# Better Cities for Greater Growth: Rethinking Malaysian Cities for Sustainable Development

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Johor Bahru

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# Better Cities for Greater Growth: Rethinking Malaysian Cities for Sustainable Development

# Overview

This policy paper advocates for adopting a spatial approach to Malaysia's economic growth, focusing on the role of cities in accelerating Malaysia's transition to a high-income country and in achieving inclusive and sustainable growth. The paper proposes that Malaysia strengthen coordination across federal, state, and local levels of the government and that it manages its cities as a dynamic portfolio of assets with distinctive endowments and characteristics. The paper presents measures for institutional transformation, including a review of the prevailing division of mandates and a search for an optimal model for stronger urban finance and development. The federal government can also design an effective support program to help cities enhance their competitiveness and livability and contribute to regional and national development. Furthermore, the paper underlines the importance of building resilient, low carbon cities as well as adopting smart solutions for a prosperous urban future in Malaysia.

## Introduction

**The primary motivation of this policy paper is to encourage a productive dialogue on the role of cities in achieving Malaysia's ambition to continue productive, inclusive, and sustainable growth.** The policy paper started from a roundtable discussion on June 23, 2023, entitled "Expert Roundtable Dialogue on Malaysia's Urban Policy" with key stakeholders in Malaysia. The World Bank and Think City—a think-and-do organization dedicated to making places and people more livable, resilient, and sustainable in Malaysia—jointly hosted the roundtable and began developing a policy paper to highlight key challenges and opportunities for Malaysian cities. The paper draws heavily from existing and ongoing analytics on Malaysia, which are abundant and of high quality. However, the paper bears limitations, lacking in-depth analysis using recent and updated data, which could be presented in a follow-up paper. Instead, the paper focuses on general challenges and key proposals, presenting several workstreams in the conclusion section, to inform future analytical and advisory work that can guide the national and sectoral policy, notably, the Thirteenth Malaysia Plan (RMK 13).

# Motivation

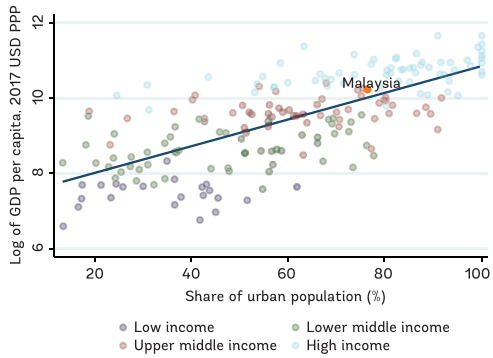
Kuala Lumpur

# Motivation

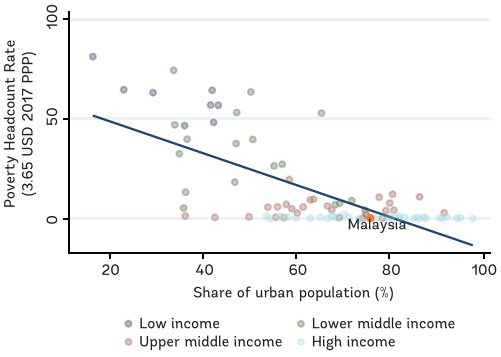
**Global evidence shows that urbanization goes hand-in-hand with higher gross domestic product (GDP) per capita and lower poverty.** Most countries reached middle-income status while urbanizing, and none has reached high-income status without vibrant cities (World Bank 2009). In this process, income per capita tends to rise and poverty rates fall as the share of the urban population rises (figure 1), often accompanied by increases in the share of GDP generated by industry and services, as well as the share of the labor force working in those sectors. Though urbanization comes with various challenges, if well managed, Malaysian cities can be powerful catalysts for economic growth, innovation, and improved livability.

*Figure 1. Urban share of the population, GDP per capita and poverty rate by country income level, 2019.*

a) GDP per capita v. urban share



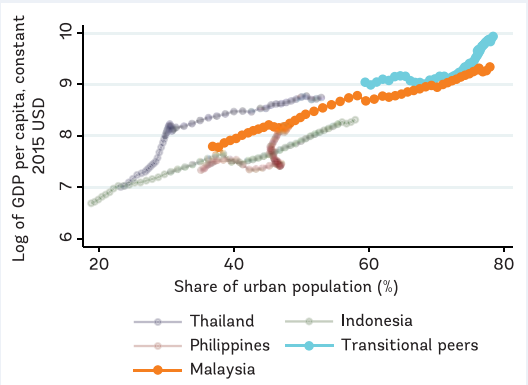

b) Poverty rate[a] and urban share




*Source:* World Development Indicators (2024).
*Notes: a. Poverty rate based on LMIC poverty line at 3.65 USD (2017 PPP).*

**Malaysia is closely following the global trend, as an upper middle-income country that has reaped the triple benefits of population growth, urbanization, and economic development over the past decades.** The country has recorded an average annual GDP growth rate of 3.6 percent and an increase of GDP per capita from US$1,385.90 to US$11,399.40 between 1962 and 2022.[1] This has reduced the poverty rate[2] from 49.7 percent in 1970 to 8.4 percent in 2020, which is an impressive achievement considering the urban population grew three times during the same period (1962–2022) from 28 percent to nearly 78 percent. Malaysia's urbanization has been closely linked to national economic growth (figure 2) and this indicates that Malaysia may have benefitted from urban agglomeration[3]—i.e., productivity gains from the spatial concentration of economic activities and population in urban areas.

*Figure 2. Growth in GDP per capita and urban population in Malaysia and its peers, 1960s to 2020s.*

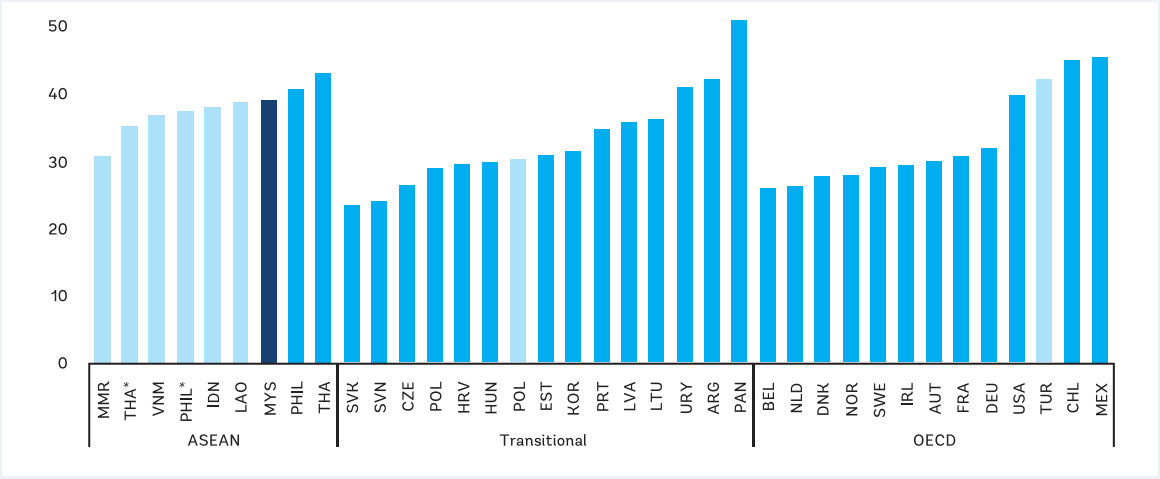



*Source:* World Development Indicators (2024)
*Note:* Transitional peers refer to the countries that attained high-income status within the past 30 years, including: Chile, Czech Republic, Estonia, Hungary, South Korea, Lithuania, Latvia, Poland, Slovak Republic, Slovenia, Argentina, Puerto Rico, Croatia, Saudi Arabia, Oman, Trinidad and Tobago, Panama, and Paraguay.

**Building on the remarkable growth in the past decades, Malaysia is on the way to become a high-income country.** With a sustained annual growth of four percent, Malaysia is likely to transition from an upper middle-income economy to high-income economy in the near future, despite the setback of COVID-19-induced recession in 2020 (World Bank 2021). A series of plans, policy reforms, and actions taken by the Government of Malaysia to spur economic development was critical for this transition: (i) an export-oriented growth model, which has promoted trade and integration with the global economy, (ii) labor-intensive growth by investing in human capital, focusing on improving education and healthcare services, and (iii) credible economic governance and macroeconomic stability, such as implementing policies to attract foreign direct investment (FDI) and promote a business-friendly environment (World Bank 2021).

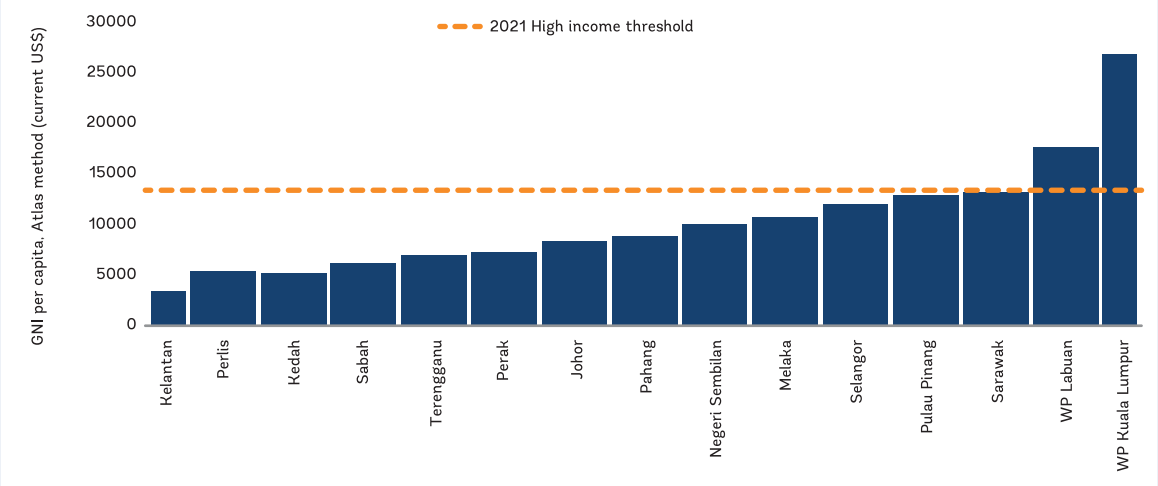
**Yet, some states in Malaysia will not become high-income economies even after the country has made a transition due to persistent income disparities.** Income inequality, measured by the Gini index, remains relatively high in Malaysia compared with regional and transitional peers, recorded at 40.4 in 2022 (figure 3). This creates a prevailing perception that the benefits of growth are not being equitably shared among all citizens, which can weaken the political support for the reforms necessary to achieve structural transformation of the economy (World Bank 2021). Disparities also persist between states. The income level of Kuala Lumpur as well as states like Pulau Pinang (Penang) and Selangor have already surpassed the high-income country threshold, while many other states are well below the national average income (figure 4).

*Figure 3. Gini Index, ASEAN, OECD and recently transitioned high-income countries, most recent data.*




*Source:* Malaysia Economic Monitor (2024c), using World Bank Poverty and Inequality Platform and World Bank staff calculations based on DOSM data

*Figure 4. Average GNI per capita by State for 2015–2022.*




*Source:* Ministry of Economy Malaysia (2023), World Development Indicators (2024).
*Note:* GNI per capita by state is calculated by multiplying GDP per capita by state with a conversion factor. The conversion factor is calculated for each year based on ratio between national GNI per capita and GDP per capita.

**For a sustainable and equitable transition to developed country status, Malaysia needs to enhance the quality of economic growth by sharing prosperity, which is the prevalent policy thinking.** The Twelfth Malaysia Plan, RMK 12 (2021–25) presents a strong focus on accelerating the development of less developed states, including Sabah and Sarawak and reducing the development gap between rural and urban areas for greater inclusion. The latest "Ekonomi Madani"[4] presents a vision that emphasizes the influence of social factors, values, and societal norms on economic development and growth. Recognizing declining growth rates, increasing income or wealth inequality, and weakened economic competitiveness, the Ekonomi Madani framework seeks not only to revitalize the country's economy but also to generate growth that improves the well-being of the people and enhance the nation's competitiveness.

**Adopting an economic geography lens can help Malaysia accelerate the process of sustainable and inclusive growth.** The economic geography of a country refers to the spatial distribution of economic activities, resources, and development outcomes within that country. One main proposition put forward by the "World Development Report on Reshaping Economic Geography 2009" is that economic production tends to concentrate and efforts to disperse them, for example, by incentivizing companies to move to less populated areas, could potentially hinder national prosperity. Rather, a country should focus on managing three dimensions of economic geography—density, distance, and division—toward enhanced economic integration at the local, national, and international levels.[5]

i. Higher ***densities*** of economic activities, people, and infrastructure can lead to greater productivity, when leveraged for productive gains;
ii. Shorter ***distances*** to economic opportunities, both physical and economic, are important; and
iii. Fewer ***divisions*** within and between communities can promote inclusive development and reduce poverty.

