'inclusive' economic growth required to lift people out of poverty (Shabu, 2010), particularly in Africa. In the absence of equitable economic growth in cities, hundreds of millions of people live in urban poverty (UN, 2014). While average incomes rise, in the form of per capita GDP figures, this can often obscure large scale poverty and rising inequality within cities.

In some cases, countries have also urbanised *without* corollary increases in average incomes, such as has been the case with Nigeria in the last two decades (Leke *et al.*, 2014). That is, while these two factors are correlated, such correlation is not perfect.

Common issues leading to urban poverty are: limited access to income and employment, inadequate and insecure living conditions, poor infrastructure and services, exposure to risks, spatial barriers that inhibit mobility and transport, inequality linked closely to socioeconomic exclusion, crime and violence – and all of these are contrary to the promises of urbanisation and economic development.

Environmental considerations also pose numerous dilemmas for the ability of cities to provide human development benefits in the near and long term. Air pollution in particular can cause urbanisation to slow improvements to human welfare. In China, one air pollutant alone—PM 2.5—was linked to 1.23 million premature deaths in 2010, decreasing GDP by an estimated 9.7% to 13.2% GDP (NCE, 2014). The same pollutant was estimated to slow India's economic growth by 6%. Whilst cities produce roughly 80% of global GDP (WB, 2009b), they also consume more than 75% of global resources, generate approximately 75% of global waste and 80% of greenhouse gas emissions (Nixon, 2009), presenting longer-term threats to human welfare. Environmental degradation can slow poverty reduction and broader economic development gains, and reduce quality of life for urban residents.

Linking environmental health, energy efficiency and liveability concerns, leading cities are now considering how to build sustainability into the way they plan. This has important climate change co-benefits, because a greater emphasis on public transit, higher density, energy-efficient buildings, and better management can contribute to a city's development objectives while reducing harms like air pollution and greenhouse gas emissions (GHGs) (WB, 2009b; NCE, 2014). Such co-benefits, along with an inclusive approach to wider economic development and poverty reduction strategies, are simultaneously likely to create more productive, competitive, innovative and prosperous cities. If successfully planned, these cities will draw a healthy balance between economic growth and urbanisation.

2.2 Trends in urbanisation

This sub-section documents the major trends in urbanisation, to take stock of where we are, and where we are headed. It focuses in particular on trends for cities, from medium- to mega-sized, although urbanisation technically comprises the growth of both towns and cities relative to rural areas.

Based on projections by the UN *World Urbanization Prospects* (2014) there are three key trends in urbanisation, the speed of urbanisation, the concentration of urban growth in developing countries, and a shift from growth concentrated in mega-cities to medium-sized ones.

- **The world continues to urbanise.** More than half of the world's population is now urban - the trend is upward. As of 2014, 54% of the world's population resides in urban areas. By 2050 that share is expected to rise to 66%. This means that continuing population growth and urbanisation are expected to add 2.5 billion people to the world's urban population by 2050 (UN, 2014).
- **Most of that urban population growth is concentrated in developing countries.** African and Asian countries are still predominantly rural with 40% and 48% of their respective populations living in urban areas, in comparison to Northern American, Latin American & Caribbean, and European countries that have more than 80% of their respective populations living in urban areas. However, they are urbanising much faster than other regions and are projected to become 56% and 64% urban respectively by 2050. Just three countries, India, China and Nigeria, are likely to see 37% of the projected urban population growth between 2014 and 2050. India is projected to add 404 million urban dwellers, China 292 million and Nigeria 212 million (UN, 2014).
- **Population growth is fastest in medium-sized cities.** Currently one in eight urban dwellers live in 28 mega-cities (cities with more than 10 million inhabitants). By 2030, the world is projected to add another 13 mega-cities. Interestingly though, close to half of the world's urban dwellers reside in relatively small settlements of less than 500,000 inhabitants. The fastest growing urban agglomerations are medium-sized cities with less than 1 million inhabitants located in Asia and Africa. To put this into perspective, by 2030 China alone will have 221 cities with a population of one million or more, compared with 35 such cities in Europe today (MGI, 2010).

There is a window of opportunity here. In very little time these small settlements are likely to transform into medium-sized cities and current medium-sized cities into mega-cities. While urbanisation is most prevalent in developing countries, it would be a mistake to treat economic development as an ineluctable consequence of economic development. It is entirely possible for incomes to fall as geographies urbanise, particularly at lower income levels (Leke *et al.*, 2014). That these cities in the making do not mimic the challenges of socio-spatial, infrastructural and ecological overload that beset relatively established and mature cities today requires distilling some key lessons – understanding why and how cities came to achieve their present status, which of the problems can be anticipated and avoided with proactive planning and policymaking, and whether there is

a key role for stakeholders such as the private sector in steering a smooth transition towards inclusive and sustainable urban and economic development. These are dealt with in considerable detail in the following sections.

3 Conceptual background

The future of our cities is tied intimately to the scale and quality of urbanisation and its interplay with economic development. In this section, we examine the relationship between urbanisation and economic development by reviewing the literature and stating a few key propositions that include:

- Proposition 1: Countries urbanise as they develop.
- Proposition 2: Urbanisation is strongly correlated with but does not cause economic growth.
- Proposition 3: Urban concentration has growth enhancing benefits.
- Proposition 4: The correlation between the rate of urbanisation and GDP level is hard to determine.
- Proposition 5: Regional trends impact the relation between urbanisation and economic development.

3.1 Proposition 1: Countries urbanise as they develop

'Urbanisation and GDP per capita tend to move in close sync as countries develop' (MGI, 2012). Developed countries with high GDP have relatively high proportions of their population living in urban areas and vice versa (Chen et al, 2014). Cross-country studies also demonstrate that higher levels of urbanisation are associated with higher per capita incomes (McGranahan and Satterthwaite, 2014). This is mainly because urban locations are economically advantageous for both people and enterprises (ibid).

According to Spence et al (2009):

> 'Economies of scale offer both efficiency and consumption advantages to urban economies, manifested in several ways. Process industries, such as chemicals, steel, and automobiles, operate more effectively at higher volumes; for this reason they have traditionally been established in urban areas. Economies of scale in input markets affect a wide range of industries. Specialised services—such as accounting, tax advice, and intellectual property management—are easier to obtain in large cities. Specialisation among input producers may also allow cost reductions, making local purchasers of their inputs more productive. Public services such as hospitals… require a critical mass of consumers to make them economically viable. The density of urban areas increases the range of such amenities' (Spence et al., 2009).

Externalities of scale in manufacturing and services attract firms and workers into cities. This is because firms' production costs decrease with the size of their own industry through scale externalities such as better local infrastructure, within-industry knowledge and information spill-overs (Henderson, 2003).

These positive externalities explain the advantages of 'agglomeration', firms locating near each other (Hofmann and Wan, 2013), as a positive aspect of urbanisation. Firms value agglomeration a great deal. They benefit from being close to other firms in either the same or related product lines and in locations with good access to domestic and international markets.

Agglomeration tends to accelerate when countries liberalise and open up to trade (WB, 2009). The benefits have been well documented in China, Japan, Korea and Malaysia. In China, for example, 50% of GDP is generated in coastal urban agglomerations accounting for only 20% of the territory (WB, 2009). China is often used as a model for local economic development approaches based on urbanisation (see Box 2).

Box 2: Systems of city clusters in China

Under China's 2006-2010 Five-Year Plan, its urban policy promoted city clusters. These were intended to create "city systems" that connected cities of different scales. The model was based on the structure of the Pearl River Delta and Yangtze River Delta, areas which reflected this cluster form. The two deltas represent 8.9% of China's population, and 26% of GDP. Their success has depended on economies of scale, and intra-industry and inter-industry agglomeration. One element that has facilitated the promotion of clusters was the integration of the institutions that were responsible for the transfer and use of rural and urban land use, permitting more coordinated development policy.

(Source: WB, 2009)

The literature on agglomeration and associated scale externalities can be subdivided into two categories, localisation economies and urbanisation economies.

- Localisation economies are external to the firm but internal to the industry (Lo, 2010). They benefit from scale externalities arising from the local concentration of economic activity within an industry, i.e. the clustering of related activities.
- Urbanisation economies are external to the firm and external to the industry (Lo, 2010). They benefit from scale externalities from the overall agglomeration and diversity of economic activity in dense urban areas, where the transaction cost of doing business is lower and opportunities for spill-over higher.

