

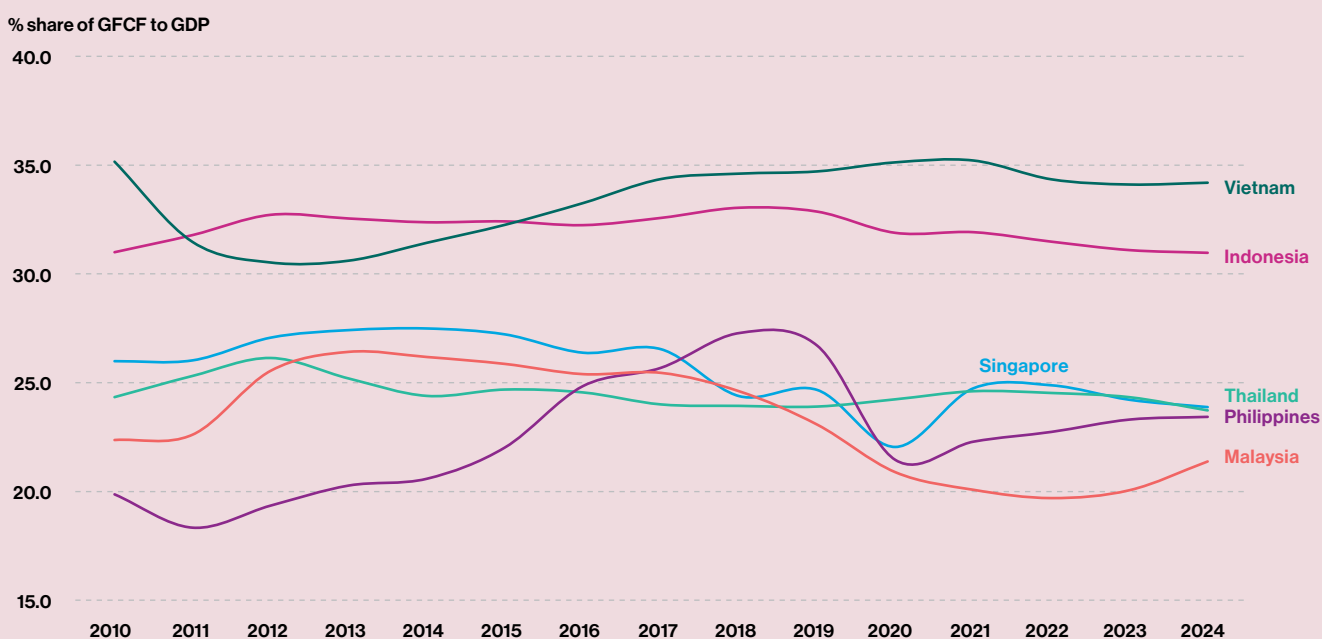
## Deciphering Investment Cycles in Malaysia

### Introduction

Robust investments in the past have been fundamental in supporting the distinct phases of Malaysia's economic transformations, which involved transitioning from a resource-based to a more diversified economy. These investments facilitated capital deepening,<sup>1</sup> significantly expanded industrial capacity, and fostered the development of new industrial clusters. They also led to enhancements in productivity, technological advancements and the country's international competitiveness.

However, over the past decade, Malaysia's investment growth has been more modest. Before the COVID-19 pandemic, Malaysia's investment share of GDP moderated from 25% of GDP in the early 2010s to 23% in 2019, lagging regional peers (Chart 1). In 2020, the pandemic dampened investment activity, as ongoing and planned investment projects were temporarily halted during the enforcement of the Movement Control Order (MCO).<sup>2</sup> Weak global demand and supply chain disruptions further exacerbated this. Consequently, investment fell to around 20% of GDP in the 2021–23 period and continued to lag regional countries (Chart 1).

**Chart 1: Investment Share of GDP for Malaysia vs Regional Peers**



Note: The data is computed using real GFCF and GDP for each country.

Source: Department of Statistics, Malaysia, Haver and respective national authorities

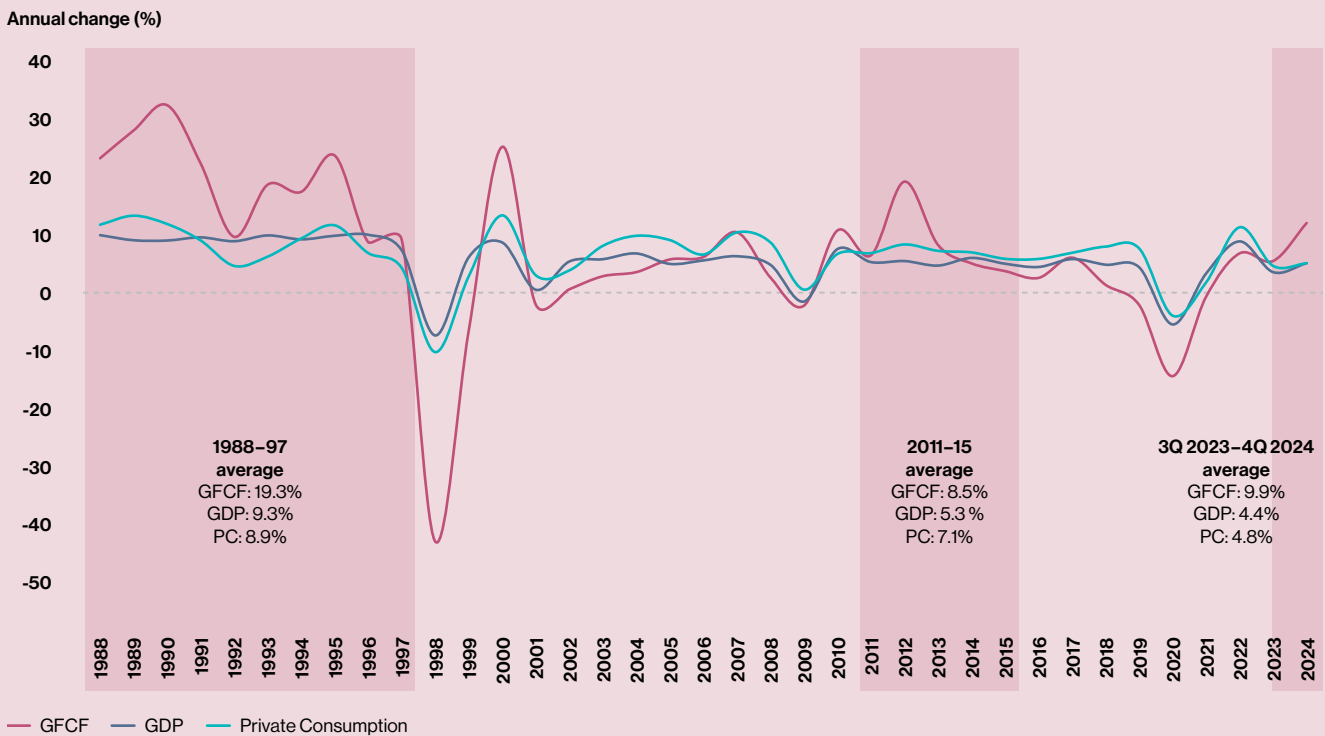
Nevertheless, beginning in the middle of 2023, Malaysia's investment performance showed clear signs of resurgence. Real gross fixed capital formation (GFCF)<sup>3</sup> or overall investment surpassed pre-pandemic levels in the first quarter of 2024 and expanded robustly in the subsequent quarters. In fact, GFCF growth exceeded its long-term averages (2015–19 average: 2.3%; 2011–19 average: 5.6%) and outpaced private consumption (PC) (Chart 2). The contribution of investment to GDP growth rose from 0.6 percentage points between 2015 and 2019 to an average of 2 percentage points since the third quarter of 2023. All these clearly marked an investment upcycle in Malaysia.

<sup>1</sup> Refers to an increase in the proportion of the capital stock to the number of labour or labour hours worked.

<sup>2</sup> Bank Negara Malaysia (2020). Developments in the Malaysian economy. First Quarter of 2020 Quarterly Bulletin.

<sup>3</sup> Gross fixed capital formation (GFCF), also known as 'investment', is the net acquisition of fixed assets which are used for production of goods and services

**Chart 2: Annual GFCF Growth vs GDP and Private Consumption (PC) Growth**



Source: Department of Statistics, Malaysia, Haver and Bank Negara Malaysia estimates

This article discusses the identification of Malaysia’s investment upcycles and its drivers. It also examines their broader economic implications and discusses policy strategies aimed at sustaining the current upcycle and maximising its benefits.