Further, policies that support inclusive development can complement the process toward a more spatially balanced growth. Box 1 presents the recent application of the economic geography concept to understanding the low economic growth rates in Latin America and the Caribbean (LAC) region despite high urbanization of over 80 percent. This can shed light on Malaysia's status and future trajectory.

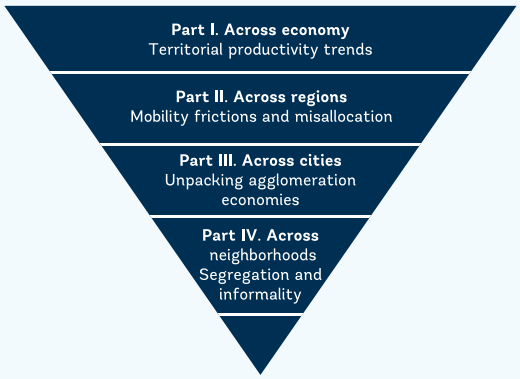
Kundasang, Sabah

***Box 1.*** *The evolving geography of productivity and employment: Ideas for inclusive growth through a territorial lens in Latin America and the Caribbean (World Bank, 2024).*

A recent flagship report uses a territorial lens to show that LAC cities have been held back by a lack of dynamism in urban centers, poor connectivity between cities, and divisions between disconnected poor and affluent neighborhoods.

Using new data and methods, the report shows that deindustrialization, distance, and divisions offer intertwined explanations for an urban productivity paradox in the LAC region: its highly dense cities with a regional urbanization rate of 82 percent should be among the world's most productive, yet they are not.[a] Using the economy–regions–cities–neighborhoods (ERCN) framework (box figure 1.1), the report unpacks this paradox across different spatial scales.

*Box figure1.1 Economy–Regions– Cities –Neighborhoods (ERCN) framework*




- ***Deindustrialization*** has shifted urban employment, especially in the largest LAC cities, away from manufacturing and toward less dynamic, low productivity, nontradable activities. These include retail trade and personal and other services that profit less from agglomeration or density, especially in highly congested cities. Although employment in urban tradable services has risen, the increase has not been strong enough to offset the decline in manufacturing employment.

- Meanwhile, ***intercity connectivity*** or distance issues have undermined the performance of the region's network of cities by restricting market access and firms' ability to benefit from specialization in smaller cities. Within cities, poor connectivity and residential labor market segregation have limited the gains from agglomeration to neighborhoods in central business districts where formal firms operate.

- ***Informality*** has persisted in low-income neighborhoods in urban areas, where residents face multiple deprivations. By contrast, many agricultural and mining areas have benefited from the strong demand for commodities by China and other economies, particularly during the golden decade (2003–2013), leading to a decline in territorial inequality or division in most countries in LAC.

The report concludes that to encourage inclusive growth, countries must transform natural wealth into human capital, infrastructure, and institutions and improve the competitiveness of the urban economy. Similar to the conclusions of the WDR 2009, reshaping economic geography through carefully designed targeted spatial development policies is essential for reducing poverty, fostering inclusive growth, and building more resilient and prosperous societies.

*Notes:*
a. LAC's urbanization rate is higher than the European Union's 75 percent and at the same level as high-income level countries. *Source:* United Nations Population Division. World Urbanization Prospects: 2018 Revision.

**What role can cities play in accelerating growth and sustainable development in Malaysia?** Malaysia's quality transition requires reforms in several areas, notably, revitalizing long-term growth, boosting competitiveness, creating jobs, modernizing institutions, promoting inclusion and financing shared prosperity (World Bank 2021). Competitive cities and regional economic corridors can contribute to GDP and job creation with spatially connective infrastructure and high economic density, as the Eleventh Malaysia Plan, RMK 11 (2016–20). This paper sketches the contours of a strategy for spatial prioritization and coordination in Malaysia, focusing on institutional transformation that will enable effective infrastructure investments and other targeted interventions. Importantly, spatial heterogeneity of challenges in Malaysia needs to be met by equally differentiated policies. The paper proposes that the country review the performance of its spatial strategy to enhance city competitiveness, livability, and resilience and explore an effective modality for impactful implementation. The paper stresses the importance of strengthening the institutional and financial capacity of local governments in Malaysia to better coordinate physical and economic planning, effectively guide infrastructure investments and improve the efficiency and equity of service delivery. Additionally, the paper suggests Malaysia adopt the latest innovations in city planning and management, such as smart and low carbon cities, which can help Malaysian cities, particularly secondary cities, leapfrog urban development phases.

# Malaysian cities' untapped potential

Sultan Abdul Halim Muadzam Shah Bridge, Penang

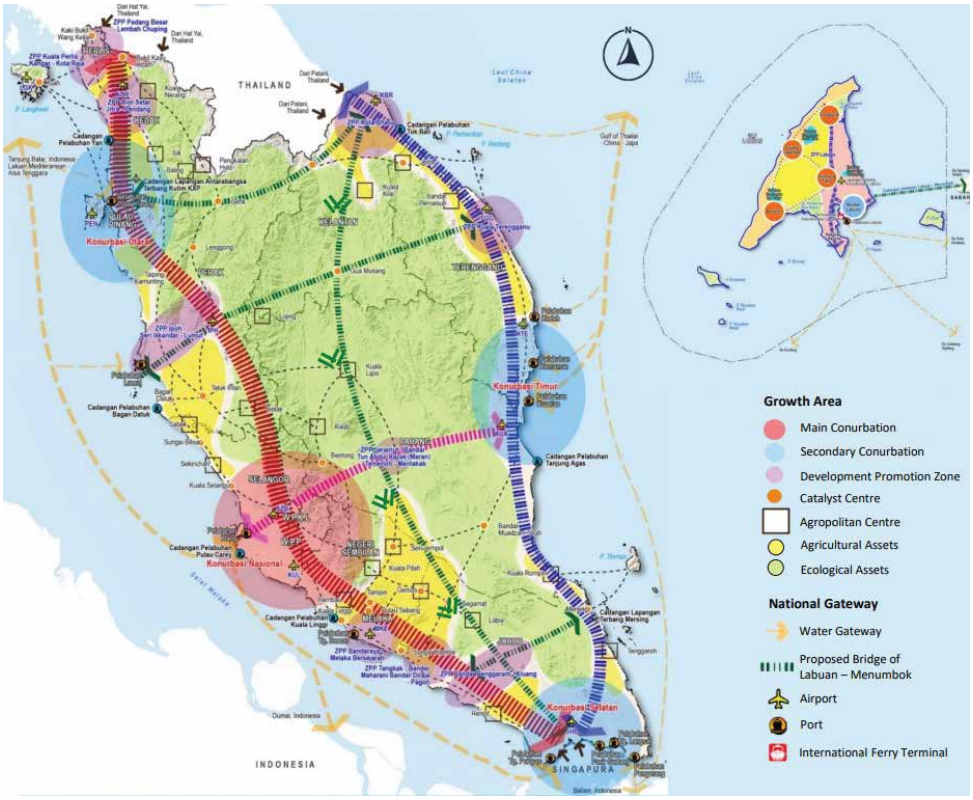
# Malaysian cities' untapped potential

**Malaysian economic geography is characterized by higher densities in leading cities but distances within and to these cities are wide for productive and inclusive development.** Population and economic activities are concentrated in Greater Kuala Lumpur and Johor, with more than 40 percent share of the population and GDP per capita in Malaysia. Such density, however, does not seem to translate into higher productivity in these primary cities, while secondary cities can do better in contributing to national growth. The physical form and connectivity of cities define the distance between jobs and homes. Through effective planning, cities can provide transport and other infrastructure and affordable housing that can foster more cohesive labor markets, enhance the alignment of workers with suitable jobs and potentially increase labor force participation at the margins. Despite continued investments, Malaysian urban forms are not optimal for efficient transportation because of urban sprawl nor for affordable housing owing to division. Divisions also exist across districts and regions in accessing basic services and addressing them will be critical for both productive and equitable development in Malaysia.

## *A system of cities*

**Malaysia is an urban nation with 78 percent of its population residing in cities.** The Department of Statistics Malaysia (DOSM) defines urban areas in Malaysia by: (i) administrative status, which are the gazetted or special development areas, (ii) level of built-up areas, (iii) population size, that is more than 10,000, and (iv) economic characteristics which means 60 percent of the population involved in nonagricultural activities.[6] Most urban residents live across four conurbations in Peninsula Malaysia as identified in Malaysia's Fourth National Physical Plan[7] (figure 5): (i) Greater Kuala Lumpur/Klang Valley includes the capital city of Kuala Lumpur and its surrounding areas, (ii) Johor Bahru conurbation in the southern state of Johor close to the boarder with Singapore and including the Iskandar Malaysia economic region, (iii) Greater Penang conurbation—encompassing the northern states of Kedah, Penang, Perlis, and Northern Perak—with the cities of Butterworth and George Town, (iv) Kuantan conurbation covers Gambang, Gebeng, and Pekan.

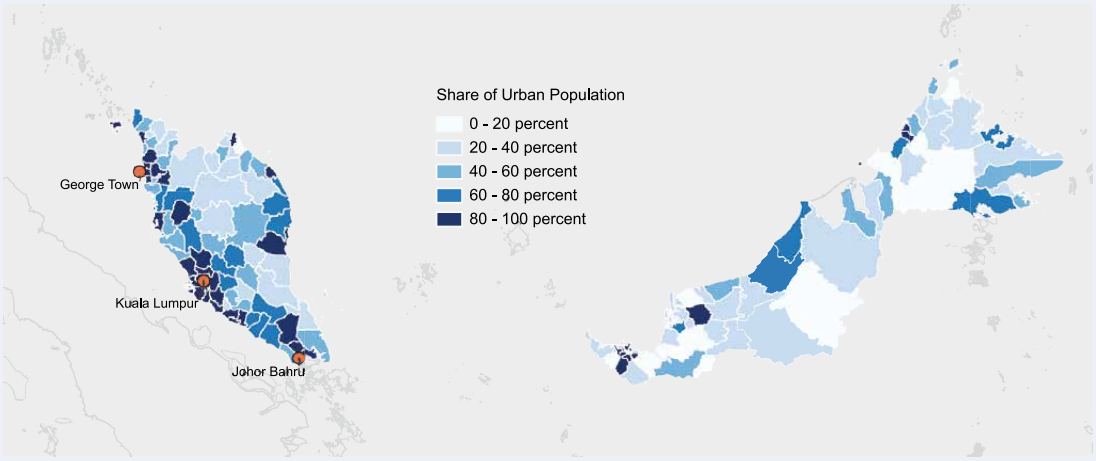
*Figure 5. 4th National Physical Plan strategic concept map.*




*Source: 4th National Physical Plan*

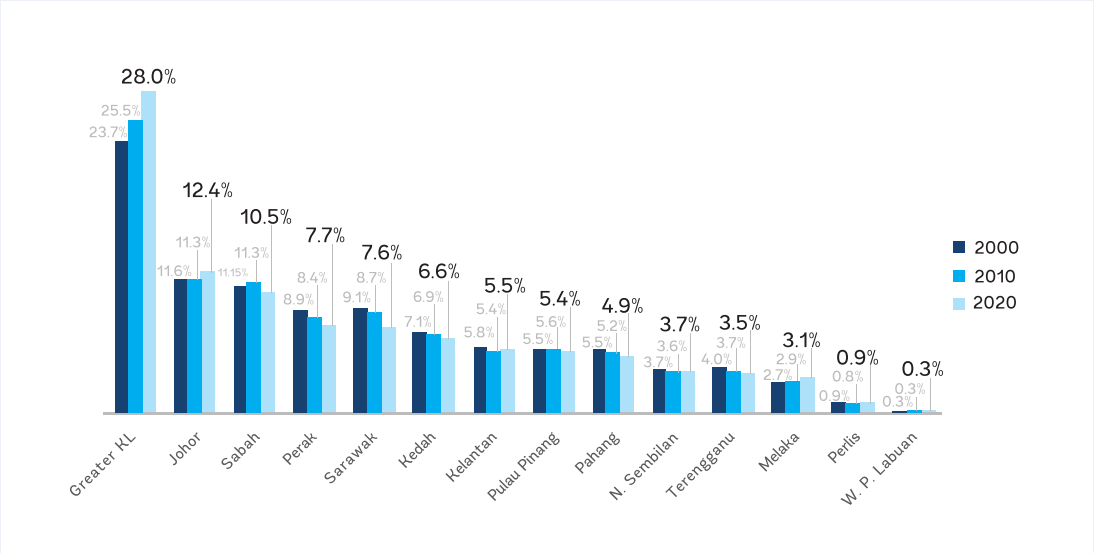
**Greater Kuala Lumpur (Kuala Lumpur, Putrajaya, and Selangor) and Johor are population and economic centers, home to more than 40 percent of Malaysians.** Malaysia's urban conurbations reflect the natural pattern of agglomeration, which maps the share of the urban population at the administrative district level (figure 6).[8] They are also the results of policy decisions. The first National Physical Plan (2005-2010) promoted the development of three main conurbations around George Town, Johor Bahru, and Kuala Lumpur, as locations to steer the country's aspirations. Between 2000 and 2020, the share of the population in these major urban conurbations has grown faster than the rest of the country (figure 7). In 2020, over a quarter of Malaysians were living in Greater Kuala Lumpur and approximately 12.4 percent in Johor. Greater Kuala Lumpur is also the economic center of the country. Two states—Kuala Lumpur and Selangor—contribute to more than 40 percent of the national GDP (figure 8). As is the case with the population increase, these cities have also grown faster economically.