Scale externalities can be both positive and negative. Positive scale externalities in the form of labour market pooling, input sharing and knowledge spill-overs, for example, are likely to enhance the prospects of inclusive economic development within cities. Recently, however, negative scale externalities such as congestion and high land rents have been receiving increasing attention. This is because they often undermine productivity, deter investment and exacerbate inequalities in cities. These negative externalities serve to explain the increasing de-concentration of large cities and the rise of networks of smaller cities (ibid).

3.2 Proposition 2: Urbanisation is strongly correlated with but does not cause economic growth

In the available literature, findings regarding the causal linkages and direction of causality between urbanisation and economic growth vary widely. However, understanding the direction of causality is key to the question of whether a high rate of urbanisation is a necessary or

sufficient condition for economic growth, and whether developing countries should encourage urbanisation as part of their economic development strategy (Shabu, 2010).

Most of the available literature argues that urbanisation promotes economic growth (Turok and McGranahan, 2013), but does not cause it (Henderson, 2003). 'While urbanisation per se does not cause development, sustained economic development does not occur without urbanisation' (Henderson, 2010: 515). The author explains further that higher levels of urbanisation, as measured by the percentage of total national population that lives in urban areas, is associated with increased income per capita. The level of urbanisation and income per capita are highly correlated, and much of the variation is explained by differences in definitions of 'urban' across countries (ibid).

Contrast this with Lo (2010). Testing the causal relationship between urbanisation and economic development over time using the Granger causality method (i.e. a lagged correlation), Lo (2010) posits that if the time series of urbanisation related data precede the time series of economic development data, then we can infer that the former causes the latter. Analysing 28 countries over a 50 year period between 1950 and 2000, the author's results show that the two processes have a long-run equilibrium relationship. The direction of causality runs from urbanisation to economic growth for developing countries, while the opposite holds for developed countries. Causality therefore depends on the economic status of the nation (ibid). The author suggests that the change in direction of causality is primarily due to the change in the factors of production from labour intensive to capital and/or technology intensive production referring to economies of scale as the likely reason for the time lag between the two variables.

In essence, urbanisation and economic development are intimately linked, however the causal relationship is difficult to establish and the direction of causality much more so. The empirical evidence till date mostly supports correlation between the two, and the possibility that urbanisation provides an enabling condition if certain other structural factors are also present.

3.3 Proposition 3: Urban concentration has growth enhancing benefits

Urban concentration—the geographical dispersion of a given population—provides insights into whether a country may be over- or under-urbanised and into what the associated implications for efficiency are. Within the body of research on urban concentration there are two main strands, 'endogenous models of city size' or 'equilibrium city size', and 'core-periphery models'.

Endogenous models of city size focus on the determinants of growth within a city. They aim to identify the optimum equilibrium by balancing the trade-off between positive scale externalities, such as agglomeration, versus negative scale externalities, such as rising land rent, congestion, pollution and health costs (Irwin, nd, Hofmann and Wan, 2013). Existing literature of urban concentration and economic performance shows that different characteristics of the urban environment, in particular the quality of urban infrastructure,

strongly determine the growth enhancing benefits of urban concentration. That is to say, that correlation between urbanisation and growth arise because of other variables driving both.

Recently there has been a shift from focusing on urban concentration in one or two major cities within a country, such as is the pattern in Cambodia, Mongolia or Japan, to what drives aggregate urbanisation trends spread over many smaller cities, such as occurs in India and China (Hofmann and Wan, 2013).

In line with this reasoning:

- Henderson (2002) argues that the optimal degree of urban concentration varies with the level of development. Some degree of urban concentration may initially be conducive to economic activity by reducing the need for inter- and intra-regional infrastructure expenditures. However, more mature systems of cities tend to be characterised by more dispersed economic activity. For example, manufacturing tends to relocate to smaller and medium-sized urban areas, whereas production in large and mega-cities tends to focus on services, Research & Development (R&D) and non-standardised manufacturing.

  The costs of excessive urban concentration, especially in developing countries, stem from the large size of mega-cities in a context of underdeveloped institutions and human resources for urban planning and management. Consequently, Henderson (2002) suggests that alleviating excessively high urban concentration requires investments in inter-regional transport and telecommunication to facilitate de-concentration of industry, and fiscal de-concentration, so secondary cities are able to finance infrastructure and services needed to compete with primary cities for both industry and population.

- Castells-Quintana and Royuela (2013) develop empirical evidence that the quality of urban infrastructure strongly determines the growth enhancing benefits of urban concentration. They find that increasing urban concentration has fostered growth in Asian countries, but has degenerated into growth-deterring congestion in most Latin American and African countries.

- Ellis et al (2012) in their review of the economic performance of Indonesian urban areas finds that medium-sized cities, those with populations in the range of 500,000 to 1 million, have performed better in terms of generating benefits from agglomeration economies than other city sizes. These medium-sized cities saw the strongest per capita growth in GDP accompanied by strong to moderate population growth. The economies of larger cities in Indonesia grew at lower rates than those of medium-sized cities relative to their rates of growth in population. Small cities performed least well, experiencing declines in population and per capita GDP.

Core-periphery models, on the other hand, examine the conditions under which manufacturing and population agglomerations concentrate in one region, rather than spreading over several regions (Hofmann and Wan, 2013). In response to original static core-periphery models, Henderson (2003) argues that an economy is composed of an endogenous and potentially large number of cities of different sizes and types. The author argues that over a long period of time there tends to be a stable relative size distribution of cities.

The relative significance of different sized urban centres for economic development is in line with the findings that cities that rely to a greater degree on their peripheries for the location of productive facilities generate higher rates of regional GDP and a faster rate of economic growth (Ellis, 2012).

Therefore, the emerging consensus on optimum city size varies depending on the desired outcome and economic purpose it is serving. For example, according to the World Bank (2009b) market towns facilitate internal scale economies for firms while also serving as conduits for marketing and distributing agricultural produce. Medium-sized cities provide localisation economies for manufacturing industries. Large cities provide urbanisation economies, characterised by diverse facilities that foster innovation in business, government and education services. However, from an environmental perspective, there is general consensus that high urban density is better for the environment and that urban sprawl needs to be prevented.

One may draw from these analyses that "maximising" urban concentration is not an effective economic development strategy alone, and that instead "optimising" city size depends on an urban area's place in a hierarchy of urban functions—from market towns serving as local economic hubs to higher-order functions like national governance and international trade. More urbanisation in any given locale is not necessarily better, as high levels of urban concentration require greater associated investment and the risk of negative externalities, even if in the aggregate a pattern of urbanisation may enable economic development.

3.4 Proposition 4: The correlation between the rate of urbanisation and GDP level is hard to determine.

Recent literature has focused on testing whether the rate of urbanisation rather than urban concentration, or the level of urbanisation, is the more relevant variable needed to explain changes to GDP level. Below we summarise findings from some of the key literature; and demonstrate why the correlation between the rate of urbanisation and GDP level is hard to determine.

- Hoffman and Wan (2013) estimate the impact of GDP growth on the rate of urbanisation to be large and positive, and hence the direction of causality likely runs from GDP growth to urbanisation, rather than vice versa. They find a negative conditional correlation of urbanisation with GDP, i.e. faster growing countries are as yet less urbanised. They also find positive and significant effects of industrialisation and education on urbanisation, consistent with the existence of localisation economies and labour market pooling. Further, they find that the significant positive correlation of GDP level with the rate of urbanisation disappears as soon as they control for other factors such as education level, industrialisation and trade. They argue that this suggests that urbanisation may be better explained by a country's development in a range of economic and human dimensions rather than by income alone.
- Ellis (2012) refers to evidence that most countries in East Asia over the past thirty years experienced growth in economic output as they become increasingly urbanised. For example in the period from 1970 to 2006, every 1% increase in urban population

correlated with an average 6% increase in per capita GDP for India and China, an 8% increase in per capita GDP for Vietnam and a 10% increase in per capita GDP for Thailand. However, in some Asian countries, including the Philippines and Indonesia, a similar rate of increase in urbanisation relates to a less than 2% increase in per capita GDP. Ellis (2012) emphasises that it is important to consider that each country's patterns of urbanisation and economic growth have been unique and contingent on a wide range of variables. For Indonesia, for example, challenges relate to the difficulty of connecting growth centres in an archipelagic country combined with institutional challenges in spatial planning, city management and the functioning of land markets and infrastructure.