### The surge: Three characteristics of an investment upcycle

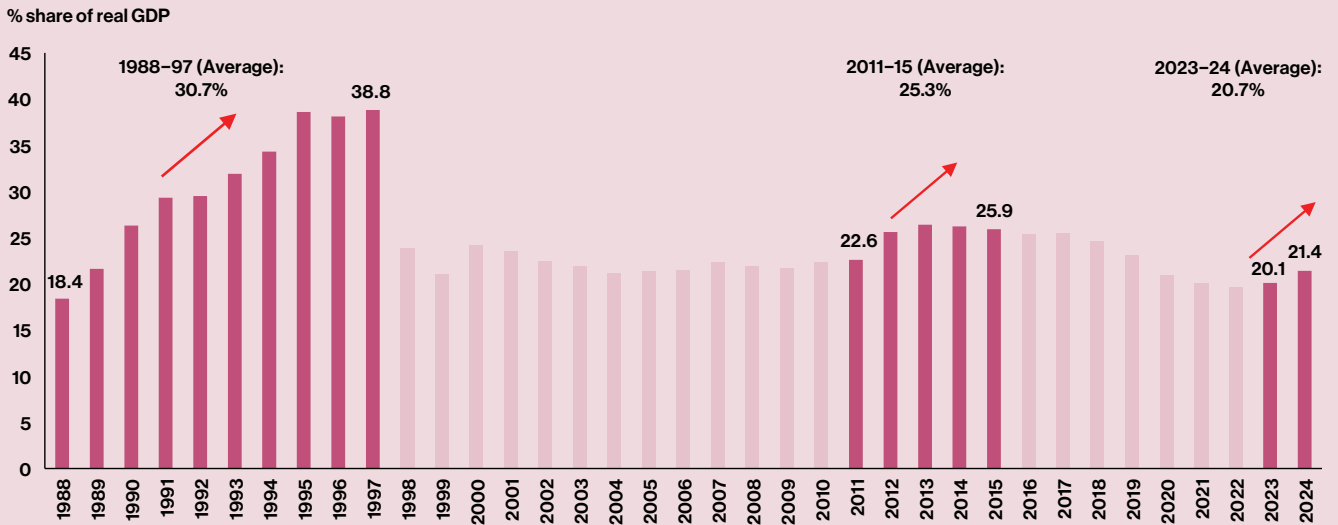
The first characteristic of an investment upcycle is the strong growth in GFCF compared to overall GDP and private consumption. This is essential as Malaysia has predominantly been a consumption-driven economy since the early 2000s, with private consumption accounting for an average of 52.2% of GDP between 2002 and 2024. Historically, there have been two notable periods where GFCF growth consistently outpaced both GDP and private consumption growth, namely, the late 1980s to 1990s, and the early 2010s (Chart 2).

The second characteristic is a rising investment share to GDP. Chart 3 illustrates the three periods of the investment upcycles as depicted by the rising share of investment.<sup>4</sup> Thirdly, an investment upcycle is also characterised by a consistent expansion of investment level above its long-term trend. By using econometric techniques to decompose data into trend and cyclical components,<sup>5</sup> it was observed that investment levels in 2023 and 2024 have constantly exceeded their long-term trends (Chart 4).

<sup>4</sup> Historically, there have been periods of rising investment share to GDP even though investment growth was weaker compared to GDP and private consumption. For example, in 2006–07, even though GFCF growth was lower compared to private consumption (GFCF 2006–07 average: 8.3%, private consumption: 8.5%), the decrease in net exports due to the rise in imports outpacing exports led to an increased share for GFCF, albeit to a smaller degree compared to private consumption.

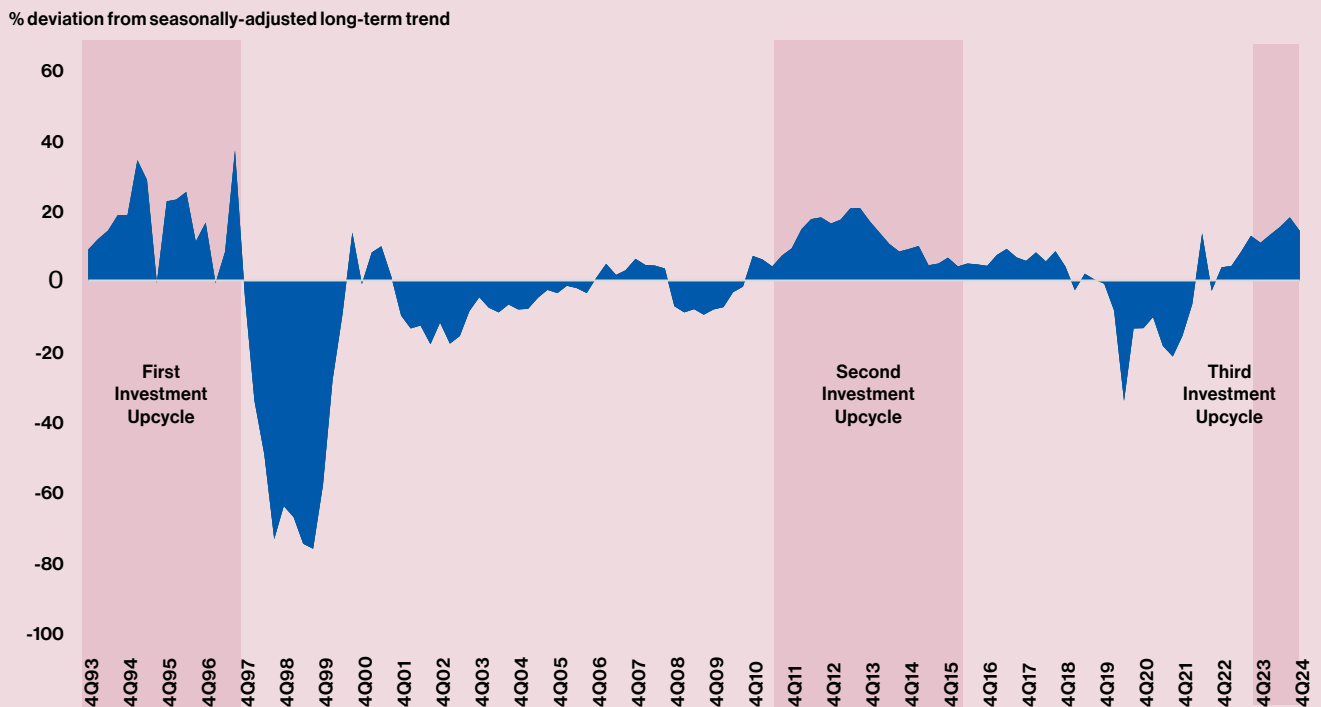
<sup>5</sup> Hamilton filter and Hodrick-Prescott filter are used to conduct this decomposition. Nonetheless, Hamilton filter was primarily adopted to reduce the risk of spurious dynamic relationships, to minimise end-point bias and to avoid making arbitrary assumptions regarding the smoothing parameter (Drehmann, M. & Yetman J, 2018; Hamilton, J.D., 2017).

**Chart 3: Share of GFCF to Real GDP**



Source: Department of Statistics, Malaysia, Haver and Bank Negara Malaysia estimates

**Chart 4: Cyclical Component of Investment**



Note: This is derived using the Hamilton filter that separates GFCF into its trend and cyclical components. Cyclical component represents deviations from the long-term trend and may be caused by factors such as business cycles, monetary policy shock and other economic shocks. The use of the Hodrick-Prescott filter shows broadly similar result.

Source: Department of Statistics, Malaysia, Haver and Bank Negara Malaysia estimates

These characteristics indicate that Malaysia's third investment upcycle started in mid-2023. Beyond the strong investment growth seen in each upcycle, what is more crucial is the quality of investments and its impact on the domestic economy.

### Characteristics of Malaysia's past investment upcycles

Each of Malaysia's investment upcycles represents a distinct phase of economic development, reflecting the global and domestic economic landscapes as well as the nation's strategic visions during the respective periods. Table 1 provides a summary of Malaysia's first and second investment upcycles.