*Figure 6. Malaysian share of urban population by district/division, 2022*



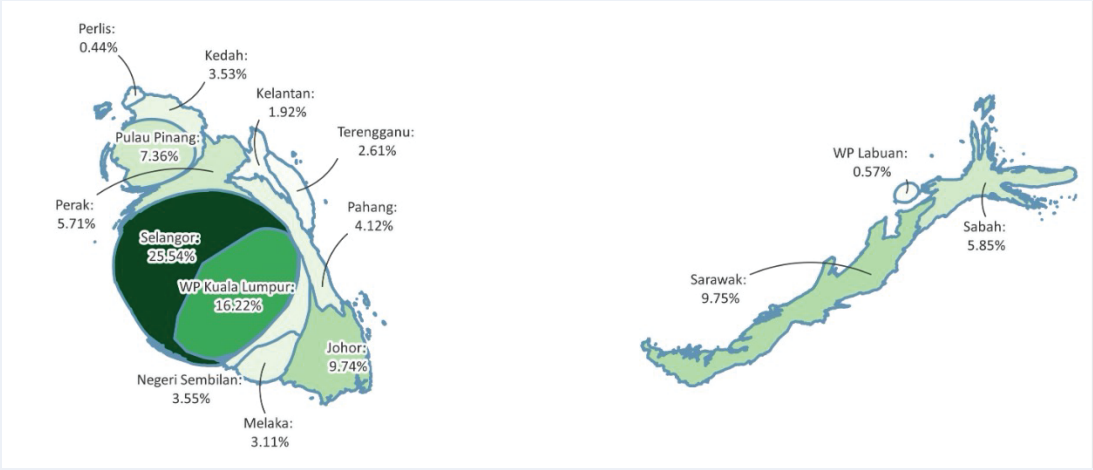

*Source:* Malaysia Household Income and Expenditure Survey (2022).
*Note:* Estimated based on the population weights.

*Figure 7. More than a quarter of the Malaysian population resided in Greater KL in 2020*




*Source: Population and Housing Census of Malaysia (2000, 2010, and 2020)*

*Figure 8. Map of Malaysian States, distorted in proportion to its contribution toward national GDP*

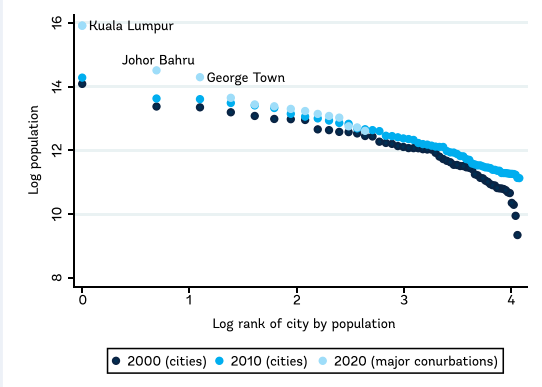



*Source: WB staff calculation based on DOSM data (2021).*

**Malaysia can manage its cities as a dynamic portfolio of assets with unique characteristics and strengths.** Malaysia has a well-balanced system of cities and towns. Urban areas' relative size distribution has remained stable over time, as in many parts of the world. The underlying patterns of cities' growth follow the rank-size rule or Zipf's law by which the rank of a city in the hierarchy of cities and its population are inversely related (figure 9). This confirms that Kuala Lumpur is the primary city in Malaysia, growing faster in population as well as proxied GDP per capita growth rates.[9] Specifically, Kuala Lumpur has seen its GDP per capita increase by 3.36 percent annually from 2000 to 2015, compared with Malaysia's national average of 2.98 percent at the same period.

**Secondary cities and smaller towns can contribute more to the national and regional development.** Medium-sized cities are growing in part with the rest of the country, but smaller towns are lagging with a GDP per capita growth rate of only 2.35 percent over the same period (figure 10). Overall, differences in GDP per capita growth rates likely reflect variations in economic opportunities and investments across the country. Malaysia can apply a differentiated approach to its portfolio of cities that can elevate primary cities' competitiveness to: (i) perform as regional and global cities; (ii) enhance the economic performance of secondary cities with industrial complexes; and (iii) provide targeted support to smaller towns in lagging regions for convergence in living standards.

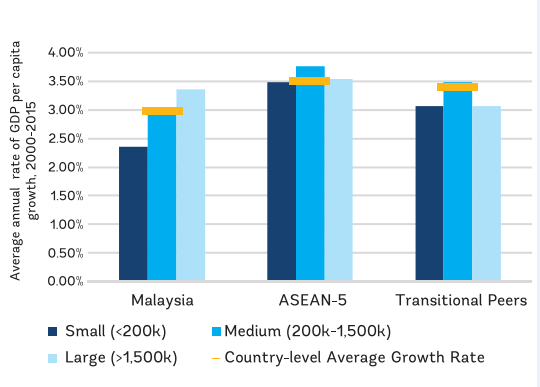
*Figure 9. Ranking of Malaysian cities by population size*




*Source:* Malaysia Population Census, DOSM, various years via CityPopulation (2024).

*Note:* Populations for 2010 and 2000 are calculated at DOSM definition of urban area (Urban areas are gazetted areas with their adjoining built-up areas which have a combined population of 10,000 or more), while 2020 data calculated based on major conurbations, derived from the Urban Center Database by European Commission (2019).

*Figure 10. City Level GDP per capita annual growth rate, 2000-2015*



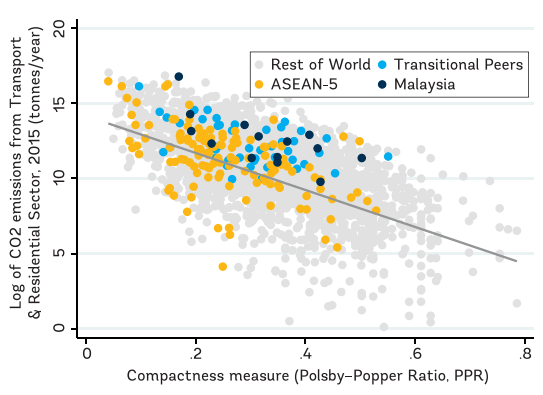

*Source:* WB staff calculation based on GHS-UCDB (2019).
*Note:* Data for country-level average growth rate retrieved from WDI. Urban centers are defined by degree of urbanization, following Dijkstra and Poelman (2014) as high-density clusters of contiguous grid cells of 1 km.sq with a density of at least 1,500 inhabitants per km.sq and a minimum population of 50,000. Based on this definition, Malaysia has a total of 36 urban centers identified, with the following composition: 22 small (less than 200k population), 13 medium (200k-1,5m population), and only 1 large (more than 1,5m population, Kuala Lumpur) UC. This definition does not necessarily corresponds to administrative boundaries.

# Disparities within cities and between regions

**A system of cities approach will be critical for addressing the disparities within cities and across regions in Malaysia.** While cities in Malaysia often present enhanced living through higher real wages, this advantage does not apply to all socioeconomic groups. Descriptive analysis suggests that the wage gap between rural and urban areas within the same state generally increases with higher levels of education (figure 11). However, in most states, real wages for those in urban areas, especially among the less educated, are even lower than their rural counterparts. In states like Perlis noneducated urban workers earn only half of their rural counterparts. This suggests that the economic benefits typically associated with urban agglomeration—such as higher productivity and better job opportunities—are not being evenly shared. This disparity may be even larger especially for noneducated, likely low-income workers in urban areas given the high cost of urban living, such as housing and transportation expenses.[10] Deeper analysis can help determine the right type of targeted interventions to ensure more equitable growth within cities as well as across urban and rural areas.

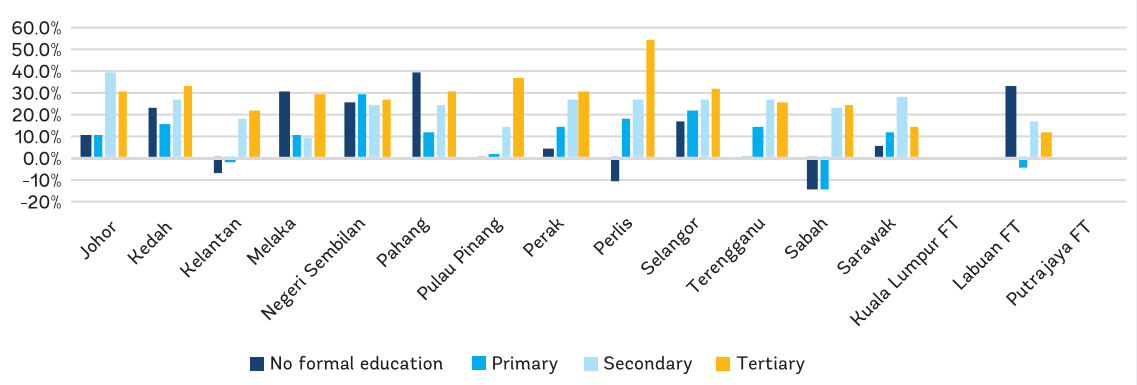
**Urban sprawl seems to result in high transport costs and negative environmental impacts in Malaysia.** Flat cities as compared with compact cities lead to longer commuting times, increased fuel use, and higher greenhouse gas (GHG) emissions, contributing to environmental degradation and public health issues (Lall et al. 2021). The urban form also matters for achieving the cost efficiency of basic infrastructure and service delivery and higher economic density. Sprawling urban development in Malaysia has led to long commutes and higher transport costs than in other East Asian cities, which hampers the productivity and livability of Malaysian cities (World Bank 2015). Moreover, for a given level of compactness, Malaysian cities tend to produce higher levels of transport and residential sector carbon dioxide emission per capita, potentially indicating room for improving the efficiency of the transport system (figure 12).

*Figure 12. Relationship between city compactness and transportation and residential $CO^2$ emissions.*




*Source:* WB Staff calculation based on GHS-UCDB (2019). Emission data based on EDGAR.

*Figure 11. Urban–rural wage gap (difference in log), 2019.*

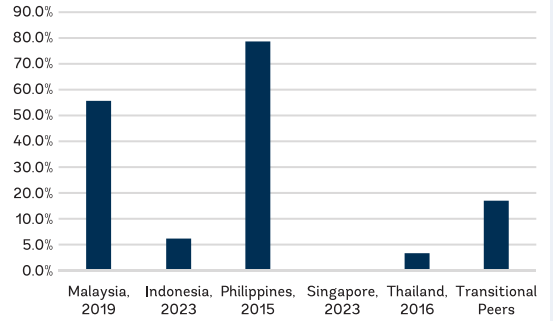



*Source:* World Bank staff calculation based on Malaysia Salaries & Wages Survey, DOSM (2020).
*Note:* Calculations are based on predicted wages obtained from linear regression method, controlling for age, gender, education level, occupation level, economic sector of employment, state and urban/rural.

**Limited housing affordability is in part due to inefficiencies in urban planning in Malaysia, which also increases the distance between jobs and homes.** While housing in Malaysian cities may be more affordable than in other cities—for example, Kuala Lumpur has a price-to-income ratio of 4.0 as compared with Hong Kong with a ratio of 19.8—housing is not universally affordable for different income classes and price differs by location.[11] Bank Negara Malaysia (2021) found that based on price-to-income ratio,[12] housing is "severely unaffordable"—in the ratio of 5.1 and above—in several states and "seriously unaffordable"—ratio of 4.1 to 5.0—in Malaysia as a whole. Housing unaffordability arises from both demand and supply sides: (i) the gap between the income level and housing price whereby many Malaysians do not earn enough and are already highly indebted[13] and (ii) the lack of affordable housing supply. This is particularly severe among B40[14] households, or those who are earning less than approximately Malaysian ringgit (RM) 5,000 (USD 1,060) monthly, with 55 percent in Kuala Lumpur and 63 percent in Petaling District lacking access to housing that they can afford. Households in the income bracket of RM 6,000–10,000 (USD 1,270 – 2,120)—between 50 percent and 75 percent income quantile—can typically afford to purchase a home in the price range of RM230,000–500,000 (USD 48,800 –106,100), but the availability of such homes is very uneven (World Bank 2019a). The Eleventh Malaysia Plan, RMK11 highlighted the deficiency of integrated planning and implementation as one of the main reasons behind the mismatch in demand and supply for affordable housing.