- Narayan (2014) analyses the relationship between the rate of urbanisation and economic performance over the past thirty years in India. The author finds that the present level of state per capita income has a positive correlation with the level of urbanisation, so states with high per capita income also have higher levels of urbanisation and vice-versa. In terms of growth of per capita income and the rate of urbanisation, the relationship is insignificant during the 1980s and 1990s but significant during the 2000s, suggesting according to Narayan (2014) that the association between the rate of urbanisation and development is getting stronger over time.
- Focusing on India, Cali (2008) finds that although the level of urbanisation and that of economic development correlate across Indian states over time, the relationship is not strong. On the other hand, the rate of urbanisation and the rate of growth appear to be negatively correlated. The author finds that there is a tendency towards convergence in growth rates among Indian towns over the course of the 20th century. Other things being equal smaller towns grow faster than larger ones.
- Chen et al (2014) find while urbanisation and per capita GDP may be strongly correlated, over the past thirty years there is no correlation between the rates of urbanisation and economic growth globally. Fast urban growth does not translate into higher GDP. They refer to countries such as Gabon, where the population has been urbanising rapidly but economic growth has been low or even negative. Conversely, countries such as Sri Lanka and Uzbekistan experienced negative rates of urbanisation, but still had overall economic growth. Therefore, GDP growth may create conditions that drive migration from rural to urban areas, but urbanisation does not drive economic growth. The authors suggest that rather than either encouraging or discouraging urbanisation, governments and development agencies should focus on creating a mobile workforce, ensuring broad access to goods and markets, and implementing polices that promote commerce and infrastructure.
- In response to the few exceptions around the world where cities grew rapidly without an increase in per capita GDP, Satterthwaite (2014) argues that these are largely due to an influx of people fleeing wars, civil unrest, famine and disaster.

3.5 Proposition 5: Regional trends impact the relation between urbanisation and economic development.

McGranahan (2014) finds that most countries follow paths characteristic of the region they are in. The author analyses the pattern of urbanisation and economic growth for Brazil, Russia, India, China and South Africa (BRICS) as outlined below and draws conclusions for regional patterns:

- Though changing, Brazil is characterised by urbanisation but not economic growth. Historically the country has been passively resistant to urbanisation, which has led to unplanned settlements and high levels of inequality. The country is now experimenting with participatory budgeting, conditional cash transfers and other measures to reduce inequality.
- Following Russia's liberalisation the country started out considerably more urbanised than China. It was therefore unable to use urbanisation as a tool for economic transformation. Other factors, such as political and economic shocks, and the uneconomic locations of many of its cities, also distinguish Russia's recent economic history and the role of cities in it.
- India though experiencing economic growth, has tended to avoid rapid urbanisation and has arguably as a result also avoided the rapid economic growth of China. A lack of coherent urban planning has resulted in rapid growth in suburban fringes and high density areas emerging outside the traditional city cores. Developing better connections between the core cities and the new suburban hubs will be critical to gain many of the economic benefits associated with urbanisation.
- China serves probably as the most powerful demonstration of cities as engines of growth. China has been one of the few countries to actively encourage urbanisation and to use a network of cities as a trigger for economic growth (see Box 3 below). Though this strategy has been exceptionally successful, it has also come at a cost, particular to environmental quality and human health.
- South Africa has suffered both socially and economically from its past racist anti-urbanisation policy prompted by apartheid. South African cities are still overly fragmented as a result and there is no clear pattern between urbanisation and economic development emerging.

Analysing the pattern of urbanisation and economic growth for BRICS, McGranahan (2014) concludes that the close positive relationship between urbanisation and economic growth exhibited by China and India is emulated in other Asian countries. The fall and rise of Russia's economic development with little shift in urbanisation is characteristic of other post-Soviet states. Brazil's mixed pattern is reflected in other Latin American countries. South Africa due to its former apartheid policies does not emanate a pattern reflected across Africa. Overall, however sub-Saharan Africa is the only region in which urbanisation has occurred to a large extent independent of economic development. He therefore argues that the trends in urbanisation and economic development experienced in BRICS are reflected in respective regional patterns.

4 Variables that shape urbanisation and economic development

In this section, we explore 4 key variables that shape the relationship between urbanisation and economic development, and in particular instances, we determine whether these are able to affect the quality of this relationship.

The key variables in this topic guide are grouped into four overarching categories:

- Infrastructure (including core urban services)
- Land-use
- Ease of doing business
- Institutions

4.1 Infrastructure

'The absence of basic infrastructure often—but not always—inhibits urban development'
- IPCC WG III AR 5

Infrastructure is central to the efficient functioning of cities and is inextricably linked to urban form[1]. Countries with good urban infrastructure can accommodate rapid population increases in city centres and sustain high economic growth (Alm, 2011).

Infrastructure can be divided into:

- ***hard*** *or* ***physical infrastructure***, such as roads, ports, airports, railways, bridges, mass transportation systems, power stations, electricity grids, information and telecommunication networks, water supply and sanitation services, waste management and treatment facilities, and sewer systems; and
- ***soft*** *or* ***social infrastructure*** such as housing, schools, universities, hospitals, street lighting, and public spaces.

Infrastructure facilitates *urban density* and *connectedness* (WB, 2009a), and caters to a variable economic base in cities.

4.1.1 Facilitating urban density

Densely populated urban centres can use resources more productively than dispersed cities or rural areas. Urban density facilitates economies of scale and improves competitiveness by lowering costs of economic inputs (like energy) and operating costs. Urban density reduces energy intensity, which in turn reduces a city's dependence on imported fuels thereby reducing overall energy costs. It also brings socio-economic benefits, such as improved air quality and health and reduced commuting times. Similarly densely populated cities make the

[1] 'Urban form and structure are the patterns and spatial arrangements of land use, transportation systems, and urban design elements, including the physical urban extent, layout of streets and buildings, and the internal configuration of settlements' (see Seto and Dhakal, 2014: 35). In IPCC's, 5th Assessment Report, the authors characterise urban form by density, land-use, connectivity and accessibility.

provision of basic services on a per capita basis both cheaper and easier, as it allows the fixed cost of capital investment to be distributed over a larger number of users (Alm, 2011).

Hong Kong and Singapore often serve as best-practice examples for the benefits of urban density. Mumbai on the other hand is an example of what to avoid. Restrictions on the use of land and height restrictions have inflated house prices, expanded slums and increased congestions, sprawl and corruption. Though Chinese cities tend to perform well on connectivity, urban sprawl has become an issue due to land use and labour movement restrictions (WEF, 2014).

4.1.2 Facilitating connectedness

In India, the quality of transport interconnectedness between cities is closely related to urban growth and urban productivity. In Uzbekistan and Honduras it has been shown that improving urban airport accessibility and size can reduce total air transport cost by 10%. Another example is Busan's substantial investment in port and port logistics, which has turned the city into a transhipment hub and magnet for global shipping companies. Similarly, Hong Kong's Mass Transit Railway (MTR) provides highly efficient public transport whilst also being profitable (WEF, 2014).

Globally, improving urban seaport efficiency, port infrastructure and handling can reduce shipping costs by more than 12%. In international trade this is equivalent to reducing the distance between origin and destination by 500 miles (WB, 2009a).

4.1.3 Catering to a variable economic base in cities

Depending on the economic base of a city, some features of the physical infrastructure are more important than others (Nollen, 2011). For example software development does not require substantial quantities but reliable electricity supply and telecommunication for receiving, processing and sending data. Bangalore and other Indian cities can be competitive in software services in part because production does not depend critically on hard transport infrastructure which is underdeveloped. On the other hand, steel making and aluminium refining depends critically on transportation infrastructure, such as railroads and seaports and on energy infrastructure and management that results in affordable, reliable power. Abu Dhabi and Dubai can be competitive in aluminium refining not because they have the raw material but because they have the critical physical infrastructure.