**Table 1: Summary of Malaysia's First and Second Investment Upcycles**

	First Investment upcycle	Second investment upcycle
<b>Period</b>	Late-1980s to 1997	2011 to 2015
<b>Main Drivers</b>	<ul style="list-style-type: none"> <li>Transition from commodity-dependent economy into manufacturing-driven economy</li> <li>Enactment of the Promotion of Investments Act 1986 facilitating conducive investment environment</li> <li>Influx of foreign direct investment (FDI) following the 1985 Plaza Accord which affected Japan's competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>Rollout of Economic Transformation Programme (ETP) aimed at elevating Malaysia to high-income status</li> <li>Relatively high oil prices due to strong global demand</li> <li>Property market boom driven by rapid urbanisation, government's home ownership programmes (e.g. introduction of Skim Rumah Pertamaku), and connectivity-improving infrastructure projects (e.g. Klang Valley Mass Rapid Transit (MRT) Line 1, and Pan Borneo Highway Sarawak (Phase 1))</li> </ul>
<b>Key Sectors and Industries</b>	<b>Manufacturing</b>	<b>Oil and gas (O&amp;G)</b>
	<ul style="list-style-type: none"> <li>Diversification from resource-based industries into electrical and electronics (E&amp;E), textiles, automobiles, petrochemicals and food processing, among others</li> <li>Establishment of economic zones such as Penang Free Trade Zone and Kulim Hi-Tech Park</li> </ul>	<ul style="list-style-type: none"> <li>Significant increase in mining and quarrying share of GFCF from 15.8% in 2010 to 19.7% in 2014</li> <li>Large-scale O&amp;G projects such as PETRONAS Refinery and Petrochemical Integrated Development (RAPID) strengthened Malaysia's position as a hub for the downstream oil and gas sectors</li> </ul>
	<b>Infrastructure</b>	<b>Real estate</b>
	<ul style="list-style-type: none"> <li>Notable projects, such as the North-South Expressway significantly improved physical connectivity across Peninsular Malaysia, while the construction of the Kuala Lumpur International Airport (KLIA) and expansion of ports enhanced international connectivity and trade</li> </ul>	<ul style="list-style-type: none"> <li>Total value of construction work done grew at an average rate of 13.8% in the 2011-15 period</li> </ul>
<b>Average Investment Growth</b>	19.3% (1988–97)	8.5% (2011–15)
<b>Average GDP Growth</b>	9.3% (1988–97)	5.3% (2011–15)

Source: Department of Statistics, Malaysia, Haver, news flows and Bank Negara Malaysia estimates

### The third investment upcycle: Pivoting towards quality investments

Malaysia's third and current investment upcycle is driven by a confluence of cyclical and structural factors. Post-COVID-19 pandemic, investment rebounded positively as firms expanded their productive capacity to meet rising demand. Structurally, prevailing megatrends such as digitalisation, recalibration of global supply chain amid geopolitical fragmentation, and low carbon transition play significant roles in fueling the current investment upcycle. At the domestic level, catalytic projects and focus areas under the Government's major national master plans such as the New Industrial Master Plan 2030 (NIMP 2030), National Energy Transition Roadmap (NETR) and various positive efforts towards improving the investment ecosystem have helped create further impetus for investment growth. Policy stability was also an important factor underpinning investor confidence in embarking on more capital expenditure.

By taking a deeper dive into the nature and composition of investment in the current upcycle vis-à-vis previous upcycle,<sup>6</sup> three notable observations can be made.

<sup>6</sup> Due to data constraints for the first investment upcycle period, the comparisons are mainly conducted between the second and third upcycles.

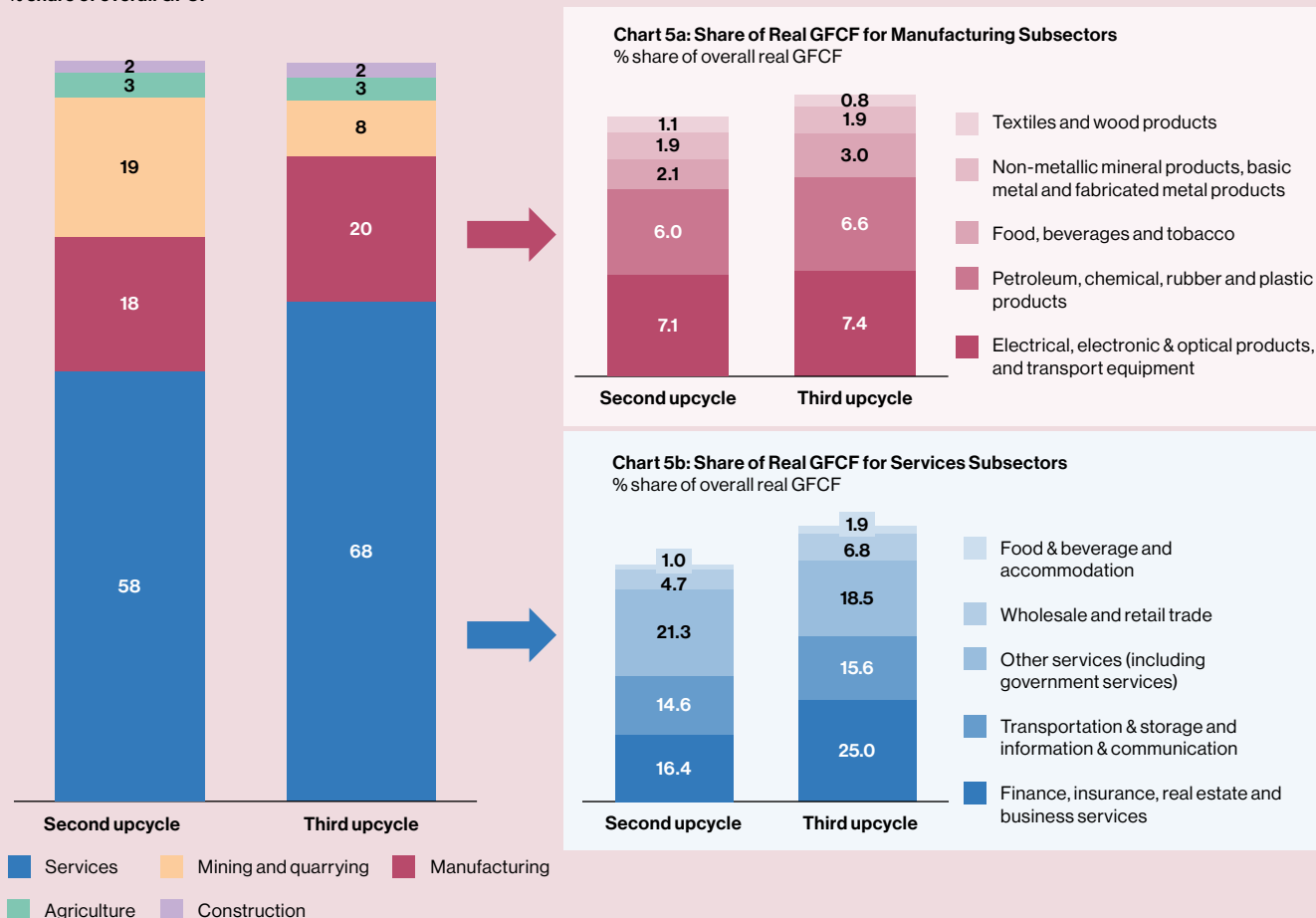
### Observation 1: Growing services sector and sustained manufacturing investments

The current upcycle has seen a notable increase in the services sector’s share of total investment. This is driven mainly by the modern services cluster, encompassing finance, insurance, real estate, and business services (FIRB), as well as transportation and storage, and information and communication subsectors (Chart 5). While the share of manufacturing investment was broadly sustained, a positive development was the increase in the share of electrical and electronics (E&E), optical products, and transport equipment subsector. On the other hand, the share of investment in the mining sector declined quite substantially.

This change in the investment profile reflects two fundamental shifts. First, there is further diversification away from upstream commodities (i.e. mining) towards the expansion of the services and manufacturing sectors. The lower investment in upstream oil and gas (O&G) industries was the result of the sharp decline in crude oil prices in 2014–16. A large contributing factor here was the surge in global oil production, particularly from the U.S. shale oil industry. In addition, the gradual transition towards renewable energy has contributed to reduced dependency on fossil fuel, leading to more cautious investments in the upstream O&G industries. Second, there is a shift to higher value-added activities in the services and manufacturing sectors. For instance, the rise in services investment is partly due to the information and communication sectors, driven by automation, digitalisation and data centre investments. This aligns with global megatrends and the expansion of Malaysia’s digital economy.

Chart 5: Share of Real GFCF by Sectors

% share of overall GFCF



Note: The share of real GFCF by sectors and sub-sectors for the second upcycle is calculated using the average of yearly data from 2011 to 2015. For the third upcycle, it is calculated using the latest available data as at 2023.