**Service delivery challenges such as stable electricity supply also remain in some Malaysian urban centers, undermining livability for residents and the productivity of businesses.** In 2019, approximately 33 percent of businesses in major urban areas reported experiencing at least one power outage. This prevalence of power disruptions places Malaysia second only to the Philippines among the Association of Southeast Asian Nations' (ASEAN) five countries in frequency of power outages affecting businesses. When compared with transitional peer countries, where the incidence rate stands at 13.5 percent, Malaysia's figure is significantly higher (figure 13). A relative inadequacy in infrastructure reliability within Malaysian urban centers highlights an area that requires attention to improve business operations, quality of life for its urban populations, and productivity of the city.

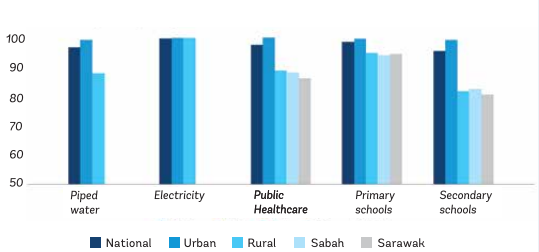
*Figure 13. Share of establishments in major business cities which experienced power outages in the last 12 months.*




*Source:* World Bank Enterprise Survey, various years
*Note:* Since different countries have different years in which WBES are conducted, figures are calculated based on the latest year of WBES in each country.

**Further, a significant variation exists across districts in access to services, suggesting relatively poor regional connectivity and disparity in quality of life.** Overall, access to basic services in Malaysia is remarkable with nearly 100 percent of households having piped water and electricity (figure 14). Regional disparities remain, however, between rural and urban areas and between states, in accessing health and education services. Access to the nearest healthcare facilities is relatively quick across Malaysian cities, with the median travel time being typically under five minutes (figure 15a). This convenience, however, does not extend to the state level, highlighting significant disparities in regional connectivity and access to services (figure 15b). Even within Peninsular Malaysia, residents of several districts face a median travel time of two to four hours by vehicle to reach the nearest healthcare facility. Travel time highlights regional service access gaps and addressing these disparities is crucial to ensure balanced regional development. In particular, secondary cities can play a bigger role in providing essential services to the region, with improved regional connectivity. Improved regional connectivity can also enhance economic productivity as highlighted in Melaka's case (box 2).

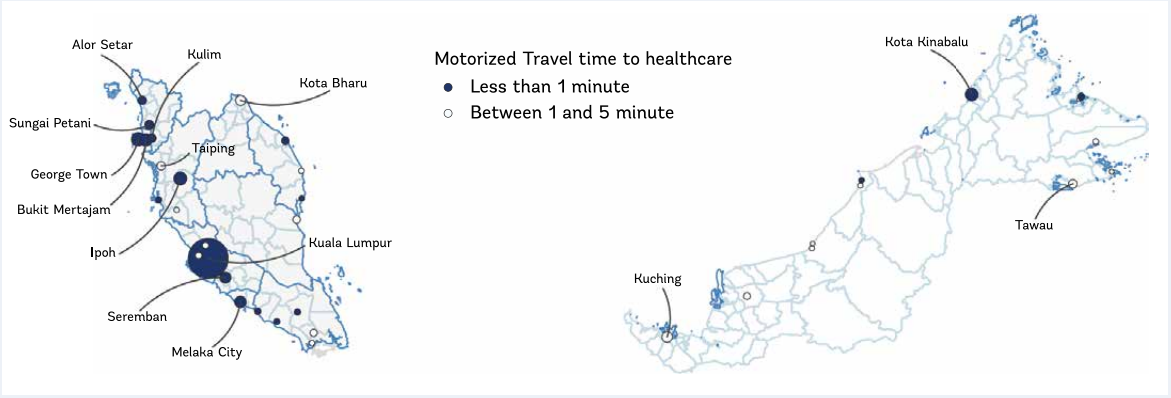
*Figure 14. Share of households accessing various basic services, percentage.*



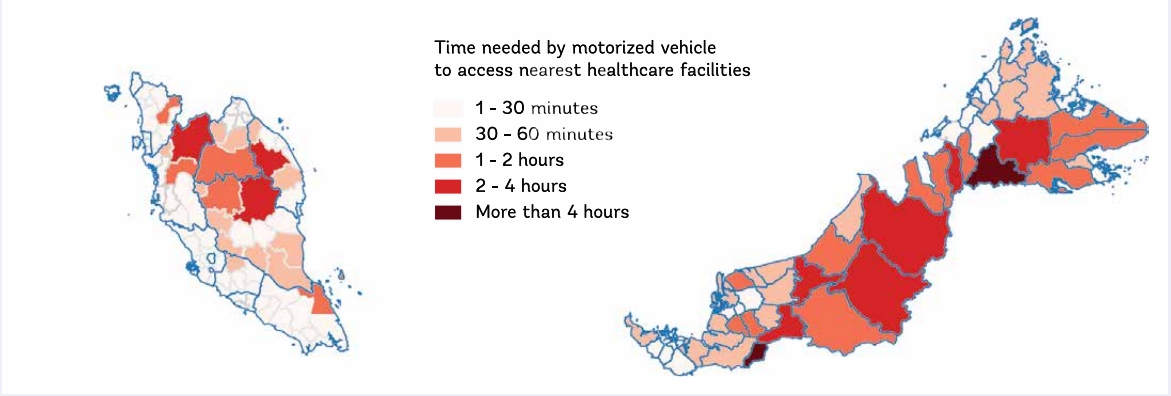

*Source: Malaysia Economic Monitor (2024). DOSM.*

*Figure 15. Median motorized travel time to nearest healthcare facilities, by urban centers, district/division, 2020.*

a. by urban centers




b. by districts




*Source: WB staff calculation based on travel time data by Weiss et al (2020).*

### ***Box 2*** *Melaka's Shortcomings from Its Success*

Over the last two decades, Melaka has seen significant economic growth, largely owing to its recognition as a UNESCO heritage site. Between 2000 and 2010, the region transformed its economy from manufacturing-based to a tourism-centric economy. From 2011 to 2015, Melaka's economy expanded at an average annual rate of 5.6 percent, exceeding the national average of 5.3 percent. Job growth in Melaka also outstripped the national figure, with a 33 percent increase in employment from 2010 to 2015 compared with the national 20 percent.

However, despite the surge in employment, Melaka's labor productivity has not improved, due to the low productivity nature of the tourism sector. The region's economic strategy is now focused on maintaining its high-productivity manufacturing base while enhancing the productivity of the burgeoning tourism sector. To continue to thrive in manufacturing, Melaka must overcome transportation connectivity issues that hinder full integration into regional and global value chains.

*Source:* Global Platform for Sustainable Cities, World Bank. 2019b. Melaka Sustainability Outlook Diagnostic: Supporting Report 1: Reinforcing Melaka's Economic Success. Washington, DC: World Bank.

# Challenges

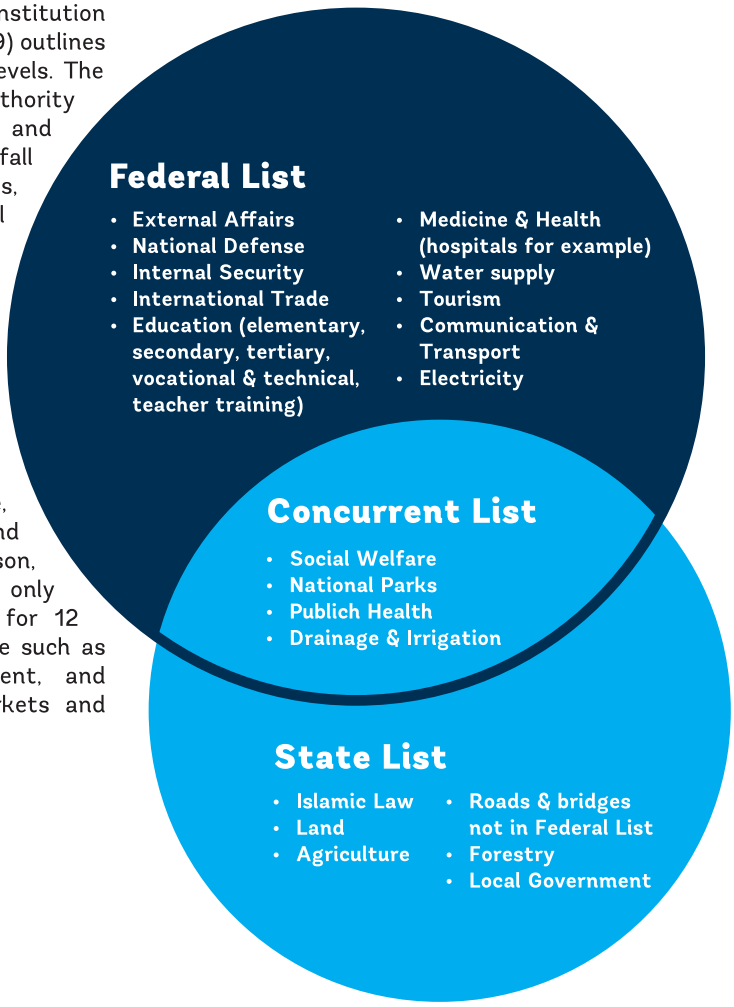
# Challenges

**Complex urban governance systems and increasing climate risks can limit Malaysian cities' ability to maximize its potential to lead sustainable and inclusive growth.** Globally, growing cities, mobile people, and vigorous trade have been the catalysts for progress (World Bank 2009). Malaysia will benefit from deeper analysis of these economic forces—agglomeration economies, migration, and specialization—and their key factors of production, namely, land, labor, and intermediate inputs, to identify any gaps and refine its policy measures to accelerate economic growth. Suggesting this for future research, this paper focuses on key policy instruments for economic integration to reduce disparities and promote sustainable and inclusive growth—institutions, spatially connective infrastructure, and spatially targeted interventions for lagging neighborhoods and regions.[15] In particular, this section discusses the challenges brought by complex institutions, since inclusive growth will require efficient institutions that meet the expanding demands of low- and middle-income groups, with greater transparency and accountability. It also involves increased capacity to improve revenue collection and spending efficiency. In addition, this section discusses the challenges of climate change, to which cities are both exposed and contributing.

## *Urban governance*

**Malaysia has three tiers of governance—federal, state, and local—but the division of mandate and authority are highly centralized.** The Constitution of Malaysia 1957 (rev. 2007; articles 74–79) outlines the distribution of powers across three levels. The federal government has significant authority over decision making, financial control, and resource allocation. Local governments fall under the control of state governments, with the National Council for Local Government (NCLG) ensuring uniformity of local government laws and policies in Peninsular Malaysia, while Sabah and Sarawak (World Bank 2023a) retain significant autonomy over land and local government matters, operating under their own state-level ordinances.[16] Overall, the federal government delivers 24 categories of services such as public transport, roads,[17] sewerage, drainage, public health, emergency services, and education (World Bank 2015). In comparison, state governments are responsible for only seven services, and local governments for 12 services that are more localized in nature such as land administration, traffic management, and maintenance of local facilities like markets and parks (figure 16).

*Figure 16: The federal list, in Malaysia, enumerates areas in the social and economic sectors which are typically assigned to subnational governments.*

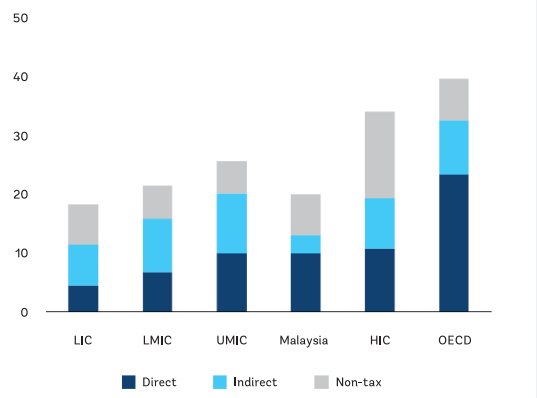



*Source:* Constitution of Malaysia 1957, created by World Bank
*Note:* Sabah and Sarawak have additional provisions on their state list: Native law and customs, Ports and harbors, other than those declared to be federal by or under federal law, Sabah Railway for Sabah only.