Countries that underinvest in infrastructure and fail to keep pace with their expanding population or invest inefficiently or in the wrong infrastructure experience sufficiently high barriers to economic growth, and lock-in wasteful patterns of development that exacerbate environmental pressures for years to come.

Some evidence illustrates the extent of future implications associated with infrastructure globally, for relatively established and mature cities, and for rapidly growing cities in developing countries. Seto and Dhakal (2014) as part of Working Group III for the Intergovernmental Panel on Climate Change (IPCC) *Fifth Assessment Report* (AR 5) provide a compelling picture of the situation.

- 'If the global population increases to 9 billion by 2050 and developing countries expand their built environment and infrastructure to current global average levels using available technology of today, the production of infrastructure materials alone would generate approximately 470 Gt of carbon di-oxide emissions. Currently, average

per capita carbon di-oxide emissions embodied in the infrastructure of industrialised countries is five times larger than those in developing countries' (Seto and Dhakal, 2014: 4).

- The life span of 'infrastructure and the built environment, make them particularly prone to lock-in of energy and emissions pathways, lifestyles and consumption patterns that are difficult to change. The committed emissions from energy and transportation infrastructures are especially high' (Seto and Dhakal 2014: 5; see also Granoff et al, 2014).
- 'In many developing countries, infrastructure and urban growth will be greatest, but technical capacities are limited, and governance, financial, and economic institutional capacities are weak' (Seto and Dhakal, 2014: 8).
- The growth of transport infrastructure and ensuing urban forms will play important roles in affecting long-run emissions' trajectories in developing countries. Urban forms and structures significantly affect direct (operational) and indirect (embodied) GHG emissions, and are strongly linked to the throughput of materials and energy in a city, the wastes that it generates, and system efficiencies of a city' (Seto and Dhakal, 2014: 5).
- 'For rapidly developing cities, options include shaping their urbanisation and infrastructure development towards more sustainable and low carbon pathways. In mature or established cities, options are constrained by existing urban forms and infrastructure and the potential for refurbishing existing systems and infrastructures. Key mitigation strategies include co-locating high residential with high employment densities, achieving high land use mixes, increasing accessibility and investing in public transit and other supportive demand management measures' (Seto and Dhakal, 2014: 5).

4.2 Land-use

Urban spaces are arranged through land-use planning. Residential, commercial and industrial areas can be organised as separate land uses, or mixed ones.

Mixed land-use and land conversion facilitate mobility and economic activity. Through their relation to the 'urban form', both land-use and infrastructure just discussed are intimately connected, and reinforce co-benefits (or lack thereof) depending on how cities are laid out.

4.2.1 Facilitating mobility

Mixed land-use is increasingly favoured 'as cities transition from industrial to service economies' (Seto and Dhakal, 2014). Travel distances become shorter and movement of people, goods and services is made easier.

4.2.2 Facilitating economic activity

Land-use changes over time depending on the activity or purpose for which it is intended. Rapid urbanisation and economic transformation both play a role in determining land-use and conversion, and are in turn shaped by it. In recent decades, Chinese cities, towns and industrial/mining sites have seen the fastest land expansion in the country, with growth rates

of 20%, 13% and 12% respectively. Significant land has also been converted for transportation, especially for highways. The provinces that have seen the highest land conversions have also witnessed high economic growth, urbanisation and industrialisation (He et al, 2012).

> 'The spatial pattern of land use change is consistent with the spatial shift of economic growth, because eastern provinces enjoy institutional and locational advantages and agglomeration economies. They have attracted the majority of foreign investments, particularly those in capital- and technology-intensive industries, and are the dominant exporters of Chinese products. Significant correlation coefficients between land use change and economic growth suggest that land has been a significant driver of economic growth, but this positive contribution is moderated by a variety of factors including a city's size, location, industrial structure, fiscal condition, and utilisation of Foreign Direct Investment' (He et al, 2012:17).

In addition to annual GDP growth per capita, other associated drivers of land conversion include urban population growth as evidenced in India and Africa (Seto et al. 2011). Much of urban expansion, however, may be due to factors difficult to observe fully at the global level, including international capital flows, the informal economy, local land use policy, and generalised transport costs (ibid).

4.3 Ease of doing business

Countries that rank in the top ten for ease of doing business (WB, 2013) include: Singapore, New Zealand, Hong Kong (SAR, China), Denmark, Republic of Korea, Norway, US, UK, Finland, and Australia. All of these are highly developed and highly urbanised countries.

It is important to keep in mind that the scale of business activity varies in all countries from micro, small and medium-sized enterprises to very large corporations. These collectively generate millions of jobs for people and help to supply a diverse range of products for local and foreign markets. In so doing, they facilitate investment and strengthen linkages with global value chains.

4.3.1 Facilitating investment and linkages with global value chains

The easier it is do business, the better it is to attract investment. A favourable business climate reduces transaction costs for companies so they can grow and develop, attract Foreign Direct Investment (FDI) and employ more workers. Often the first place to start for attracting investment to cities is improving the subnational investment climate with a focus on reducing bureaucracy while strengthening regulatory effectiveness (as discussed in the next section). Investment climate assessments and doing business surveys provide critical information about a city's ability to attract investment from a private sector perspective. The experience of Hong Kong and Dubai for example, illustrates how effective and well targeted investment climate reform can fast track cities to getting embedded in regional production networks and global value chains (WEF, 2014).

Getting the basics right and keeping them simple for producers, consumers and citizens is also critical (WEF, 2014). This includes stable and prudent macroeconomic policies, efficient and simple taxation, a flexible labour market, openness to trade and FDI, simple and transparent domestic business regulation and a safety net that protects the most vulnerable.

The experience of Singapore illustrates how keeping it simple increases investor's confidence and boosts competitiveness (ibid).

4.4 Institutions

Strong institutions, including efficient government and public services, the rule of law, impartial enforcement of property rights and contracts are a major part of city competitiveness (WEF, 2014).

Institutions, as commonly understood, lay out the 'rules of the game' (North, 1990). They facilitate transparency, accountability and good urban governance.

4.4.1 Facilitating transparency and accountability

Integral to institutional strength are transparency and accountability. In a context of rent seeking and corruption in many developing countries and especially in city-centres, these tend to be difficult to achieve. Nevertheless, important initiatives are emerging to facilitate transparency and accountability across the board – between the public and the private sector, between government and citizens, civil society groups, etc. Measures include publishing of annual accounts, asset-based accounting systems, independent auditor general reports and introduction of ethical standards and practices of public sector accounting (Hildebrand et al, 2013) – each of which encourage openness in interactions of the public sector with other stakeholders, particularly in economic interactions with the private sector.

4.4.2 Facilitating good urban governance

There has been a strong trend towards devolution and decentralisation giving more political and fiscal authority to local and municipal governments. The underlying assumption is that cities need to have the authority and capability to operate under competitive and open market conditions. Cities such as Bilbao, Dubai, Penang and Busan among others illustrate the strong case for cities to take advantage of the decentralisation of power (WEF 2014). However, in most instances, the decentralisation of power is a complicated political process. Even though at the subnational level, local governments are allowed greater political autonomy, central governments typically retain control over public budgets. This is particularly problematic for local governments at the city level that need financing for urban service delivery and urban infrastructure, and for overall management of public affairs.

A rapidly evolving urban landscape also often does not coincide with physical and administrative boundaries (WB, 2009) and can compromise the quality of urban governance. As outlined by the OECD (2007) that is because local government boundaries rarely keep up with patterns of urban development and the evolving relationship between administrative cities, urban economic centres and their connections with others. Whilst there are notable exceptions, it is difficult to reorganise sub-national governments in ways that reflect economic as opposed to administrative realities. A challenge is to develop forms of urban governance that can facilitate greater strategic integration between authorities and enable them to foster urban cohesion and competitiveness more effectively. This will often require coordination across jurisdictions, as for example in the city-region of Bilbao-Basque country (WEF, 2014). Urban or regional agencies may be a helpful vehicle where there is a mismatch between municipal boundaries and the urban economic boundaries (WB, 2009).

5 Role of the private sector

'Unlike previous waves of urbanisation that were often accompanied by vigorous economic growth, future urbanisation may occur with few public resources to support and sustain it'

– Shlomo Angel (2012)

The private sector is a key stakeholder in both urban and economic development. It demonstrates the requisite *interest* and *influence* to shape the two processes. The benefits to the private sector from the factors discussed in the prior section—urban agglomeration and urban concentration, infrastructure, mixed land-use, ease of doing business, and institutions—are numerous.