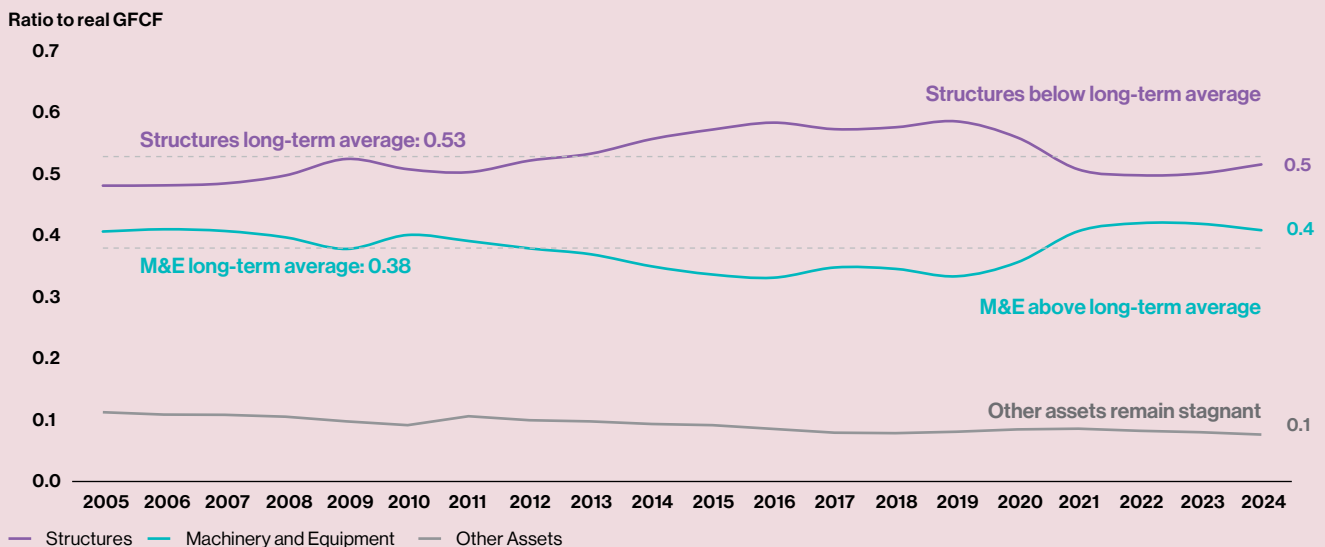
Source: Department of Statistics, Malaysia and Bank Negara Malaysia estimates

For the manufacturing sector, while the overall investment share remains broadly unchanged, there is a compositional shift in investments towards E&E, optical products and transport equipment. Notably, the strong E&E investment is supported by the global tech upcycle, more mature and deep domestic E&E ecosystem with a strong presence in back-end activities (e.g. outsourced semiconductor assembly and testing), and recalibration in the global semiconductor supply chain amid global economic fragmentation.<sup>7</sup> As trade and investment are being repositioned through ‘connector countries’ like Malaysia,<sup>8</sup> the local E&E industry is well-positioned to benefit from the growing demand for high-performance chips and related investment flows. This enables Malaysia to further deepen its integration into the global semiconductor supply chains.

### Observation 2: Growing share of machinery and equipment (M&E) investments, with a continued focus on infrastructure development

Compared to the previous upcycles, the share of investments in machinery and equipment (M&E) is higher and rising above its long-term average (Chart 6). This trend reflects firms’ automation and digitalisation efforts, which were accelerated by the COVID-19 pandemic. M&E is relatively more productivity-enhancing<sup>9</sup> than structures investment. First, M&E is easier to replace and upgrade, which in turn raises investment flexibility to meet changing business needs. Second, M&E has greater intensity of technology which helps in fostering specialisation, faster technological change, skills upgrade and innovation. Third and more relevant to the Malaysian economy, M&E capital deepening indicates continued automation efforts (Chart 7) that could lead to a reduction in dependence on low-skilled foreign workers.<sup>10</sup>

Chart 6: Share of GFCF by Asset Type



Source: Department of Statistics, Malaysia, Haver and Bank Negara Malaysia estimates

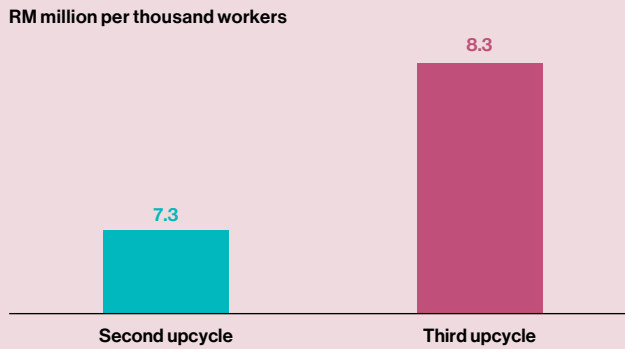
<sup>7</sup> Going forward, there are many global opportunities arising from emerging tech trends for Malaysia to capitalise on, including cloud computing, advanced semiconductor chips, and artificial intelligence. Please refer to detailed analysis in another EMR2024 box article, titled ‘Malaysia’s Position in the Global E&E Value Chain and Prospects’.

<sup>8</sup> Gita Gopinath, Pierre-Olivier Gourinchas, Andrea F Presbitero, and Petia Topalova (2024). ‘Changing Global Linkages: A New Cold War?’, IMF Working Paper No. 2024/076.

<sup>9</sup> Herrerias, M. J., & Orts, V. (2012). Equipment investment, output, and productivity in China. *Empirical Economics* Vol. 42(2), pp. 181–207.

<sup>10</sup> Even though there has been a reduction in non-citizen share of employment relative to the pre-pandemic period (1Q 2018–1Q 2019 average: 15%), there has been a recent rebound in the share (4Q 2024: 14.4%; 3Q 2024: 14.4%; 2Q 2024: 14.2%; 1Q 2024: 13.6%) after being relatively stagnant throughout 2022 and 2023 (2022-23 average: 13.6%).

**Chart 7: Ratio of Real M&E Investment per Worker**



Note: The ratio of real M&E investment per worker for the second upcycle is calculated using the average of yearly data from 2011 to 2015. For the third upcycle, it is calculated using the latest available data as at 2023.

Source: Department of Statistics, Malaysia, Haver and Bank Negara Malaysia estimates

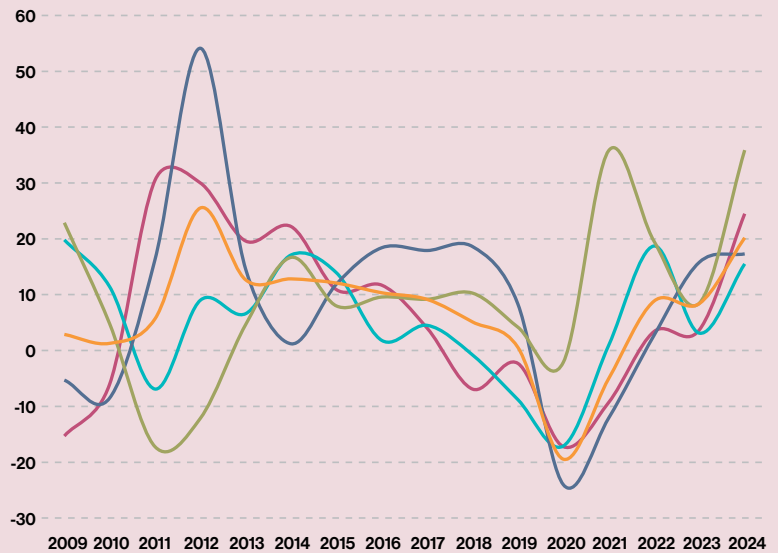
Another feature of the third investment upcycle is the infrastructure development across various key sectors. The share of civil engineering to value of construction work done increased from an average of 32.4% to 39.4% in 2011–15 and 3Q 2023–4Q 2024, respectively (Chart 8a and 8b). This is supported by a strong pipeline of projects in areas such as physical connectivity and low carbon transition (Chart 9). Investments in green clusters including renewable energy (i.e. hydroelectric and solar parks), electric vehicle (EV) charging stations and carbon capture and storage (CCS) have been on the rise.