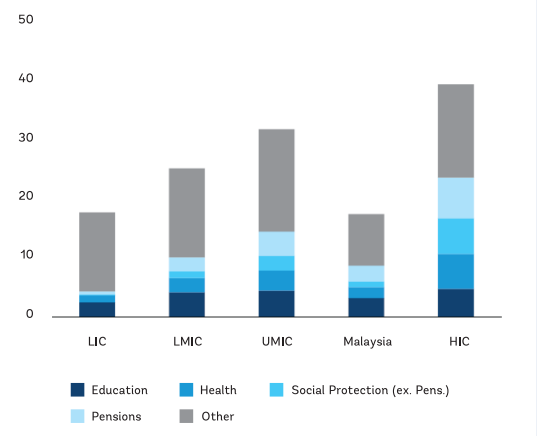
**Local governments' limited financing and human capital constrain their ability to deliver, with the extremely low revenue and expenditure at the local level.** Overall, Malaysia's total revenue collection and government expenditure are very low compared with its peers (World Bank 2023d). For example, in the five years before transitioning to high-income status, only a few of Malaysia's transitional peers collected less tax revenue or spent less on government expenditure (figure 17a, 17b). This means Malaysia needs to collect more revenues to increase the fiscal space for targeted, pro-poor spending, which will be critical for making an inclusive transition to developed country status. Subnational revenues and expenditures are also lower in Malaysia, compared with other countries.[18]

*Figure 17. Subnational expenditures and revenues of Malaysia and other countries.*

a. Government revenue by source, Percentage of GDP




b. Government revenue by Type, Percentage of GDP




*Source: World Bank. 2022. Poverty and Shared Prosperity Report: Correcting Course and MOF*
*Note: Malaysia data point is for 2019.*

**Revenue:** Local government revenue in Malaysia was less than five percent of the total government revenue in 2014.[19] Fiscal transfers and grants from federal or state governments are less than 10 percent of the typical local authorities' revenue,[20] with over 90 percent coming from own-source revenues (OSR). OSR consists mostly of property assessments and other minor sources such as development charges, licenses, and summonses. Local authorities receive transfers as grants, as provided for in the Tenth Schedule of the Federal Constitution, the Local Government Act 1976, and the State Grants (Maintenance of Local Authorities) Act 1981. In per capita terms, transfers to local authorities appear to be inadequate and unrelated to the size of the local authority area or its development status and vary annually. This has resulted in unpredictability of budget availability from the local authority perspective (World Bank 2015). Furthermore, the discretionary nature of fiscal transfers seems to have made states governed by opposition parties susceptible to political repercussions.

**Expenditure:** In 2013, subnational government expenditure in Malaysia accounted for only 9.7 percent of total public spending, significantly lower than the average of 47.6 percent observed in other federal-type governments (OECD 2016).[21] This may in part due to the limited responsibility of local authorities and evaluating its adequacy will require a deeper review of the division of mandate and resource allocation as recommended in the next section. Yet, the expenditure of subnational governments as a share of Malaysia's GDP is just 3.2 percent, indicating limited financial autonomy and, potentially limit the capacity for local governments to manage and deliver public services independently.

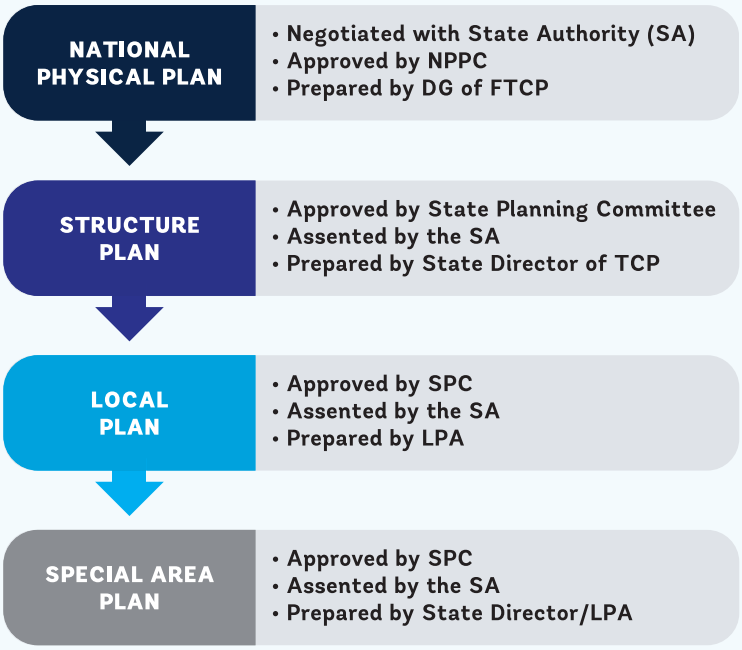
**Malaysia has a robust spatial planning system, which is foundational for achieving optimal urban forms and service delivery, but implementation can benefit from stronger coordination.** In Peninsular Malaysia, the National Physical Plan (NPP) provides the overarching framework, within which state and local authorities develop and coordinate state-level structure plans and local or special area plans (box 3). Any gaps in implementing the NPP, for example, inconsistencies between local plans and state-issued land titles, can hinder (World Bank 2015). In the case of road networks, limited integration exists between the Highway Network Development Plan (HNDP) at the federal level and local plans, state structure plans, and the NPP. In comparison, the most successful urban areas are those that connect physical growth to economic demand and support it with good plans, policies, and investments to avoid uncontrolled sprawl (World Bank 2021c).

***Box 3.*** *National Physical Plan—a tool for integrating physical and economic planning*

Development in Peninsular Malaysia is guided by the Five-Year Malaysia Plan, the National Physical Plan (NPP), and sectoral policies, with development planning implemented at regional, state, and local levels. The NPP is developed by the Department of Town and Country Planning, at PLANMalaysia under the purview of the Ministry of Housing and Local Government (KPKT) and obtains the approval of the Cabinet and the National Physical Planning Council (NPPC). It is the highest planning framework for physical development at the national level, guiding the spatial planning and development of the country by translating sectoral policies into a spatial form and providing physical plans for sustainable development strategies.

The implementation of the NPP involves a coordinated effort among various stakeholders and agencies at different levels of government (box figure 3.1). The main responsibility lies with the state and local authorities, as they are responsible for land use planning and development control within their respective jurisdictions. They are expected to align their local plans and development projects with the guidelines and objectives set out in the NPP.

Box figure 3.1 *Development plan hierarchy in Malaysia according to Sections of Act 172.*




In addition to the state and local authorities, other relevant government agencies, such as the KPKT, the Ministry of Works (KKR), and the Ministry of Natural Resources and Environmental Sustainability (NRES) are also involved in the implementation of the NPP. These agencies play a role in coordinating and overseeing specific aspects of physical development, such as infrastructure development, environmental protection, and housing initiatives. The NPP also includes follow-through actions by PLANMalaysia and the implementation of the Malaysia Urban Observatory (MUO) for monitoring sustainable development in cities.

*Note:* FTCP Federal Town and County Planning now PLANMalaysia; TCP - Town and County Planning; SPC - State Planning Committee; LPA - Local Planning Authority

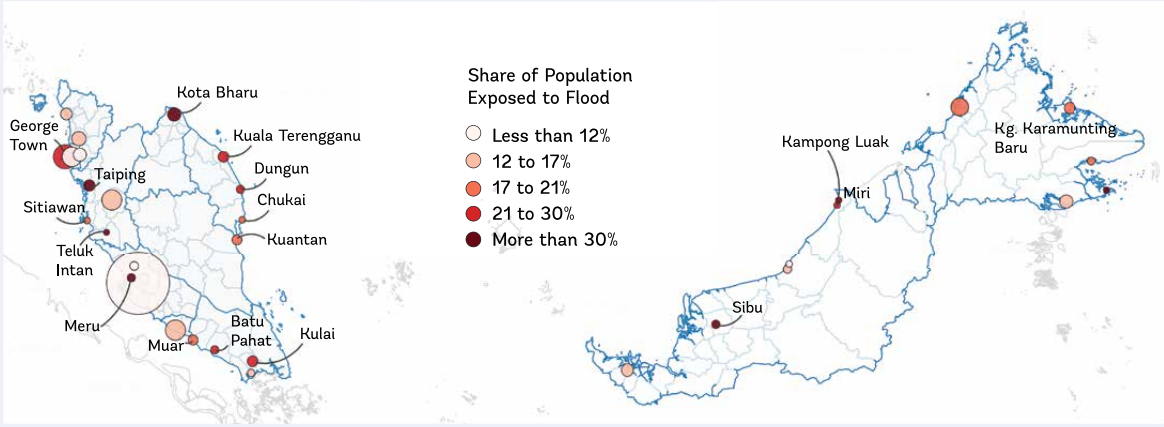
# Climate change

**Climate change can undermine Malaysia's development efforts, which should be climate resilient and sustainable.** From 1970 to 2013, the surface mean temperature in Malaysia's regions rose by 0.14 degrees Celsius to 0.25 degrees Celsius each decade (World Bank and Asia Development Bank 2021). Additionally, an uptick in rainfall is anticipated, particularly in Sabah and Sarawak compared with Peninsular Malaysia. The country is expected to face more frequent and intense floods, heat waves, and droughts that could affect key agricultural sectors like rubber, palm oil, and cocoa. The repercussions of climate change could worsen poverty and inequality, especially among low-income individuals who rely on climate-sensitive activities such as agriculture and fishing, and informal workers and residents, who are typically more exposed to higher temperatures.

**Large number of populations are affected by high future flood risk, especially in urban centers.** Malaysia experiences frequent flooding, particularly during the monsoon season, affecting both urban and rural areas. The Department of Statistics Malaysia estimates that damages from the country's flood in December 2021 and January 2022 alone totaled RM6.1 billion—about US$1.35 billion, equivalent to 0.4 percent of the country's nominal GDP. The government allocated RM1.2 billion—about US$260 million—in financial aid and other forms of relief for those affected by the flood events in 2021–22 (World Bank 2024). Analyses based on historical flood hazard data show that a 1-in-20-year flood can cost Malaysia up to 4.1 percent of GDP in 2030 in the absence of adaptation efforts (World Bank 2024a). In the Kuala Lumpur agglomeration, it is estimated that about 660,000 residents—roughly nine percent of the city's population—live in areas highly susceptible to pluvial floods. In smaller urban centers, a larger percentage of the population faces high flood risk, potentially causing more significant economic disruption (figure 18). A heightened flood risk in smaller cities may deter investment and stifle their growth potential in Malaysia. One of the recommendations from a World Bank flood risk report (World Bank 2024a) was to strengthen policy efforts to enhance flood risk awareness and build capabilities to foster greater efforts toward adaptation and resilience.

**Extreme urban heat damages urban competitiveness, public health, and overall livability.** Urban heat island (UHI) effect according to the US EPA's definition is where urban areas with structures highly concentrated and greenery limited become islands of higher temperatures relative to outlying areas. For the world's largest cities, productivity losses from the combination of the UHI effect and global warming will decrease real gross domestic product (GDP) by 1.4–1.7 percent for the median city by 2050. For the worst-affected cities, the loss could reach almost 11 percent by the end of the century (World Bank 2023c). East Asian cities are 1.6–2.0 degrees Celsius warmer than their immediate rural surroundings from 2016 to 2020. Cities in Indonesia, Malaysia, and the Philippines—where average temperatures can be up to 5.9 degrees Celsius warmer—suffer from the strongest UHI effects (World Bank 2023c). More than 100,000 people in the East Asia and Pacific region die each year owing to causes linked to extreme heat, which is a public health crisis. Lastly, extreme urban heat makes cities less livable, directly through the unpleasantness of extreme heat—especially when combined with high humidity—and indirectly through other negative impacts, such as potential increases in crime, violence, and car accidents (World Bank 2023c).impacts, such as potential increases in crime, violence, and car accidents (World Bank 2023c).