In this section, we discuss private sector participation in urban and economic development in some depth, and highlight the role of the private sector as a 'supplier' of economic opportunity, and as a 'partner' and 'investor', thereby establishing some of its key linkages with the two simultaneously on-going processes of urbanisation and economic development. Where possible we also analyse its role in the context of the key variables, in particular *ease of doing business* and *infrastructure*.

We analyse first some key indicators related to the business environment in low-, middle- and high-income countries as presented in the World Bank's *Data Book* (2015) (see table 1). Some interesting observations include:

- The time to start a business in terms of days is the lowest in high-income countries and is double that in low-income countries.
- The number of procedures to start a business in all countries are roughly the same.
- The time to prepare, file and pay taxes in terms of hours is the lowest in high-income and is roughly its double in middle-income countries.
- The numbers of days it takes to export is the lowest in high-income countries, double that in middle-income countries and triple that in low-income countries.
- The number of years it takes to resolve insolvency is the lowest in high-income countries and the highest in low-income countries.
- Taxes on profits as a percentage of commercial profits is the lowest in high-income countries and the highest in low-income countries.
- New business density as estimated by the number of new businesses registered per 1000 people of working-age is the highest in high-income countries and the lowest in low-income countries.

In short, we take away from these statistics the following:

- High-income countries offer the friendliest business environment. They are also highly urbanised and highly developed economically.
- Middle-income countries offer the second friendliest business environment. These countries are disaggregated further in the World Bank's *Data Book* (2015) into lower

and upper middle-income countries, and are at various stages of urbanisation – from intermediate to advanced.

- Low-income countries offer the least friendly business environment. These countries are at relatively lower stages of urbanisation, but are also the ones that are urbanising rapidly.
- Hence, both low- and middle-income countries that have upward urbanisation and economic development trajectories offer the highest potential for the private sector to participate.
- In this regard, enabling a friendly business environment i.e. facilitating ease of doing business is central to engaging the private sector and to reaping the long-term benefits that this engagement provides.

Table 1. Indicators related to business environment and private sector investment in low, middle and high-income countries

	Low-income countries (2013)	Middle-income countries (2013)	High-income countries (2013)
Business environment			
Time to start a business (days)	29	24	15
Procedures to start a business (number)	8	7	6
Time to prepare, file, and pay taxes (hours)	265	319	166
Time to export (days)	35	23	12
Time to resolve insolvency (years)	3.4	2.7	2
Profit tax (% of commercial profits)	19.2	16.7	14.1
New business density (new business registered per 1,000 working-age pop.)	0.3	2.2	7.5
Private sector investment			
Investment in infrastructure with private participation, 2006–13 (US $ millions)	30,934	1,098,489	-

Private foreign direct investment, net (% of GDP)	3.8	3.0	2
Gross fixed capital formation (% of GDP)	25.2	30.1	20.3

Source: Data Bank (2015)

The World Bank's *Data Book* (2015) also lays out some key indicators related to private sector investment in low-, middle- and high-income countries (see table 1 above). Some interesting observations include:

- Investment is infrastructure with private participation between 2006 and 2013 was US $ 31 billion in low-income countries and US $ 1.01 trillion in middle-income countries. In other words, private participation in infrastructure-related investments in middle-income countries was 35 times higher.
- Net private FDI as a percentage of GDP is the highest in low-income countries and the lowest in high-income countries. While this is an artefact of the relative size of these respective economies, it highlights the importance of FDI in low-income countries.
- Gross fixed capital formation as a percentage of GDP is the highest in middle-income countries and the lowest in high-income countries.
- Private sector investment is therefore higher in middle-income countries in comparison to low-income countries. It is promising though to see that low-income countries are attracting higher net private FDI (as a percentage of GDP) in comparison to middle-income countries.

5.1 Private sector as 'supplier' of economic opportunity

In most countries, the private sector is a major component of national income and a major employer and creator of jobs. The private sector provides around 90% of employment in the developing world - including both formal and informal jobs, critical goods and services, the most tax revenue, and efficient flows of capital (IFC, 2015).

Small and medium-sized firms are essentially engines of job creation, and the hubs for innovation and entrepreneurship. In many countries, they are one of the primary drivers of economic development.

This is evidenced by economic growth in low-income countries being accompanied by a more than proportional increase in the share of the formal small and medium enterprise sector. However, in low-income countries the share of formal small and medium enterprises in employment is still low - about 30% and in GDP about 17%, in comparison to high-income countries where shares are about 60% and 50% respectively. Contrary to low-income countries, richer countries also see far less informal enterprise activity.

The private sector is critical to poverty reduction. In countries where labour is relatively cheap and in abundant supply, specialisation has led to labour-intensive manufacturing. With the concomitant

expansion of the services sector, both low, semi and highly-skilled workers have seen rising incomes. Many poor people are moving to places or sectors where there are jobs, often to urban areas and to cities in particular (IFC, 2011).

The growing recognition within the private sector as to the importance of its role has led many private companies and government institutions to consider the ways through which private businesses can contribute pro-actively to the provision of products, services, and economic opportunities that benefit poor populations. These now take on a number of names such as *inclusive business models, base of the pyramid, or opportunities for the majority* and include a focus on businesses that broaden access to services such as finance, education, and infrastructure (UNDP, 2003).

5.2 The private sector as 'partner'

Governments are partnering increasingly with the private sector. Many of these arrangements come under the framework of public-private partnerships, widely known as PPPs. According to the PPP Reference Guide 2.0 (WB, ADB and IADB, 2014), PPPs can be defined as a 'long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance' (WB, ADB and IADB, 2014: 18).

Projects can be classified into:

- ***Greenfield* projects**: PPPs that involve new **assets** are often called 'greenfield' projects. For example, the United Kingdom's PPP programme—called the Private Finance Initiative (PFI)—involved private companies in financing, building, and managing new public assets, from schools and hospitals to defense-related facilities (WB, ADB and IADB, 2014).
- ***Brownfield* projects:** PPPs that transfer responsibility for upgrading and managing existing assets to a private company are called 'brownfield' projects (ibid).

PPPs are marked by the following key features (WB, ADB and IADB, 2014):

- They specify assets or services provided in terms of outputs rather than inputs—in other words, defining what is required, rather than how it is to be done.
- They cab bundle together multiple functions, depending on the nature of the PPP concession. The functions can include the following:
    - **Design** (or 'engineering' work) entails developing the project from its inception – specifying the initial concept and the requisite outputs as well as specifications ready for construction.
    - **Build, or Rehabilitate** can involve the creation of new infrastructure assets or the rehabilitation of existing assets. In the former case, private parties construct the asset and install all equipment. In the latter case, the private party rehabilitates or extends the existing assets.
    - **Finance** Flowing from the arrangement for building new assets or rehabilitating existing ones, the private party needs to provide or secure the

finance for all or a proportion of the necessary capital expenditure these require.

- **Maintain** This entails assigning responsibility to the private party for maintaining an infrastructure asset to a specified standard over the duration of the contract.
- **Operate** This involves the private party taking on operating responsibilities of the asset and associated services. For example, the private party can be in charge of:
    - Technical operation of an asset, and providing a bulk service to a government off-taker—for example, a bulk water treatment plant
    - Technical operation of an asset, and providing services directly to users—for example, a PPP for a water distribution system
    - Providing support services, with the government agency remaining responsible for delivering the public service to users—for example, a PPP for a school building that includes cleaning services.

- ***Payment mechanisms are contingent on performance.*** The mechanisms for payment to the private party can vary, but in all cases payment is contingent on performance. Depending on the functions of the private party, users or governments can pay all or some of the amount for the service.

    - Under '**user pays'** PPPs, such as toll roads, the private party generates revenue by charging users for that service. These fees (or tariffs, or tolls) can be supplemented by subsidies paid by government, which may be performance-based (for example, conditional on the availability of the service at a particular quality), or output-based (for example, payments per user).
    - In '**government pays'** PPPs, the government is the sole source of revenue for the private party. Government payments can depend on the asset or service being available at a contractually-defined quality ("availability" payments). They can also be output-based payments for services delivered to users—for example, a "shadow toll" road that is free for users, but for which the government pays a fee per driver to the operator.