**Chart 8: Value of Construction Work Done by Sub-Sectors**

**Chart 8a**  
% share of overall total value construction work done



**Chart 8b**  
Annual change (%)



Residential Civil engineering  
Non-residential Special trade

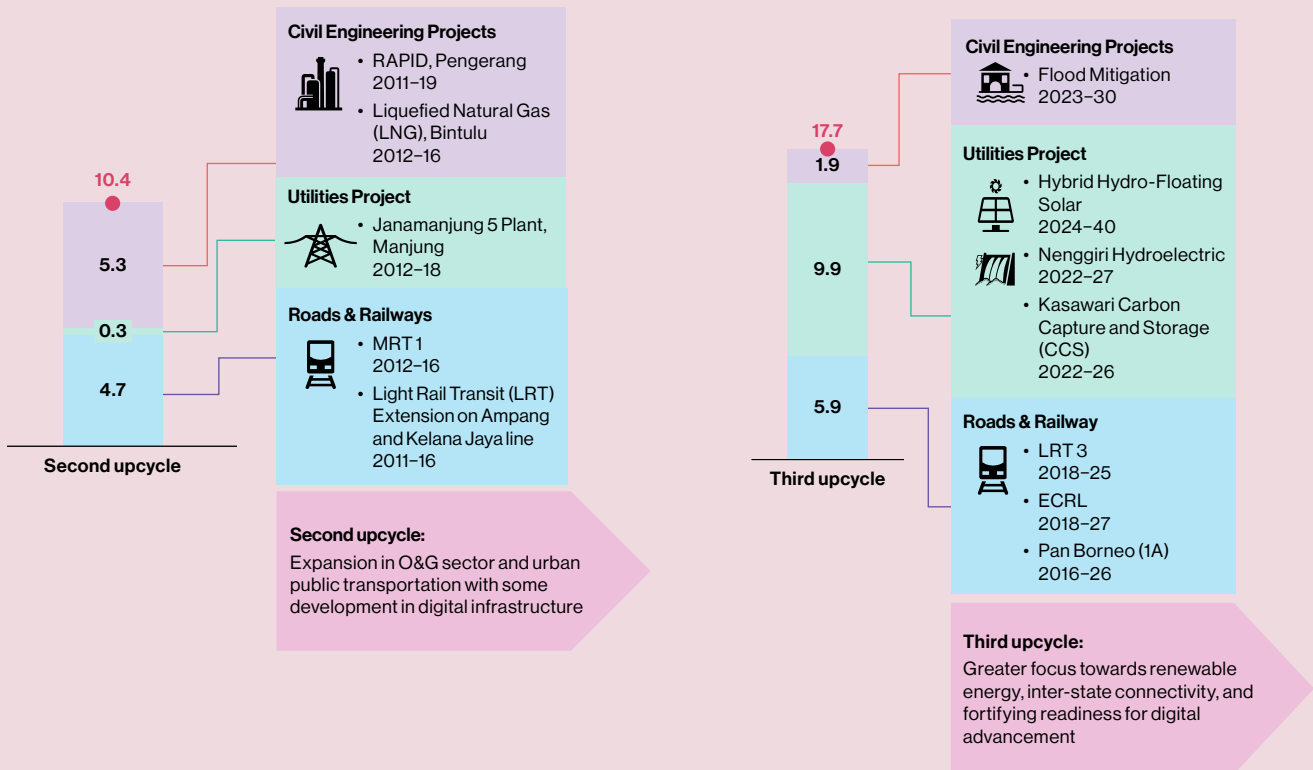
Residential Non-Residential Civil engineering  
Special trade Total

Note: For Chart 8a, the percentage share of overall total value of construction work done for the second upcycle is calculated using the average of data from 2011 to 2015. For the third upcycle, it is calculated using the average of data from 3Q 2023 to 4Q 2024.

Source: Department of Statistics, Malaysia and Bank Negara Malaysia estimates

**Chart 9: Examples of Infrastructure Projects in the Second and Current Investment Upcycle**

**Civil Engineering Value of Work Done by Activity**  
Percentage point contribution



Note: Earliest available data for the civil engineering value work done by activity is 2012. The percentage point contribution of civil engineering value of work done by activity for the second upcycle is calculated using the average of the earliest available data from 2013 to 2015. For the third upcycle, it is calculated using the average of data from 3Q 2023 to 4Q 2024.

Source: Department of Statistics, Malaysia, news flows and Bank Negara Malaysia estimates

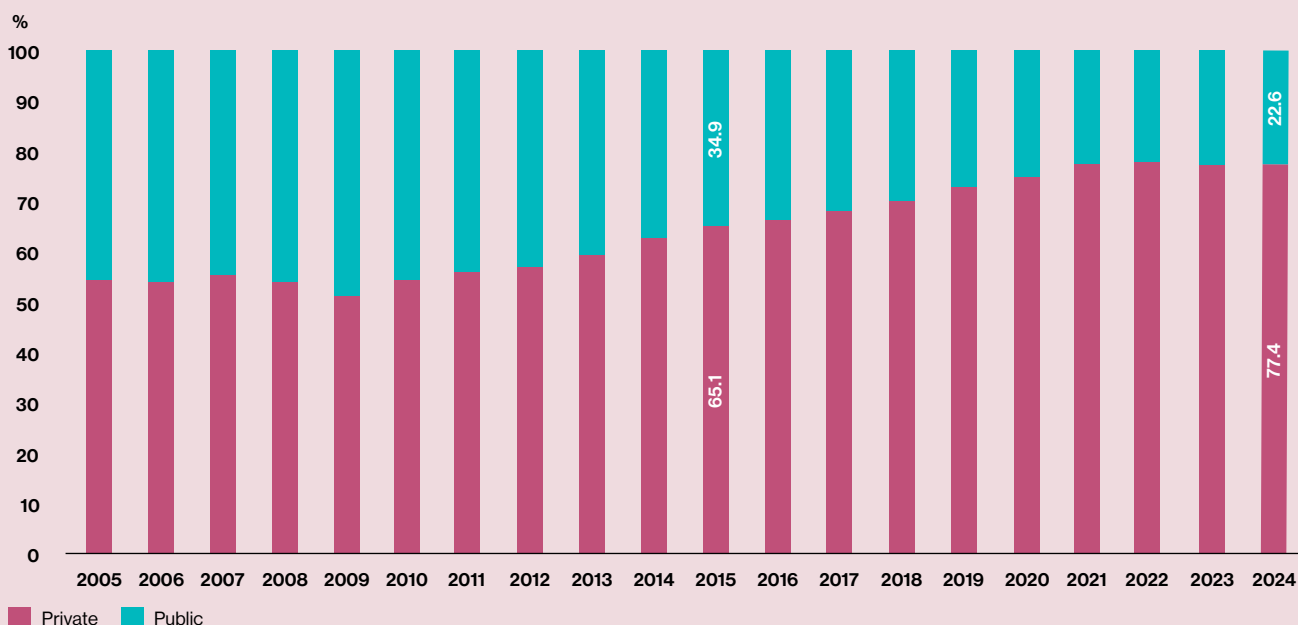
**Observation 3: Rising share of private sector investment**

A significant development is the larger role of the private sector in driving investments in the third upcycle (Chart 10). Approximately 77% of investments in the current upcycle are undertaken by the private sector (2015: 65%). Foreign investments have also seen a notable rise, making up 45% of the total approved investments in 2024, compared to just 18.7% in 2015. This reflects foreign investors' confidence on Malaysia's investment landscape, alongside continued investment by domestic firms (2024: 55%; 2015: 81.3%) (Chart 11).

During the current upcycle, public investments focus mainly on projects related to connectivity (e.g. highways and 5G network), and utilities such as development of renewable energy. Public corporations are heavily involved in driving these investments. For example, given the increasing demand for renewable energy, Tenaga Nasional Berhad (TNB) has been active in the development of large-scale solar parks, in partnership with SMEs, cooperatives, and state economic development corporations. Meanwhile, PETRONAS' subsidiary, Gentari Sdn Bhd, has rapidly widened its EV charging infrastructure across Malaysia. On digital infrastructure, Telekom Malaysia focuses on enhancing communication networks, including the expansion of its fibre connections. This effort together with the rollout of 5G network by the Digital Nasional Berhad supports the country's digital transformation. These investments play a crucial role in growing other private investments,<sup>11</sup> by providing the necessary infrastructure for businesses to thrive.