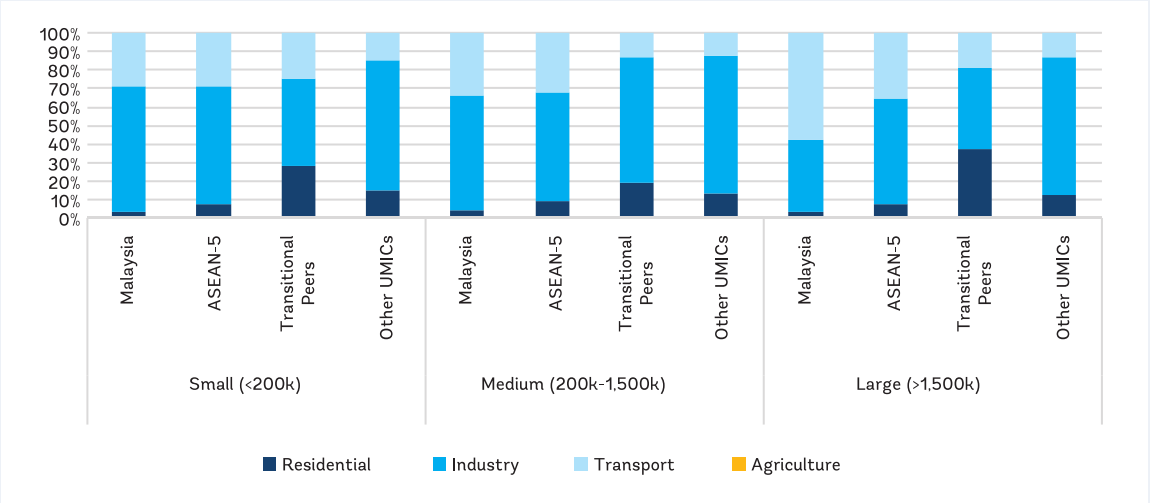
*Figure 18. Share of the population affected by high risk of pluvial, fluvial, or coastal flood.*




*Source:* WB staff calculation based on Fathom 3.0 (2022) global flood risk map and WorldPop (2020).
*Note:* Calculated based on 1-in-100 flood risk. Dot sizes are proportional to city population.

**For a sustainable future, Malaysian cities play a critical role.** Globally, cities contribute up to 70 percent of the emissions (Hopkins et al. 2016) and thus have a huge role to play in achieving national net zero goals. The latest available data from Dewan Bandaraya Kuala Lumpur (DBKL) found that throughout 2017 a total of 25,094,052 million tons of carbon dioxide was released into the Kuala Lumpur air. Fifty-six percent of that annual figure—or 14 million tons of carbon dioxide—came from the transport sector alone, 99.4 percent of which emanated from on-road transport. Due to the high rate of personal automobile ownership, cars account for about 59 percent of the overall emissions from transport, while freight including trucking, rail, maritime, and air is responsible for 27 percent (GIZ 2016). This also meant that Kuala Lumpur, for its given size, emits higher share of transport-related emissions relative to its peers (figure 19). Integrated urban planning, land use, and infrastructure development are critical for not only improving the efficiency of transport services but also reducing high energy consumption and GHG emissions from the sector (GIZ 2016). Considering that no country has reached a high-income status without lowering emissions, it will be challenging for Malaysia to find an optimal model for green growth, which enables low carbon growth.

*Figure 19. Share of sectoral emission to total urban emission, 2015.*




*Source:* WB staff calculation based on GHS-UCDB (2019).
*Note:* Emission data are calculated from EDGAR, based on urban center boundaries outlined in GHS–UCDB.

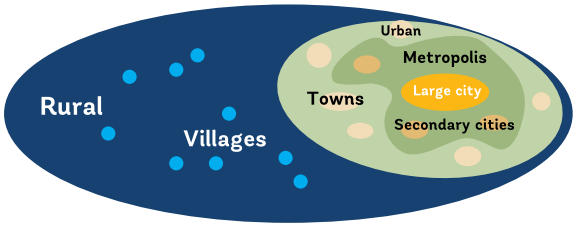
# Proposal: Stronger urban institutions for competitive, livable, and resilient cities in Malaysia

Masjid India, Kuala Lumpur

# Proposal: Stronger urban institutions for competitive, livable, and resilient cities in Malaysia


**This paper advocates for adopting an economic geography approach to achieving productive and inclusive development in Malaysia.** The national vision for inclusive development requires sustained growth and shared prosperity across regions and segments of society. In the prevailing policy's emphasis on enhancing the competitiveness of firms and workers, a missing piece is the role of places, particularly cities, in creating productive and livable environments for both businesses and people. In its spatial approach, Malaysia can manage cities, municipalities, and districts as a dynamic portfolio of assets that are interconnected and interdependent and focus on strengthening urban–rural linkages (figure 20). In a positive step toward addressing this, the Ekonomi Madani: Memperkasa Rakyat framework emphasizes the importance of world class infrastructure in rural–urban areas and geography-based policies, which require a greater understanding of places to maximize benefits and potential for growth.

*Figure 20. Malaysia's economic geography with portfolio of cities and urban-rural linkages.*




**The country needs better coordinated and capacitated institutions with optimal division of functions and resources that can transform the model of infrastructure and service delivery to accelerate growth in Malaysia.** This paper proposes three ways in which the government can strengthen local institutional capacity for effective urban planning and management that can create competitive, livable, and resilient environments for firms, workers, and citizens, ultimately enabling them to lead national and regional growth.

- First, evaluating the efficacy of the existing division of mandates can optimize roles and responsibilities across levels of the government. In doing so, the paper proposes a system of cities' approach whereby cities and municipalities play integrative roles in the national and regional development according to their endowment and characteristics.

- Second, an increased role of cities in promoting inclusive growth requires commensurate resource allocation and capacity enhancement. The federal government can strengthen the system of cities by offering a performance based fiscal transfer, combined with capacity building support, particularly for secondary cities to play a bigger role.

- Third, in supporting cities, the federal government can focus on capitalizing on the transformative potential of digital technologies and innovation and promoting low carbon and climate resilient investments.

## *Evaluate and optimize planning and service delivery across levels of the government*

**The division of mandates across layers of governance can benefit from clarification and its effectiveness can be optimized further.** A thorough evaluation of the existing system can help at least clarify the status of functional mandates across levels of the government, including achievements and gaps, and stimulate a renewed discussion on the optimal allocation of roles and responsibilities. A better understanding of the successful initiatives as well as gaps and challenges on the ground will be the first step for a productive discussion (box 4).

**The degree and structure of decentralization are subject to debate and may vary by function.** Several factors influence the level at which public services should be managed. Economies of scale is one factor, which depends on the geographic and demographic characteristics of an area and can lead to reduced costs with increased service quantity. For example, on the grounds of cost efficiency and quality of service delivery, the federal government has controlled solid waste management (SWM) in Malaysia since 2007 (Act 762) through the formation of the National Solid Waste Management Department (JPSPN) and the Solid Waste and Public Cleansing Management Corporation (PPSPPA), taking on the functions that local authorities had hitherto performed. However, it is unclear if this has increased cost efficiency because no substantial efficiency gains were realized after the federal government took up the role.[22] Other factors include: (i) both positive and negative externalities, which necessitate local maintenance on the one hand and broader planning, investment, and coordination on the other; (ii) equity, as disparities in local wealth, can lead to unequal service access, which can be mitigated by managing services at higher levels; and (iii) local responsiveness and accountability, for which decentralization is crucial to tailor services to community needs and enable citizens to hold decision makers accountable.

***Box 4** Penang's Story of Locally Led Economic Development*

Over the past decades, Penang has emerged as a competitive city through strategic local governance and institution-led development. The transformation began with the establishment of the Bayan Lepas Free Industrial Zone in 1972, which propeled Penang to become a global electronics manufacturing hub. The Penang Development Corporation (PDC), since its inception in 1969, has played a pivotal role in this economic shift, attracting foreign direct investment and overseeing the development of industrial parks and infrastructure. Local initiatives, such as the Penang Skills Development Centre (PSDC), have been key in cultivating specialized skills to sustain the region's high-tech industries.

Penang's urban interventions, particularly the George Town Transformation Programme (GTTP), have furthered its development by enhancing urban living and leveraging its UNESCO World Heritage status to boost tourism and investment. These local efforts have synchronized the growth of Penang's cities, people, and economy, resulting in a GDP per capita which was 58 percent higher than the national average in 2008, showcasing the effectiveness of local institutions in driving economic progress.

*Source:* Cities, People & the Economy: A Case Study Positioning Penang. Khazanah Nasional Berhad & The World Bank (2010)

George Town, Penang

**Vertical and horizontal coordination is critical for integrated urban planning across sectors and levels of the government and effective implementation.** First, the integration of spatial and economic plans can deepen, by aligning NPP with Malaysia's National Plan—Rancangan Malaysia (RMK)—as well as local and regional development plans. The RMK, as the five-year national development plan, has set the country's economic and social development goals since 1966. It was only in 2005 that the NPP was introduced, and it can be more closely connected with the RMK to ensure that physical development can support the economic geography of the country. The NPP's integration into sectoral planning and development is particularly important as it relates to budgetary allocations necessary for realizing the NPP. Second, a more effective horizontal collaboration mechanism between the federal and the state governments can help align local plans with centrally planned investments. Local authorities tend to rely on federal agencies to access relevant data because decision making and allocation of development expenditure rest with the federal government (World Bank 2015), as will be discussed in the following section. Targeted federal programs with adequate resource allocation can help improve urban planning capacity and implementation at the local level.

**Delegation of service delivery responsibilities, if considered, should be accompanied by a commensurate level of authority.** Malaysia has considered different regional and local governance models. Notably, the regional corridor authorities in Malaysia have served as the coordinating and advisory body for economic development planning. However, the lack of legal mandate and power to implement have limited their influence and impact (box 5). Malaysia can draw lessons from this experience when considering the establishment of metropolitan authorities or other mechanisms of governance as a model for enhancing the efficiency of urban planning, management, and service delivery in metropolitan areas.

## *Implement a program to enhance the local financial and implementation capacity*

For economic convergence, the federal government can consider spatially targeted policies and investments. The absence of economic success in certain cities can be traced to multiple factors. Some cities' small size or remoteness from key markets hinders their development into regional economic hubs. These cities often lack essential elements such as human capital and basic services, as well as a favorable business environment to draw private sector investment and stimulate agglomeration economies. These issues are common in lagging regions, which also struggle with poor local business environments, inadequate infrastructure, weak institutions, and limited human capital. While the government can utilize spatially targeted policies, including special economic zones (SEZs), they have had mixed results, with their successes often overshadowed by costly failures. Experience has shown that more nuanced, spatially sensitive approaches are necessary (box 6).[23] It is essential to first have a realistic understanding of what can be achieved and design place-based policies that are attuned to the unique challenges and opportunities of each region.

***Box 5.*** *A case for metropolitan governance systems in Malaysia?*

Many local governments in Malaysia are struggling to provide services amid rapid urban growth, and the multitier governance system complicates coordination across jurisdictions and sector, leading to fragmented service delivery and environmental degradation (World Bank 2015). Regional corridor authorities—namely, the East Coast Economic Region, Iskandar Malaysia, Northern Corridor Economic Region, Sabah Development Corridor, and Northern Corridor Economic Region—have been established to transcend local and state boundaries for better planning and investment promotion. However, these bodies lack the legal power to invest and implement, which remains the responsibility of local or federal agencies (World Bank 2015; Sharifah 2007).

In response to the increasing need to manage effective urban growth, if Malaysia is to revisit the existing governance system, the country can consider benchmarking examples of metropolitan agencies elsewhere that have legal mandates to coordinate functions such as urban transport, waste management, and emergency services. With the authority to make and approve plans, metropolitan agencies can enable local authorities to consider service availability in development approvals and land use planning, thus ensuring a more proactive approach to urban management. This strategy can strike a balance between achieving economies of scale and addressing regional disparities while maintaining citizen access to responsive and accountable local governments (World Bank 2015).

***Box 6.*** *Enhancing the competitiveness of secondary cities and achieving balanced territorial development*

Globally, secondary cities are growing rapidly but often have fewer capacities to plan and manage urban development (Roberts 2014). Secondary cities in Asia can become more competitive if they are to be successful in engaging trade and fostering local economic development. Some cities, by virtue of the link they have with the global system of cities and trade, will always have to focus on being internationally competitive. One example is the crosscountry operation between Singapore and the secondary cities of Bintan and Batam (Indonesia) and Johor Bahru (Malaysia), which leverages each city's competitive advantage (Toh 2006) on the Indonesia–Malaysia–Singapore Growth Triangle.[a] Others will only need to compete within the national league of cities and function as driver of growth within their region.

The Republic of Korea has worked since the 1960s on urbanization and decentralization policies with a strategic decision to expand infrastructure networks, which enabled the growth of secondary cities and the development of new towns. In the 1960s the population was concentrated in the cities of Busan and Seoul. Then, in the 1980s, as these cities grew and manufacturing was concentrated in and near them, the government made efforts to connect them—to each other and domestic and international markets (World Bank 2008). It can thus be seen how urbanization advanced and large urban centers arose outside Busan and Seoul. This approach has allowed Korea to develop a diversified urban system and maintain low unemployment rates. Additionally, while developing a series of satellite cities around Seoul and successful secondary cities in other districts, Seoul itself has benefited from various revitalization projects and attracted new industries (Roberts 2014).