Even though most PPP contracts have the features identified above, the international standard to define a PPP and to specify particular responsibilities and payment mechanisms vary (WB, ADB and IADB, 2014). For comparisons across countries, this can be problematic. Moreover, partnerships between the private sector and the public sector are certainly not restricted to PPPs, and encompass a wide range of other arrangements. In some cases, there is a great deal of overlap, but in others the arrangements under PPPs or otherwise between the two sectors can mean very different things. Country contexts are therefore important when gauging the levels of and changes in private sector participation.

Governments enter into a wide range of contracts with private companies. Some of these contract types share some or all of the typical PPP characteristics - being long-term, output based, or performance-related for instance (WB, ADB and IADB, 2014). These can vary from:

- Management contracts with similar performance indicators and requirements to PPPs. Note that these are usually of shorter duration in comparison to PPPs, and do not involve high private capital investment—with performance incentives created through payments and penalties.
- Operations and Maintenance (O&M) and performance-based maintenance contracts in these instances are also of shorter duration relative to PPPs.
- Design-build, or 'turnkey' contracts involve output-based specifications similar to PPPs, but their short term nature does not create the same performance incentives as longer-term PPPs.
- Financial lease contracts to provide public assets. These are of long duration, but pose less risks to the private party than under PPPs.
- Other arrangements between the public and private sectors in particular to promote public policy goals entail:

    - Information-sharing mechanisms
    - Voluntary activities undertaken by private companies towards public ends and in coordination with relevant authorities, such as community health or education projects attached to major FDI projects
    - Private funding of public investment projects on a philanthropic basis, which may involve some private involvement in project execution
    - Jointly-run projects for research and innovation, formed to draw on skills and information in both the public and private sectors
    - Government interventions to support private sector development in general, or in particular target sectors—such as providing land, assets, debt, equity or guarantees to otherwise fully private enterprises that are not public service providers.

The underlying rationale for PPPs is that they provide a mechanism for governments to procure and implement public infrastructure, including services, using the resources and expertise of the private sector. PPPs combine the skills and resources of both the public and private sector by sharing risks and responsibilities (PPP-IRC, 2014). PPPs have delivered infrastructure projects that otherwise would either not have been built or only at a later date due to a lack of finance and/or management capacity (ibid).

The key drivers for governments to pursue PPPs tend to be threefold. Firstly governments are often not able to borrow at a lower rate than the private sector. Secondly, though it comes at a premium, they allow governments to offload some of the financial risks associated with infrastructure developments to the private sector. Thirdly, the private sector tends to be more efficient at planning and implementing infrastructure projects leading to overall cost savings (PPP-IRC, 2014).

It is important to acknowledge that PPPs have a mixed record as a public performance tool in delivering sustainable infrastructure (Colverson & Perera, 2012). Concession of public services to private entities represents foregone public revenue from public assets, so the near term fiscal appeal of PPPs need to be weighed against long term fiscal implications. Likewise, the cost of having public institutions capable of procuring, negotiating, monitoring, and

enforcing PPPs should be taken into account. Notwithstanding these challenges, PPPs can be useful.

To be successful policymakers need to have a clear vision of the objectives and a deep understanding of the context to fully appreciate the advantages and limitations of PPPs (Phack, 2009). A careful analysis of the long-term development objectives and risk allocation is essential. The legal and institutional framework in a country also needs to support a PPP model of infrastructure development and provide effective governance and monitoring mechanisms for PPPs.

There are several examples of good practice PPPs to draw on. For example, Hong Kong developed possibly one of the best public transport systems in the world through a PPP. The Hong Kong Mass Tansit Railway (MTR) is incorporated with the government acting as the leading shareholder but management is autonomous. The government provides the land for the MTR to develop subway stations and tracks. The MTR in turn builds and leases out condos, office blocks and malls around and on top of subway stations, which pays for its transport services and makes an additional profit. The Hong Kong MTR model has been so successful that the company now runs subway systems in other cities including London (WEF, 2014).

5.3 The private sector as 'investor'

Urbanisation and economic development processes both require massive infrastructure. Financing urban infrastructure and services is a *productive investment* which can unlock endogenous growth potential. Increasing the scale and efficiency of urban development financing should therefore be a priority, and the private sector seen as the key investor.

Based on the 2014 update on figures[2] from the *Private Participation in Infrastructure Database* (PPID, 2014), we can assess how critical the role of the private sector as an 'investor' is. Some headline facts include:

- Total investment in infrastructure for projects with private participation in the energy, transport, and water and sanitation sectors increased 6% to US$107.5 billion in 2014.
- Brazil drove the increase with US$44.2 billion of the total.
- Just five countries – Brazil, Turkey, Peru, Colombia and India accounted for 73% of total investment and 63% of all projects.
- New 2014 data shows the highest-ever average project size of US$419 million, an increase consistent with a decade-long trend toward larger projects.
- Four out of six regions experienced declining investment levels.

[2] Note that the data covers the period from 1990 to 2014 and reviews more than 6,000 projects across 139 low- and middle-income countries, providing information on private infrastructure investment in emerging markets.

- The largest number of new projects were in **energy** (157), followed by **transport** (49), and finally **water and sanitation** (33). Although the energy sector had the most new projects, the sector with the greatest investment was transport, receiving US$55.3 billion, or 51% of total global investment. The energy sector accounted for US$48.2 billion, or 45%, and the water and sanitation sector for US$4.1billion, which was 4% of total investment committed.

- A sectoral overview provides further detail:
    - **Roads.** Roads attracted the most investment with US$28.5 billion in 33 projects, approximately the same number as in 2013. The average road project, however, was much larger at US$863 million. Four out of the top five road projects are in Brazil (the fifth is in Turkey). India had 13 new road deals in 2014.
    - **Airports.** Airports captured the second highest investment with US$13.2 billion committed in five projects. The largest deal—Rio de Janeiro's (Galeao) Airport—was a concession that accounted for over US$10 billion. Of this amount, US$8 billion was a payment to the government.
    - **Rail.** Three large rail projects closed in Brazil, China, and Peru—one in each country. The largest of the three projects—Lima Metro Line 2—was heavily subsidised by the Peruvian government with a US$3 billion capital grant.
    - **Seaports.** Investment in seaports fell year-over-year, receiving only US$3.2 billion in eight projects. The three regions with investments include South Asia, Latin America, and East Asia.
    - **Electricity.** At US$45.4 billion and 151 new projects, the electricity subsector continued its decline with 22% lower investment and 30% fewer projects than in 2013. Electricity investment continued to wane and in 2014 was 30% lower than the rolling five-year average of US$60 billion. Generation projects accounted for US$39.9 billion of the total, while distribution and transmission projects accounted for US$3.8 billion and US$1.6 billion, respectively. Within electricity generation, approximately US$22 billion was in renewables. Onshore wind and Solar PV were the most common technologies for **renewable** energy projects.
    - **Natural gas.** Although a small amount of the total, US$2.7 billion was committed to natural gas. This is nearly four times the amount committed in 2013. Mexico accounted for most of the increase with three new gas pipelines reaching closure (Los Ramones 1, Sonora and Tamazunchale El Sauz). The increase in natural gas investment in Mexico is part of a larger reform in the sector.
    - At US$4.1 billion, investment in the **water** sector was 8% higher than the five-year moving average of US$3.7 billion (PPID, 2014).

Meeting the infrastructure demand without catalysing the role of the private sector as an 'investor' will be increasingly difficult. Various studies have identified the 'funding gap' in infrastructure provision as a major bottleneck to urban development. For example:

- In 2010, the World Bank's diagnostic study of infrastructure in Africa estimated that Sub-Saharan Africa needed to spend US$ 93 billion a year on infrastructure, of which only half was being met through existing sources—such as government spending, user charges, private sector investment, and other external sources.
- According to the 2013 IADB infrastructure strategy, the additional investment needed in infrastructure in Latin America amounted to US$100 billion per year, about 2% of regional GDP.
- A 2007 OECD report on *Infrastructure to 2030* identified a widening gap between the infrastructure investment needed for the future and the capacity of the public sector to meet those requirements from traditional sources.
- MGI estimates $57 trillion in infrastructure investment will be globally required between 2013 and 2030 mainly in roads, power, water and telecommunications technologies - simply to keep up with projected global GDP growth. The value of this investment is more than the estimated value of today's worldwide infrastructure. Currently global infrastructure investment is US$2.7 trillion a year, but US$3.7 is needed.
- Allianz (2014) estimates that around $2 trillion will have to be invested every year over the next 20 years to upgrade urban infrastructure and make it more sustainable.
- Some countries such as China and Japan are perhaps overinvesting, but most countries are not investing enough in infrastructure, and this is a pressing issue in particular in Africa and Latin America. Underinvestment in infrastructure and in particular in urbanisation will constrain and even shrink developing economies, since new infrastructure is needed and maintenance and operation of existing infrastructure even more so.