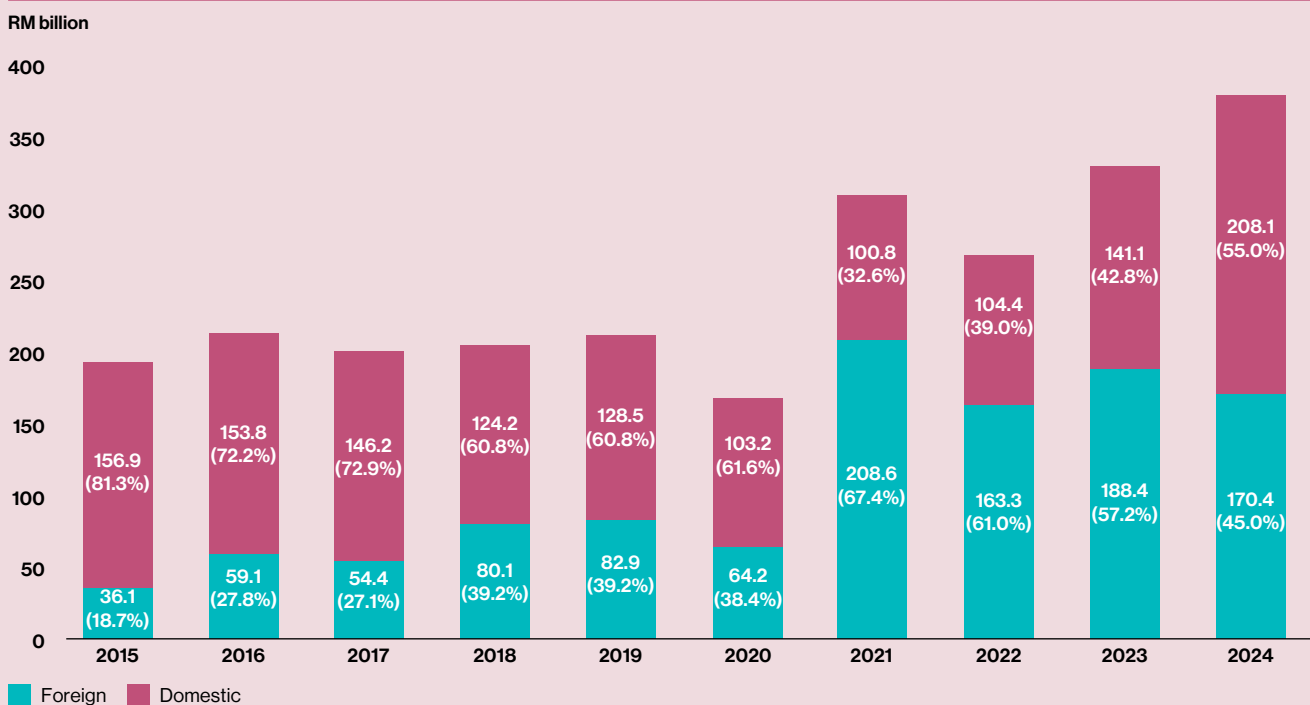
<sup>11</sup> Boushey, H. (2023). The Economics of Public Investment Crowding in Private Investment.

Chart 10: Share of Real GFCF by Sector



Source: Department of Statistics, Malaysia

Chart 11: MIDA Investment Approvals



Note: Numbers in parentheses indicate foreign or domestic share of investments to total investment approvals.

Source: Malaysia Investment Development Authority

## Reaping the returns of investment cycles: Ensuring every investment counts

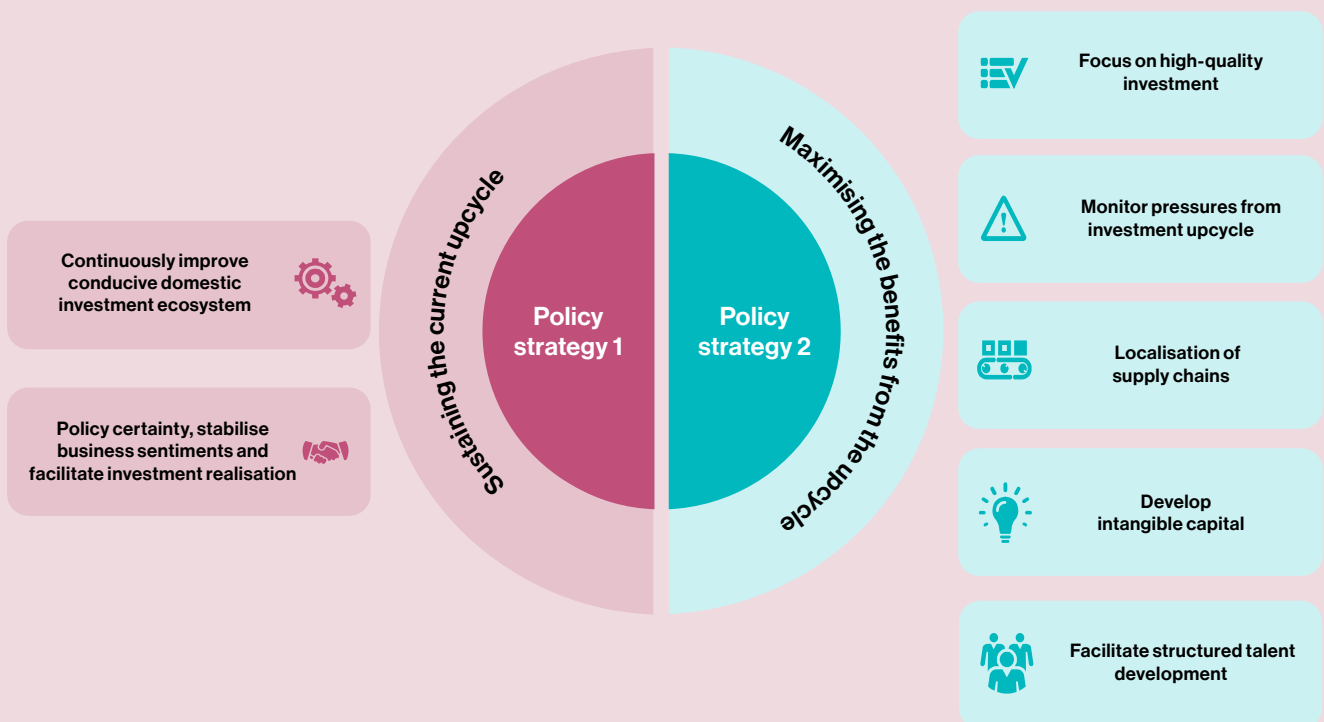
### Investment as a catalyst to transform Malaysia’s economy

Generally, and historically in Malaysia, investment upcycle is a critical driver of economic transformation. Empirically, investment upcycles are associated with faster output growth over time. First, stronger investment growth directly accelerates capital accumulation. Using a growth accounting framework, Malaysia’s potential output is decomposed into factor inputs.<sup>12</sup> Among these, capital accumulation has been a key growth driver, contributing nearly 50% on average annually since 2001 (Chart 12). Second, capital deepening is highly correlated with productivity growth (Chart 13). Third, during investment upcycles, resources tend to shift from less productive to more productive uses over a given period.<sup>13</sup> Recognising the importance of leveraging the current investment upcycle to advance Malaysia’s development objectives, key policy strategies should concentrate on sustaining the current upcycle and maximising the positive spillovers (Diagram 1).

### Policy Strategy 1: Sustaining the current upcycle

Based on the duration of past investment upcycles (Table 1), the current growth phase has the potential to last for several years. This trend is supported by the robust investment approvals in both 2023 and 2024 (Chart 14). The E&E industry and the information and communication technology (ICT) subsectors remain at the forefront, with approved investments worth RM55.8 billion (14.7% share of total approved investments) and RM136 billion (35.9%) in 2024 respectively. The implementation and facilitation of long-gestation private and public projects will further lend support to investment growth ahead (Table 2).