*Source:* Roberts (2014) Managing Systems of Secondary Cities.
*Note:*
a. In the growth triangle, Singapore is seen to have advantage in capital, advanced technology, access to world markets, advanced physical infrastructure, and advanced commercial infrastructure. Malaysia noticeably has advantage in land, natural resources, intermediate technology, and basic infrastructure while Indonesia complements in basic technology, natural resources, and undeveloped land according to Debrah et al. (2000). The cities mentioned in the text collaborated on integrated supply chains in manufacturing, whereby each city has a specialized role in production.

*References:*
Debrah Y.A., McGovern I. and Budhwar P. (2000) 'Complementarity or Competition: the development of human resources in Southeast Asian growth triangle: Indonesia, Malaysia and Singapore", *International Journal of Human Resource Management*, vol. 11, pp. 314-35.

**Performance-based grants are globally utilized with a proven track record for strengthening local technical and financial capacities to deliver quality services delivery.** Such programs combine resource allocation with capacity enhancement to achieve national policy goals (box 7) and often focus on growing secondary cities and tertiary towns in lagging regions. This requires strong national policies directing a higher level of per capita resources to secondary cities and regions where governments want development to occur. These policies have been successful in countries such as Australia and the Republic of Korea as well as in Brazil, China, and India although to a lesser extent. Building on the existing systems, Malaysia can consider revising the federal system of operational grants to local governments—or Pihak Berkuasa Tempatan—to be more transparent, predictable, and formula-based, as well as performance based. Capacity building can be an integral part of the program to ensure that varying capabilities of local authorities are factored into the program design and can converge through targeted support. In Malaysia, capacity building components can target improving the overall planning capacity of state and local governments and the human resource management capacity of local authorities to recruit, motivate, and retain the right staff. Targeted initiatives through an enhanced system of local performance indicators and policy-based guarantees represent key opportunities to enhance local capacity and accountability.

***Box 7.*** *Supporting reforms in the local business and service delivery environment through performance-based grants*

In 2011, Morocco embarked on an ambitious institutional reform agenda aimed at deepening decentralization and deconcentration. The ongoing institutional reforms introduced through the 2011 Constitution give regions and municipalities an increased mandate in facilitating the private sector's ability to create jobs, promote the delivery of quality public services, and strengthen the ability of citizens to hold the state to account.

In this reform context, the World Bank is supporting the Municipality of Casablanca for the period 2017–2024 to increase the investment capacity of the municipality, improve its business environment, strengthen its resilience to climate change and enhance access to basic services in the program area. This operation is the first program for results (PforR) loan to a municipality and features a new model to support an integrated program of reforms and investments at the city level.

Under this program, institutional reforms include: (i) mandating revenue management to a new local joint ownership company who runs revenue information system, called Casa Mawarid; (ii) providing public services such as waste collection and management through a public–private partnership (PPP) contract rather by the municipality; and (ii) digitalizing the administrative transaction via the provision of new Rokhas IT system to improve the business licensing and urban planning system. The program also supports the provision of infrastructure such as roads, water supply, sanitation, and electricity to disadvantaged neighborhoods.

The program has led to improvements in three key reform areas. The Municipality of Casablanca increased its own revenues—excluding transfers—by 40.25 percent as of December 2023, and successfully achieved its target for private capital mobilization through PPP contracts for its waste collection service. Additionally, the local business environment improved, with the average time to issue a building permit reduced from 72 days in 2017 to 39 days by the end of 2020. Moreover, the number of households in disadvantaged neighborhoods with improved access to basic services rose significantly to around 6,000, compared with none at the program's inception in 2017.

*Source: World Bank (2024). Disclosable Version of the ISR - Casablanca Municipal Support Program - P149995 - Sequence No : 13. "https://documents.worldbank.org/en/publication/documents-reports/documentdetail/437431545423856199/disclosable-version-of-the-isr-casablanca-municipal-support-program-p149995-sequence-no-03"*

**Several other tools can be explored for increasing local government financing.** Property taxation is usually under the local government's authority globally and its efficiency has increased substantially in many countries with the application of digital technologies to mass land valuation. Although property tax is a significant part of the own source revenue (OSR), which forms 90 percent of the total local revenue in Malaysia, several challenges limit local governments from fully realizing its potential (box 8). Local governments can also leverage its assets and utilize land use planning regulations, notably land sales and leases, charges for impact and development, or developer extractions, and betterment levies—land value capture taxes. Land value capture (LVC) for transit-oriented development (TOD) is a known mechanism to use land and development rights for an area development around a major transport facility. Given the existing revenue sources of local governments, maximizing the revenue potential of diverse OSR types will be critical to enhance their implementation capacity. This will require evaluating and addressing challenges, notably with property valuation and taxation and optimize the existing taxation practice.

***Box 8.*** *Challenges of increasing the local property tax revenue*

The local property tax system can be a buoyant source of revenue but the system in Malaysia is limited by poor valuation practices and a flawed tax structure (Pawi et. al. 2011). According to the World Bank data (2020), Malaysia's property tax (part of the other tax category) contributes about 2.3 percent of the total country revenue, increasing by about 0.3 percent from the preceding year. This tax is typically based on a property's annual rental value, determined by the Ministry of Finance's Valuation and Property Services Department (JPPH), and the applicable assessment rate, ranging from two percent for agricultural land to 12 percent for commercial properties. Revaluations in Malaysia as elsewhere in the world can be expensive and take time to complete (Pawi et. al. 2011), creating a gap of several years between revaluations, which often results in significant value shifts and tax increases. The resulting shock may be tempered as taxation rates can be varied according to the use and location of the property, as in the case of the federal territory of Kuala Lumpur, where annual rental values were revised upward by as much as 200 to 300 percent with effect from January 2014 for the first time in 21 years. This increase was accompanied by: (i) a reduction in assessment rates for commercial and residential properties, (ii) rebates for the disabled, retirees, and owner-occupied properties, as well as (iii) exemption of low- and middle-cost properties from the application of the revised annual rental values (Chan and Sim 2013). Rural local authorities where property values are naturally lower, are often unable to generate sufficient revenue from assessment tax and thus rely heavily on grants from the federal government or the state.

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# *Focus on building smart and low carbon cities*

**Changing the existing urban governance structure will take time during which Malaysian cities can leapfrog in their development by applying the latest innovations.** Smart cities and low carbon, resilient cities are relatively new urban development concepts that are geared toward tackling urban governance, planning, and management challenges with the aid of digital technologies and in the way to reduce carbon emissions and increase climate resilience. In the prevailing era of big data, machine learning (ML) and artificial intelligence (AI), it is crucial to generate, process, and share data to produce insightful analytics that can help cities optimize resource allocation and service delivery. With adequate digital infrastructure and human capabilities, Malaysian cities can transform themselves into smart cities and export digital services within the country and to the rest of the world. Bound less by place-based factors, smart cities present a great potential for secondary cities to elevate their status and thrive. With the development of carbon markets, Malaysian cities can also prepare themselves by implementing low carbon, resilient investments with which they can tap into additional resources in the carbon market to fund greener urban development.

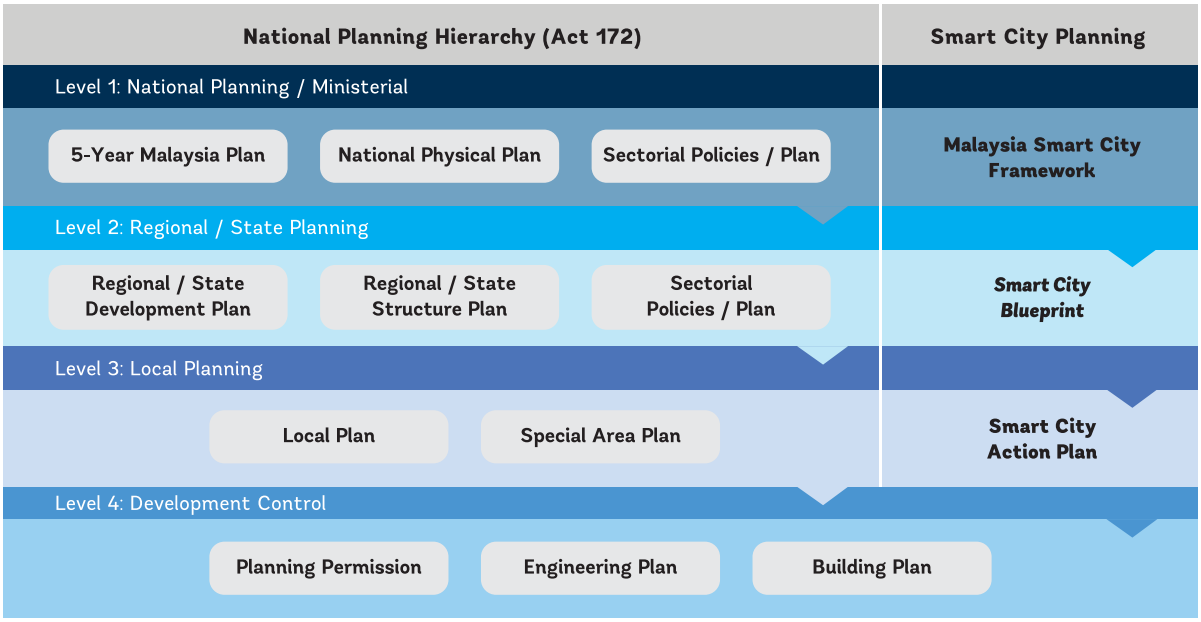
## Smart cities

**Smart cities offer opportunities for Malaysia, which is already well positioned with a comprehensive strategy to leverage new and innovative means of data-enabled urban management practices.** In 2018, the Ministry of Housing and Local Government (KPKT) prepared the Smart City Framework Malaysia (MSCF) to serve as a guide for local authorities and other stakeholders in planning and developing smart cities in Malaysia.[24] In line with the global discussion on smart cities, the framework defines smart cities as "cities that use information and communications technology (ICT) and technological advancement to address urban issues including to improve quality of life, promote economic growth, develop sustainable and safe environment and encourage efficient urban management practices." The framework presents seven components of smart cities—smart economy, living, environment, people, government, mobility, and digital infrastructure—across which rest 16 policies, 36 strategies, and 112 initiatives.

**A range of smart city initiatives are rolled out to local governments in Malaysia as digital solutions for a more livable future.** PLANMalaysia, as an implementing agency of KPKT, has systematically integrated smart city planning into the national planning hierarchy (figure 21).[25] Starting with a few pilot cities such as Johor Bahru, Kota Kinabalu, Kuala Lumpur, Kuching, and Kulim, the agency plans to expand the smart city accreditation program to other cities, municipalities, and eventually all districts in the coming years. Furthermore, PLANMalaysia has begun the establishment of the Malaysia Urban Observatory (MUO) as a municipal monitoring system at the national level that integrates various big data platforms and information between national and local governments to produce spatial planning analytics and monitoring. This can contribute to enhancing the use of open data from the government and other sources toward innovation. At the municipal level, Iskandar Malaysia Urban Observatory (IMUO)[26] is already facilitating the data-driven decision making by sharing insights on economy, spatial planning, social development, natural environment, transportation, and utilities.

**A centrally coordinated program with substantial seed funding can ensure the economies of scale, consistency, and interoperability of smart city interventions.** A plethora of smart applications exist in this era of digital transformation, but without coordinated and concerted mediation between smart city planning and investments, many solutions tend to evolve and operate in silos and struggle to sustain over time (Van Bronkhosrt and Choi 2023). Integrated data and digital infrastructure form the foundation of truly interconnected and thriving smart cities, together with adequate institutional and human capacity.[27] In advancing the smart city agenda under the MSCF, local authorities yet rely on the annual budget, which is often sufficient only for small-scale investments and can run the risk of sustainability. Considering that many cities will share common challenges and seek similar solutions, Malaysia can consider developing a national program with substantial funding that solicits smart city development proposals from local authorities and provides matching funds to support selected proposals, as done in the various smart city challenge programs in Japan, the Republic of Korea, and the United States. Box 9 presents examples of centrally coordinated regulatory, institutional, and programmatic efforts in Japan and the Republic of Korea. Some of the programs also rely on the annual budget cycle, however, and the uncertainty of funding amount and sustainability is a comment challenge. Benchmarking them, further technical work can be done for Malaysia to develop a financial model for supporting smart city development across the nation.