Without investment in the necessary infrastructure and the development of appropriate management capacities, cities will become unmanageable and will no longer be competitive (BMZ, 2014). This is true for cities across Asia, the Middle East, Africa and Latin America alike (WEF, 2014). The largest infrastructure gaps tend to be in cities in poor countries, e.g. Lagos, Jakarta, Dhaka, Karachi and Cairo (ibid).

Infrastructure investments required in Chinese and Indian cities needs to be in the range of 4 to 6% of urban GDP by 2025, equivalent to roughly $850 billion a year (Dobbs et al, 2012b). The good news is that countries like India can raise up to$12 billion per year by leveraging debt and encouraging private sector participation in urban sectors (MGI, 2010).

It is also in the interest of the private sector to engage as an investor. Urbanisation in India and China alone present infinite possibilities for new private sector investments (MGI, 2010) (see box 3 on China).

In an enabling environment, the private sector (under PPPs) is adept at mobilising additional sources of funding and financing for infrastructure. Countries that have had long histories with PPPs have found them to manage construction better than traditional procurement, with projects coming in on time and on budget more often. These efficiencies are usually attributed to the incentives created by the PPP structure. Finally, the longer-term investment perspective under such contracts helps to ensure that assets maintain their quality.

Some PPP arrangements can help close this funding gap in infrastructure—for instance bring in more revenue to pay for infrastructure services, including:

- Increased revenue from user fees—by introducing user charges, or reducing leakage in the collection of charges. For example, the N4 Toll Road in Mozambique and South Africa was developed as a toll road under a PPP, since neither governments had the funds to invest otherwise. Cross-subsidies from the South African side to the Mozambican side helped make tolls affordable to users (WB, ADB, IADB, 2014).
- New revenue streams from greater asset utilization. Raising revenues from alternative uses for infrastructure assets can reduce the cost of the infrastructure to government or users (ibid).

Land-based financing is also another avenue and as such, an underutilised source of funding. Land values typically increase with urbanisation and public investment and this "unearned increment" is socially generated. Ways to share this value include value-based annual land taxes, betterment levies, capital gains taxes, developer exactions, and land readjustment. A transparent and up-to-date fiscal cadastre is essential to the utilisation of such tools (UNHABITAT, 2012). Crucially, however, land use planning is critical to urban form, and thus the ability of urbanisation to serve economic development. Land-based financing poses risks revenue mobilisation objectives can work at odds with planning objectives if not managed carefully.

Box 3: China's policy of accelerated urbanisation

China has recently launched a policy of accelerated urbanisation. The government has raised urbanisation targets. The primary target is an urbanisation rate of 70% by 2025, for a total of nearly 1 billion people. This target implies an additional 250 million urban residents over the next decade.

The focus is on under-urbanised regions, with a view to creating new cities, ensuring a viable economic base and securing livelihood for the residents.

The financing needs are enormous. Approximately RMB42 trillion (US $ 6.75 trillion) will be required to finance China's urbanisation efforts over the next seven years. In order to meet these needs, the resources worth exploiting include: the expansion of China's municipal bond market; the central government granting local governments more revenue collection capabilities (such as commercial and residential property taxes); the promotion of more sophisticated frameworks offering local governments and private funds an incentive to cooperate and mitigate risks; as well as expanding skill sets, training, and capacity building efforts to support China's local government officials, who will be asked to take on new and important treasury and finance management responsibilities.

In China, local governments – and not the central government – take primary responsibility for funding their respective urban development plans. A significant hurdle for local governments funding urbanisation is that they are unable to rely on steady, sustainable fiscal revenues to underpin investment efforts. In the present fiscal structure, the governments retain only a portion of taxes collected locally, and have few options – other than land sales – to generate revenues. To enhance reform at the local level, the central government could grant local governments more autonomy and discretion toward the collection of certain taxes, such as: licensing fees and vehicle taxes, personal income taxes, corporate taxes, and property taxes.

According to the urbanisation review of China issued jointly by the World Bank and the Development Research Center of the State Council, the Chinese government should introduce property taxes as a major revenue source for local governments. Allowing local governments the ability to tax commercial and residential property is one of the most significant options under consideration, and would allow local governments to effectively match revenue against urban project expenses, ensuring fiscal responsibility without relying on less sustainable financial avenues.

PPPs are also viable in the areas of public infrastructure construction and urban public services. But, these partnerships have been exposed to certain market risk factors in China. Since PPPs are long-term in nature, they must not only gain current local government support, but also continue to receive support for the duration of the project or service. However, China's mayors typically rotate positions every five years; if an incoming mayor does not support a PPP in progress, the PPP may encounter significant political risk. For PPPs to succeed and gain investment from international enterprises in China - an ultimate objective - this political support must be more transparent and codified in the eyes of international investors.

The central government has identified this need, and according to China's National New-Type Urbanisation Plan (2014-2020), the government is now taking steps to align the performance evaluations of the mayors to the long-term success of such projects. In addition, legal frameworks may be introduced to include regulatory oversight and dispute resolution at the national level, which would better protect the interest of the private investor, and ensure a more transparent legal landscape.

Source: World Bank and Development Research Center of China's State Council (2014)

6 Public policy tools to engage the private sector

Urbanisation in the coming decades will allow positive economic transformations to take place – but, mainly when improving its quality is made an overarching policy objective by planners and policymakers today. While private investment choices fuel cities' economic growth and development, urban public policy is and will continue to be a critical enabler of that process. A dramatically changing urban landscape will require constructive engagement between the public and the private sector. In this section, we suggest what that should look like.

A series of key reports in 2014 have all advocated for a targeted, coordinated and cross-sectoral approach to urban development and bundling policy instruments together as the right way forward (Seto and Dhakal, 2014; NCE, 2014; and Granoff et al, 2014).

In this topic guide we suggest what that bundling should involve:

- Increasing the role of the private sector in delivering better urban outcomes;
- A deliberate linking of urban planning with public policy; and
- Contextualising urban planning within a wider economic development strategy that not only aims at inclusion, but also sustainability.

6.1 Role of the private sector to deliver better urban outcomes

The private sector can act now to support cities future proof their development (Atkins, 2012). Bangalore, India is a good example of progressive private sector investment and involvement in low-carbon buildings (Atkins, 2012).

The private sector can also fund a sizeable percentage of urban projects, in water supply and distribution, sewage treatment, solid-waste management, public transportation routes, and mass transit systems (MGI, 2010). These projects can also extend to education, healthcare, and other services (ibid).

MGI (2010) and UN (2011) share some core areas and options for private sector engagement. Some country and city based examples are also provided to show where good outcomes have been generated (see table 2).