Diagram 1: Key Policy Strategies

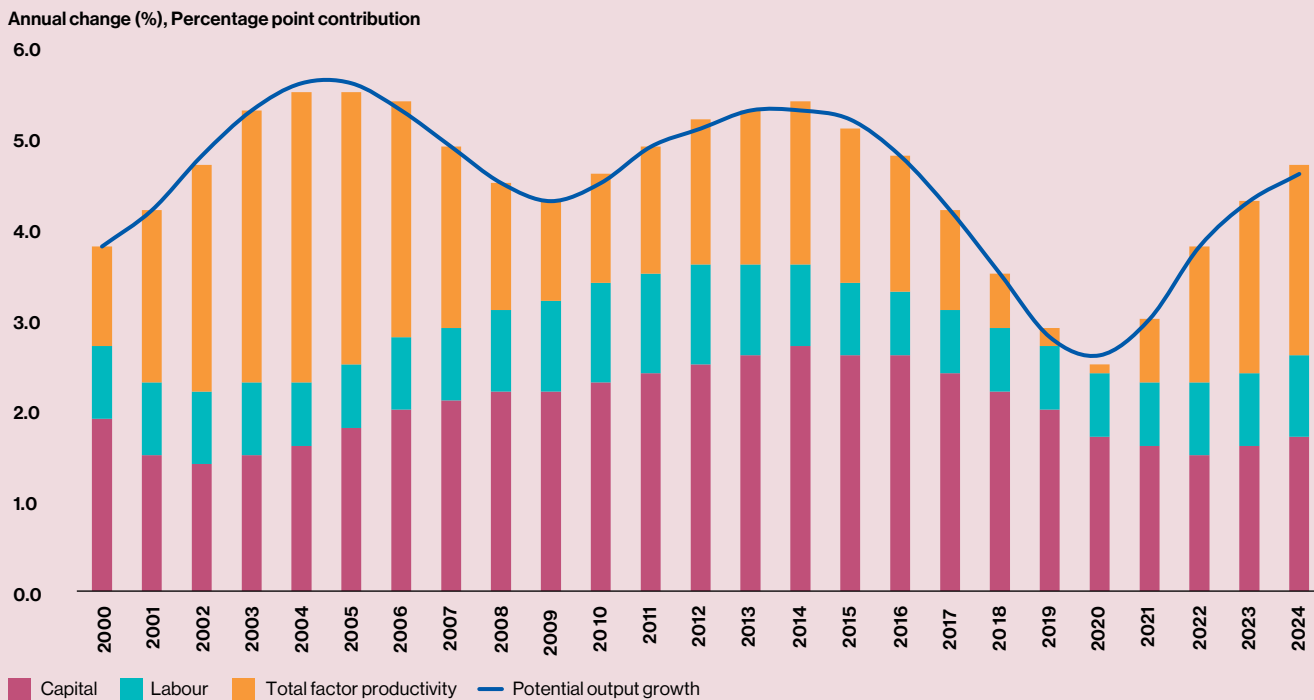


Source: Bank Negara Malaysia

<sup>12</sup> Bank Negara Malaysia (2012). Potential Output and the Output Gap in Malaysia. Second Quarter of 2012 Quarterly Bulletin.

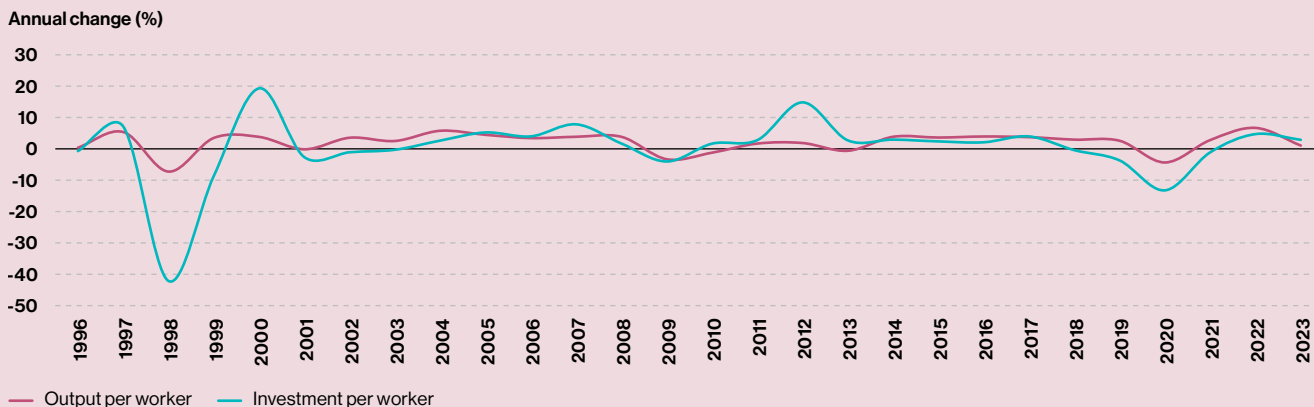
<sup>13</sup> Such mechanism is likely to be more impactful when there is an effective replacement capital that fully harness 'creative destruction' with improved management practices or new business models during the deployment period (Fleming, 2021).

**Chart 12: Factors Contributing to Malaysia's Potential Output Growth**



Source: Department of Statistics, Malaysia and Bank Negara Malaysia estimates

**Chart 13: Capital Deepening and Productivity Growth**



Note: The latest available data is up to 2023.

Source: Department of Statistics, Malaysia, Haver and Bank Negara Malaysia estimates

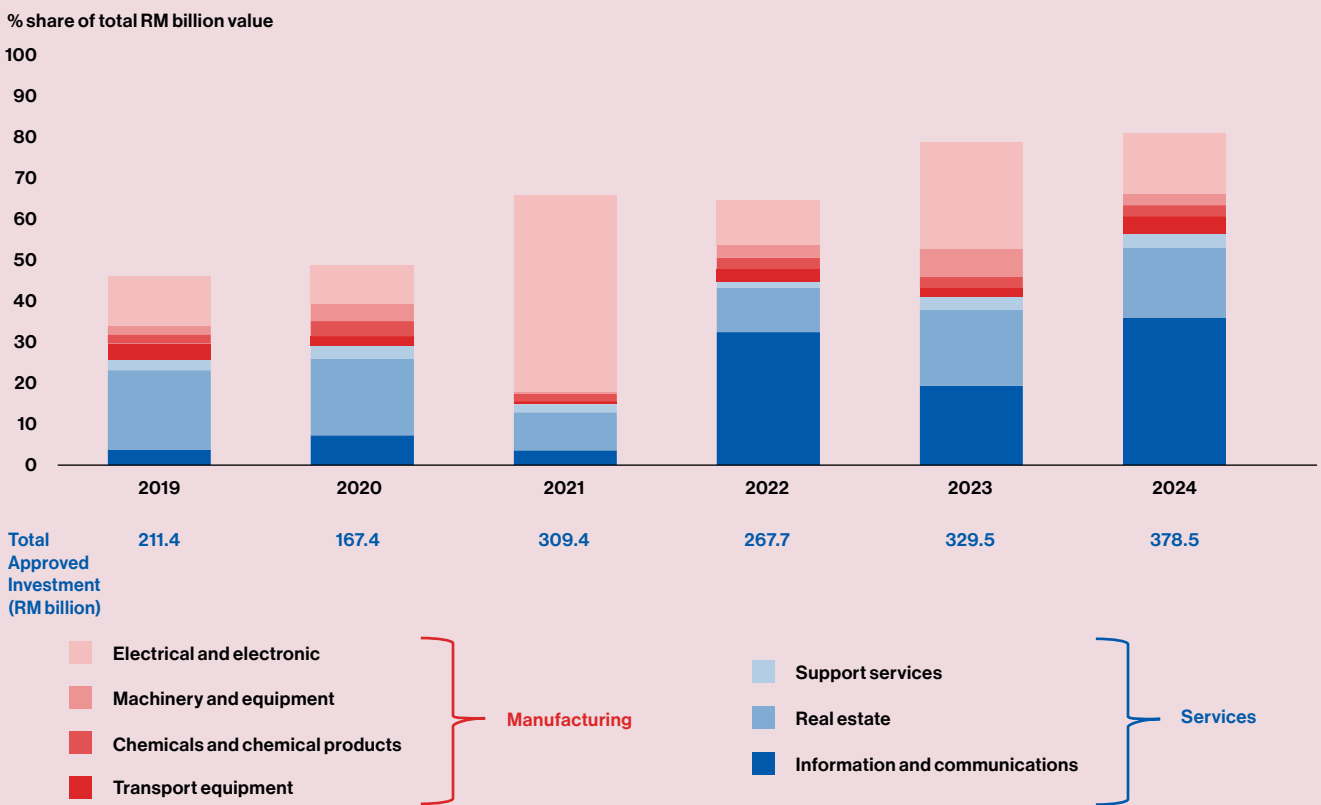
Sustaining the current upcycle would therefore require a timely and smooth realisation of approved projects. A significant development is the positive implementation progress of investment approvals. Between 2021 and December 2024, 84.5% of manufacturing projects approved by the National Committee on Investment (NCI) have been implemented. More recently, 67.8% of those approved in 2024 are progressing well and currently in various implementation stages, such as construction of facilities and installation of machinery and equipment.<sup>14</sup> This positive development has been enabled by government initiatives to expedite the approval process and facilitate implementation of projects, amid active engagements between authorities with investors.

<sup>14</sup> Source: MIDA 2024 Investment Performance Report.

These initiatives should be continued including various facilitation efforts throughout the investor journey not only at the national level but also at the state and local authorities. At the investment promotion and attraction stage, the establishment of a single point of contact for investors would provide better clarity among businesses. On this, efforts to streamline the national investment promotion role under the Malaysian Investment Development Authority (MIDA) would serve this purpose. At the investment implementation and investor aftercare stages, MIDA's Project Implementation and Facilitation Office (TRACK) provides end-to-end investment services to facilitate investment approvals, expedite the implementation of approved projects by addressing investor issues, and also increase the retention of these investments in Malaysia.