*Figure 21. Mainstreaming Smart City Planning in Malaysia (Source: PlanMalaysia)*




*Source: PLANMalaysia*

***Box 9.*** *Coordinated smart city support programs in Japan and the Republic of Korea*

The Republic of Korea enacted its first smart city law in 2008 to promote a smart city as a new form of integrated urban governance and developed the first national comprehensive plan for smart city implementation in 2009. In accordance with the law, local governments were mandated to formulate and submit their smart city plans to the Ministry of Land, Infrastructure and Transport of Korea Rep. for approval before officially launching individual projects both greenfield and brownfield. In addition to better organizing the government's own institutional setting, Korea Rep. has established public–private consultation systems to review and develop the national strategy for smart cities.

Similarly, the central Government of Japan offers various subsidy programs for local governments to implement smart city approaches. First, one of the relevant ministries at the central government announces a call for applications. Interested local governments prepare a proposal in partnership with companies by forming a council of public–private partnership (PPP), which is often a requirement of the subsidy programs. Once qualified proposals are reviewed and selected, the central government provides a subsidy to local governments who often bring in matching or additional funding from their side. Private companies who joined in the proposal submission usually continue with implementation and cover parts of the project cost.

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# Low carbon, resilient cities

**Cities are not only sources of carbon emissions but can also drive solutions for climate change.** By reducing carbon emissions and implementing measures to enhance climate resilience, cities can play a crucial role in mitigating the impacts of climate change and adapting to changing environmental conditions. This can be achieved through various strategies such as promoting sustainable transportation, increasing energy efficiency in buildings, and integrating green spaces into urban planning. For example, cities can invest in public transportation systems, incentivize the use of renewable energy sources, and invest in green, resilient infrastructure to manage stormwater and reduce urban heat island effects. By prioritizing low carbon, resilient initiatives, cities can not only reduce their contribution to climate change but also enhance their ability to withstand and recover.

**Malaysia already has a solid low carbon city policy and initiatives, with the potential to scale their implementation and tap into the carbon market.** Malaysia issued its first Low Carbon Cities Framework (LCCF) in 2011[28] with the goal of measuring GHG emissions of cities, guide local authorities to transform their cities into low carbon cities, and help build capacity for local authorities. The LCCF looks at addressing carbon emissions in four main areas: urban environment, urban infrastructure, urban transportation, and buildings. Subsequently, the Ministry of Natural Resources and Environmental Sustainability (NRES)[29] launched the National Low Carbon Cities Masterplan[30] in 2021, which is a comprehensive guide for state and local governments to develop low carbon cities. The Malaysian Green Technology and Climate Change Corporation (MGTC) under the purview of the NRES launched programs, such as the Low Carbon City 2030 Challenge in 2019, with the goal of spreading low carbon development through 200 low carbon zones and 1,000 low carbon partners by 2030.

**With the potential in the voluntary carbon market (VCM), Malaysia is well positioned to capitalize on VCM to fund the necessary green transition to make its cities cleaner and more livable.** Global decarbonization commitments are driving up demand in the VCM. Leading global corporates are setting net zero targets and many are relying on carbon credits to deliver their commitments. National governments also have nationally determined contribution (NDC) targets under the Paris Agreement. Malaysia has committed to reducing its economywide carbon intensity[31] against GDP by 45 percent[32] in 2030 compared with the 2005 level. Adoption of Article 6 of the Paris Agreement at the Conference of Parties (COP26) in Glasgow in 2021 has unlocked significant voluntary carbon credit demand which saw a surge toward US$2 billion in 2021 and 2022, quadrupling in market value from 2020.[33] The VCM has subsided since the sudden boom but is still showing growth potential as more corporations are pledging to net zero and carbon offsets through VCM. The Malaysian government has started the groundwork for developing a regulatory environment to capitalize on VCM, notably the development of carbon pricing instruments, monitoring, reporting, and verification (MRV) systems and domestic crediting schemes.

**Malaysian cities can invest in low carbon solutions, which can enable them to tap into VCM, for which systematic support is needed for guiding local investments and aggregating its impacts at scale.** The government can consider developing a program to fund and scale low carbon city development throughout the country, building on the existing LCCF framework and capitalizing on the potential of the carbon market. For example, the federal government can set up a program to support selected cities to invest in simple, proven, replicable, and scalable interventions with seed funding (box 10). Such a program can help cities assess the cost of introducing these solutions, the potential size of carbon reduction and the necessary market and enabling environments. Malaysia is already adopting, encouraging, or considering low carbon solutions, notably: (i) retrofitting buildings; (ii) installing rooftop solar panels and other energy efficient technology; (iii) upgrading to LED streetlights; (iv) transitioning to electric vehicles for public sector; and (v) transitioning to electric vehicles for private sector. Helping cities measure and consolidate the impacts of these investments will be critical for leveraging them to access VCM.

***Box 10.*** *Shenzhen International low carbon city*

*Box figure 10.1. Layout of ILCC showing the pilot (red), extension (orange) and comprehensive (green) zones*


Credit: Provided by Shenzhen Municipal Government. Copyright © 2016

The Shenzhen International Low Carbon City (ILCC) project was initiated after Shenzhen was chosen by China's National Development and Reform Commission (NDRC) in 2010 as one of the first eight cities for the low carbon city pilot (LCCP). The project, which began in 2012, aims to reduce energy consumption in industry, traffic, buildings, energy production, lifestyles, and land use. The Pingdi subdistrict, with its high carbon emissions, was selected for the project. In 2012, Pingdi's GDP per capita was only a fifth of Shenzhen's average, but its carbon emissions per GDP unit were 2.5 times higher, and its energy consumption had doubled.

Under the ILCC project, existing buildings were retrofitted with modern, energy-efficient technologies to create a low carbon environment in Pingdi, while the natural landscape was preserved and enhanced to blend seamlessly with urban areas by maintaining green spaces and adding green walls and rooftops. Technological upgrades included renewable energy for buildings, vertical gardens, rainwater harvesting, membrane sewage treatment, ecological building materials, efficient insulation, natural cooling, solar power, and a smart microgrid.

Shenzhen ILCC is a demonstration project of the China–EU Partnership on Sustainable Urbanization (CEUPSU). The project achieved a 22 percent reduction in carbon emissions intensity per GDP unit in Pingdi, from 2.21 tons of carbon dioxide (t-$CO^2$) in 2011 to 1.72 t-$CO^2$ in 2014, primarily due to the industrial transformation and the establishment of new low carbon businesses. Through scale-up of the pilot, Shenzhen is aiming to further reduce carbon intensity to five t-$CO^2$ per capita by 2025.

*Source: Urban Efficiency II Seven Innovative City Programmes for Existing Building Energy Efficiency, C40 Cities and Tokyo Metropolitan Government (2017).*

# Conclusion

This paper sketches the contours of a strategy for spatial prioritization and coordination in Malaysia, focusing on institutional transformation that will enable effective infrastructure investments and other targeted interventions. Malaysia will benefit from deeper analytics and advisory services in reviewing and refining its policy actions to optimize their impact on the inclusive transition to developed country status. This paper concludes by offering a list of future analytical work for consideration.

- Spatial patterns of growth in Malaysia to understand how cities spatially grow—center versus periphery—and if Malaysian cities and regions are converging or diverging in economic growth, coupled with a deeper analysis of what drives such patterns of growth.

- A deeper analysis of the system of cities in Malaysia with a focus on secondary cities' competitiveness and other growth potential in terms of attracting talent and investments and creating better and more jobs. The work can also review the performance of leading cities in the past years, building on the previous competitiveness assessment (World Bank 2015).

- Urban–rural linkages in agricultural and nonagricultural activities and migration, particularly in lagging regions where the potential for cities to pull rural areas up through stronger linkages with rural areas.

# Notes

1. Based on GDP per capita (constant 2015 US$) - Malaysia. Data source: World Bank National Accounts data and OECD National Accounts data

2. Malaysia's National Poverty Line threshold is almost US$10, higher than the World Bank's US$ 3.65 per day for lower-middle income country poverty line and $6.85 per day for upper-middle income country poverty line. Data source: World Bank Poverty & Equity Brief, Malaysia April 2023 & Poverty in Malaysia, Penang Institute 2016.

3. Urban agglomeration as a continuous urban area that includes a city and its surrounding suburbs and exurbs, linked by physical and economic ties (World Bank 2009).

4. Ekonomi Madani means Civil Economy and MADANI references Sustainability, Prosperity, Innovation, Respect, Trust, and Compassion.

5. Economic integration means integrating rural and urban areas and slums with other parts of cities, integrating lagging and leading regions within a nation and integrating isolated and well-connected countries.

6. Department of Statistics Malaysia defines the following as urban areas: (i) gazetted areas with adjoining built-up areas and a population of 10,000 or more; (ii) built-up areas that are contiguous to a gazetted area and have at least 60 percent of their population (15 years old and above) involved in non-agricultural activities; and (iii) special development areas with at least 10,000 people and 60 percent of their population (15 years old and above) in nonagricultural activities. https://v1.dosm.gov.my/v1/index.php?r=column/cone&menu_id=bDA2VkxRSU40STcxdkZ4OGJ0c1ZVdz09

7. The National Physical Plan (NPP) is a long-term strategic plan that outlines the direction of the physical development and spatial planning of Malaysia. NPP is developed by the Federal Department of Town and Country Planning (FDTCP) at the national level under the Ministry of Housing and Local Government (KPKT)

8. A district is an administrative division below the state level in Malaysia. In Peninsula Malaysia, a district is a subdivision of a state. In East Malaysia, a district is a subdivision of a division (bahagian) of a state.

9. The degrees of urbanization cities dataset provide a proxied GDP based on Kummu et al. 2024, which is a modeled GDP based mostly on nighttime lights. Although this is a powerful dataset, even if lights at night have independent correlations with certain economic outcomes, we acknowledge limitations in claiming that nighttime lights growth proxies GDP growth, as it highly depends on the context and level of aggregation (Asher et al. 2021).

10. Problems arise if more productive workers self-select into cities according to unobserved factors, such as ambition or innate ability.

11. World Bank presentation to the Bank Negara Malaysia in 2020.

12. Median house price divided by annual median income. Based on the median multiple approach, a house is deemed affordable if the house price is not more than three times the annual income. For example, price-to-income ratio of 3.0 and below is considered affordable.

13. The National Affordable Housing Policy (2019) caps the affordable housing price in Malaysia at RM300,000.

14. B40: Bottom 40% of the country's income distribution based on households' income level.

15. Institutions refer to policies and regulations that are spatially blind and facilitate the provision of basic services through tax and fiscal transfer mechanisms. Infrastructure refers to policies and investments that are spatially connective such as transport and communication systems, facilitating the movement of goods, services, people, and ideas. Interventions mean spatially targeted programs for the marginalized areas within cities and lagging regions.

16. For example, in Peninsular Malaysia, planning is overseen by The Ministry of Housing and Local Government (KPKT), while the state-level Land and Survey Department is responsible for doing so in Sabah and Sarawak (World Bank, 2015).

17. Highways and arterial roads by federal state, and city roads by local government.

18. Internal World Bank document.

19. Malaysia Country Profile 2017-2018. https://www.clgf.org.uk/default/assets/File/Country_profiles/Malaysia.pdf. This compares to the share of local government revenue of Indonesia (28 percent) and Vietnam (14 percent) in 2010 (UCLG 2011).

20. Based on interviews conducted with local authorities across the country and analysis of a breakdown of revenues for selected local authorities in Malaysia (World Bank 2015).

21. Countries include (Africa): Ethiopia, Nigeria, South Africa. (Asia-Pacific): Australia, India, Malaysia. (Europe): Austria, Belgium, Germany, Switzerland, Spain, and Russia. (Latin America): Argentina, Brazil, Mexico. (North America): Canada, United States.

22. World Bank analysis on the annual cost per ton (excluding capital expenditure) over 2012 to 2013 for 14 localities where costs refer to operating expenditure for solid waste collection, transport and disposal, as well as public cleansing, including local authority staff. (World Bank 2015)

23. For the international experience, see Rodríguez-Pose and Wilkie (2019) and Grover, Lall and Maloney (2021), among others; the case of Europe is discussed in Farole, Goga and Ionescu-Heroiu (2018). For SEZ in particular, see the review of Farole and Akinci (2011).

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28. Second updated version was issued in 2017.

29. At the time Ministry of Environment and Water (KASA).

30. The masterplan was part of the Green Technology Application for the Development of Low Carbon Cities (GTALCC) project sponsored by the United Nations Development Programme (UNDP) - Global Environment Facility

31. Carbon intensity throughout the document refers to GHG intensity from all the seven GHGs: Carbon dioxide (CO2), Methane (CH4), Nitrous oxide (N2O), Hydrofluorocarbons (HFCs), Perfluorocarbon (PFCs), Sulphur hexafluoride (SF6) and Nitrogen trifluoride (NF3).

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