Table 2. Private sector involvement in core urban services

Core urban service	Potential private sector involvement		Examples
	McKinsey Global Institute (2010)	UN (2011)	
Water and sewage	Tariff collection and management of water distribution infrastructure and fixed fee contracts to lay	Financing and management	The private sector consortium in Casablanca, Morocco, since 1997 handles the city's water and sanitation services (UN, 2013)

	out water and sewerage pipes		
Waste management	Fixed fee contracts for waste collection and processing	Financing and management	Municipal Solid Waste Treatment, based on a PPP in Wenzhou, China (PPP-IRC, 2015)
Transportation	Construction and operation of toll roads, mass transit systems with viability gap funding and regulated user tariffs	Financing and management	Mass Transit Railway Hong Kong, China (WB, 2009) discussed earlier; In Casablanca, Morocco, all of the inhabitants have access to electricity, with services provided since 1997 by a private-sector consortium (UN, 2013)
Education	Fixed per student funding for managing municipal schools with agreed benchmarks and target outcomes	Financing, management, and business venture	In Nairobi, Kenya the private sector has launched a new Internet/ cell phone based virtual platform enabling low and middle income residents to pay school fees (UN, 2013).
Health care	Concession agreements for managing municipal hospitals	Service provision	Lesotho, National Referral Hospital. In 2011 Lesotho replaced its main public hospital with a new 425-bed facility supported by a network of refurbished urban clinics. All the facilities were designed, built, financed, and operated under a PPP arrangement that included clinical services. The new hospital started to deliver greatly improved, high–quality, publicly funded health care services and serves as the main clinical training facility for all health professionals. The PPP project was the first for the health sector in Africa (IFC, 2014).
Housing	Incentives to private sector developers in return for a fixed amount of affordable housing units; fixed fee construction contracts for units built directly by the government	Construction, financing, management	Housing in Hong Kong, China during urban redevelopment phases were led by the private sector (WB, 2009); Through China's affordable housing programme, private sector developers build houses for lower and middle income groups at 50 to 75% of the market price. To make this viable for the private sector, the government extended free land allocation, provision of basic infrastructure, tax exemptions (MGI, 2010). Singapore develops land and housing plans every 10 years and lets the market function once public and private sectors agree on which economic activities to develop and which residential patterns are needed to accommodate firms and workers (WDR 2009).

In order for the private sector to engage to this extent to fulfill urban planning, public policy and development objectives, the public sector needs to step up its efforts.

- First, in considering what incentives it can provide to the private sector to participate (a lot can be accomplished if the public sector improves the institutional and regulatory environment and investment climate);
- Second, reflecting on what arrangements it can pursue beyond PPPs to meet its financial needs (e.g. fiscal decentralisation, issuing municipal bonds etc.) and other non-financial obligations (delivering on universal service provision of core services through better management of its own operating systems, reducing distribution and transmission losses, reducing water and electricity theft by informal network providers and corruption, promoting e-governance, etc.); and
- Third, implementing specific policy instruments and interventions that complement, coordinate and collaborate rather than compete with the private sector.

The private sector needs also to recognise that beyond short term profit-motives for engaging in wider planning, policy action and economic development strategies, there is a greater responsibility to deliver on inclusive and sustainable urbanisation. These will serve enterprise in the long term. The costs of over-populated, unmanaged, and congested cities will far outweigh any benefits to the private sector from urban growth, if not accounted for now.

Some implications of private sector involvement in urban development are worth highlighting as well. Even though PPPs can increase the fiscal space for infrastructure provision, the costs of this may ultimately be borne by the public sector. In this sense, the fiscal advantages of private sector involvement are likely to be more apparent than real.

Governments do need to hold the private sector accountable, but also provide it the flexibility to find the most efficient and effective ways to provide quality services. A balance between reasonable rates of return for the private sector, extraction of fees and charges by the public sector, and quality services at affordable costs to consumers is key.

6.2 Urban planning and inclusive public policy

While urbanisation is inevitable, inclusive urbanisation is not. It requires more than an open-door policy to welcome migrants from rural areas into urban areas (McGranahan and Satterthwaite, 2014); it requires a focus on fundamentally restructuring the urban form, as characterised by density, land-use, connectivity, and accessibility (Seto and Dhakal, 2014) that both urban planning and public policy can together deliver (Granoff et al, 2014). From an environmental perspective too, sustainable urbanisation is not inevitable. A combination of efficient infrastructure and a shift in public policy and urban planning is needed to steer the transition towards sustainable cities (McGranahan and Satterthwaite, 2014).

For the key variables examined in this topic guide it makes perfect sense to link urban planning with public policy. For instance, both infrastructure and land-use drive the urban form, and therefore proper urban planning can do much to ensure that the shape a city takes (based on how physical and social infrastructure is laid out; how commercial, industrial and residential areas are built and to what standard; and how land is converted

to accommodate urban expansion) is aligned well with wider public policy objectives. In many countries, these include amongst others: the goal to increase people's access to basic services such as water, sanitation, sewage and electricity; to improve the quality of life indicators (education health, and income) for greater wellbeing; and to reduce pressures on the environment and to mitigate and adapt to climate change. Incorporating an inclusive and sustainable aspect to urban planning and public policy can really help to deliver on these goals.

The public sector is critical in urban public policy, but the private sector, as a key stakeholder, can also play an important role in this regard. As a 'partner' and 'investor' it can provide the resources, skills and expertise that a good urban form requires (see table 2 for some examples).

6.3 Urban planning and economic development strategies

The transition to more compact, connected, and coordinated urban growth will require countries to put urban planning at the heart of their economic development strategies (NCE, 2014). Many of the factors that make cities economically vibrant, liveable and efficient generally also constitute the factors most relevant to attracting private sector development. Planning and infrastructure investment, for example, can drive agglomeration and concentration, mechanisms that are precisely those that make urban environments generally attractive to commercial activity. These factors, combined with those focused on facilitating the ease of doing business—efficient public institutions, clear and rational legal environment, etc.—attract private investment.

Urban planning, infrastructure investment, and investment in urban institutions are ultimately public sector issues and costs. However, if they are designed to facilitate private investment these public investments leverage the private sector by attracting it: the benefits to the private sector from the factors discussed in the prior section—urban agglomeration and urban concentration, infrastructure, mixed land-use, ease of doing business, and institutions—are numerous.

The private sector as a 'supplier' of economic opportunity (through income and employment, goods and services, efficient flows of capital, etc.), and as a 'partner' and 'investor' can generate the necessary momentum for economic development to continue apace. At the same time, the private sector can continue to reap the benefits of urban agglomeration, concentration, density and increased economic activity that come from effective public planning and investment.

7 Conclusion

The findings of this topic guide on *Urbanisation and Economic Development: Private Sector Linkages* are summarised below.

First, there has been a conceptual shift in thinking about urbanisation in the context of economic development. Although establishing a causal relationship is complex, urbanisation generates enormous growth benefits and should be recognised as a gateway to greater economic opportunity.

The five key propositions in the conceptual background section reinforce this point.

- Countries urbanise as they develop.
- Urbanisation is strongly correlated with but does not cause economic growth.
- Urban concentration has growth enhancing benefits.
- The correlation between the rate (and not the level) of urbanisation and GDP level is hard to determine.
- Regional trends impact the relation between urbanisation and economic development.

Still, the symbiotic relationship between the two processes needs to be unpacked further to see the kinds of barriers they impose on each other, at what stage of their respective trajectories, and under what conditions in addition to measuring fully the kinds of opportunities they offer along the way. This is difficult though and in particular when the definition of 'urban' and what it constitutes changes over time, when the methodologies to capture their full impact on each other are weak and data on urbanisation and economic development come with a lag. It is however not impossible. With better accounting by all agents involved in the two processes, this can be done.

Second, factors such as urban density, connectedness, mobility, and economic activity matter a great deal in thinking about the future of our cities and about how we aim to urbanise and develop in the short to medium run. Are we comfortable with informality, slums and congestion, with massive health and environmental consequences or are we willing and prepared to do what it takes to ensure a better urban future for all?

Third, public policy and investment choices that facilitate density, connectedness, mobility and economic activity – i.e. infrastructure, land-use, ease of doing business and institutions – are equally important to rates of urban growth or urban size in shaping the quality of urbanisation and economic development. These are critical to ensuring that urbanisation represents positive rather than negative economies of scale.

Fourth, urban density, mobility and connectedness in turn generate economic development by facilitating growth of the private sector. They create a larger and more diverse labour pool and access to suppliers and specialised services for production, and a greater local market. Connectedness lowers information and transaction costs, and encourages innovation. Many of the factors that make cities economically vibrant, liveable and efficient generally also constitute the factors most relevant to attracting private sector development. That development, in turn, functions as a supplier of economic opportunity.

Finally, although urban planning, infrastructure and investment in urban institutions are ultimate public sector driven, the private sector can and should be a critical 'partner' and 'investor' in delivering better urban form. Private investment in infrastructure is critical and needs to be scaled up -- even if caution must be taken that such investment serves the public inclusively. Private sector involvement and engagement is also important to inclusive public policy, planning and investment, which can adapt and design variables that generate better urban forms and economic development patterns.

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