Of critical importance, at a broader level, ensuring policy certainty is crucial to promote business confidence and reduce uncertainties. Continuous implementation of catalytic projects under the national masterplans (i.e. NETR) would attract additional investment and stimulate further economic activity in new growth areas. For example, the installation of EV charging stations would not only encourage EV adoption but also stimulate new economic activities that revolve around the EV industry. These activities include production of electric vehicles and batteries, as well as the development of service and maintenance capabilities in Malaysia. Policy certainty, combined with a conducive investment ecosystem and Malaysia's robust economic fundamentals, are also key in attracting new investors and promoting investment retention in the country.

**Chart 14: Investment Approvals by Sector**



Source: Malaysia Investment Development Authority

**Table 2: Selected Large Investment Projects**

Type	Project	Description	Timeline
Private	Nvidia	Partnership with YTL to build advanced Artificial Intelligence (AI) infrastructure	2024–32
	Infineon Technologies	New silicon carbide power fabrication plant	2023–28
	Texas Instruments	Expansion of semiconductor manufacturing facility	2023–30
	Amazon Web Services	Cloud computing infrastructures and data centre	2023–37
	Google	Establishment of data centre and cloud region	2024–30
Public	Kasawari Carbon Capture and Storage (CCS)	Construction of a fixed offshore platform	2022–26
	East Coast Rail Link (ECRL)	Railway connecting east-west coasts of Peninsular Malaysia	2018–27
	Mutiara LRT Line	New transit system in Penang	2025–30
	Hybrid-Hydro Floating Solar (HHFS) Photovoltaic (PV)	Solar capacity installation at Tenaga Nasional Berhad's hydropower dams	2024–40

Source: News flows and company announcements

### Policy Strategy 2: Maximising benefits from the upcycle

Importantly, beyond boosting aggregate investment growth, translating the investment upcycle into long-lasting productivity gains should be prioritised. To achieve this, focus should be given to several mutually reinforcing policy directions:

- Focus on high-quality investment:** Continuous emphasis via well-targeted incentives<sup>15</sup> should be placed on high-quality investments that yield positive spillovers to the economy. In recent years, there has been a notable increase in approved investments in E&E, transport equipment, support services and ICT (Chart 14). These industries tend to create high-value jobs (Chart 15a) and expand domestic linkages – two measurable pillars under the National Investment Aspirations (NIAs). For instance, based on the 2021 input-output tables, E&E and transport equipment industries have backward and forward linkage index values of more than one. This implies that these industries significantly source intermediate inputs from other domestic upstream industries and supply substantial intermediate inputs to other downstream industries (Chart 15b).
- Manage pressure points from investment upcycle:** While strong investment can offer substantial benefits when effectively capitalised, it is equally important to remain cognisant of potential risks associated with investment upcycles. Drawing lessons from previous investment upcycles, these risks include increased household and business indebtedness, as well as pressure to the current account of the balance of payment:
  - *Rise in household and business indebtedness:* During the second investment upcycle, there was an oversupply of high-end residential and commercial properties. This resulted in large inventories of unsold properties,<sup>16</sup> which placed financial strain on households and businesses, exposed financial institutions to vulnerability, and contributed to price volatility in the property market leading to financial imbalances.<sup>17</sup> While the sectoral drivers of the current upcycle are more diverse with strong contributions from E&E and ICT, it is important to remain vigilant about the potential risks in the property market.
  - *Pressure to the current account of the balance of payments:* Strong investment activity could place temporary pressure to the current account surplus mainly due to increased capital imports particularly for M&E. Nonetheless, a deficit may not necessarily indicate an unsustainable development, particularly if these investments are funded

<sup>15</sup> Based on Budget 2025, the Government is currently developing the New Investment Incentives Framework. The key focus includes developing a well-targeted incentives for high-value investments via a scorecard approach in line with the NIAs.

<sup>16</sup> Bank Negara Malaysia (2015). Assessing Demand-Supply Conditions in the Malaysian Property Market. Annual Report 2015.

<sup>17</sup> For more details on financial imbalances, please refer to the box article titled 'Financial Imbalances and Policy Responses in Malaysia' in the Annual Report 2014.

by stable sources, such as foreign direct investment. Moreover, such investments have the potential to enhance productivity and generate future income, thereby supporting the current account balance over the long term.<sup>18</sup>

- Localisation of supply chains:** To maximise the positive spillovers from the current investment upcycle, it is essential to further integrate more domestic firms into the supply chains connected to these investments. For example, investments from multinational companies (MNCs) that demonstrate substantial efforts to expand and develop domestic supply chain network such as sourcing materials from local suppliers and building local capabilities<sup>19</sup> should be encouraged. The recent influx of data centre investments in Malaysia can also help advance the local manufacturing ecosystem by supplying equipment such as server racks and cooling systems. Additionally, the data centre industry can generate forward linkages in the economy, for example, by fostering the development of local cloud computing and uplifting local independent software vendors. These can be achieved through strengthening partnerships with local vendors and service providers, and enhancing their capabilities to serve data centres within and outside of Malaysia.

Chart 15a: High-skilled Labour Distribution by Sector (2022)

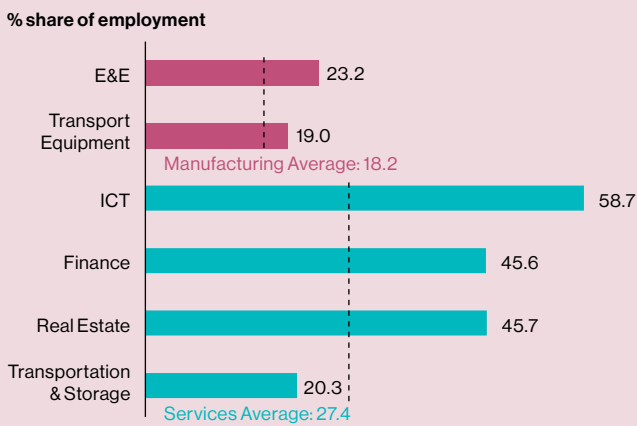
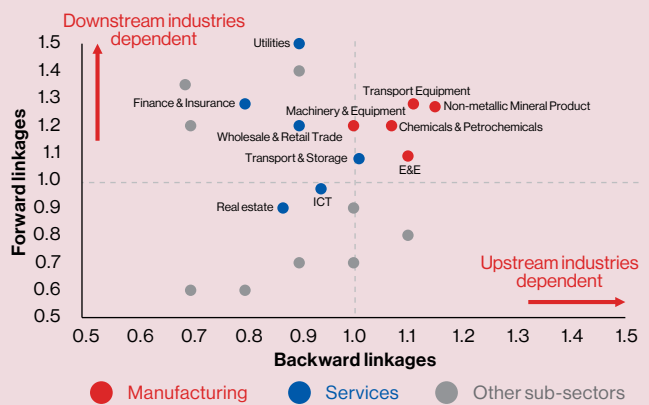


Chart 15b: Forward and Backward Linkages Index



Note: The latest available data is up to 2022 for Chart 15a and up to 2021 for Chart 15b.

Source: Department of Statistics, Malaysia and Bank Negara Malaysia estimates

- Foster growth of intangible capital:** In the era of the knowledge economy powered by rapid digitalisation, advanced economies have been increasingly focusing on developing and acquiring intangible capital (e.g. intellectual properties (IPs), computer software, and databases) to benefit from new growth areas such as artificial intelligence and digital services. Between 2008 and 2023, intangible investment has consistently grown at a faster rate than tangible investment in many advanced economies.<sup>20</sup> Intangible capital is one of the main sources of market value and competitiveness for firms to generate higher product premium especially in knowledge-intensive industries such as high-tech manufacturing, pharmaceutical and cloud computing. In the semiconductor industry, for instance, transitioning from back-end assembly to advanced packaging and front-end activities<sup>21</sup> is ideally driven by homegrown IPs and product designs. Moving up the global value chain requires greater policy focus directed towards stimulating research and development (R&D) spending, patenting activity and fostering partnerships between private sector, leading MNCs and research institutions.

<sup>18</sup> For more details on pressure to the current account balance, please refer to 'Drivers of Malaysia's Current Account of the Balance of Payments in the Post-COVID-19 period' box article in BNM's Economic and Monetary Review 2024.

<sup>19</sup> For instance, in March 2024, Google announced two initiatives aimed at equipping Malaysian youth with future ready skills and enhancing public service delivery. The first initiative involves Google and the Ministry of Higher Education (MoHE) working together to upskill Malaysian youth from diverse backgrounds by providing 161 institutes of higher learning with 500 Google Career Certificate scholarships each. The second initiative involves collaborating with Jabatan Digital Negara (JDN) to equip 445 thousand public officers with Google Workspace tools to boost productivity.

<sup>20</sup> World Intellectual Property Organization and Luiss Business School (2024).

<sup>21</sup> For instance, integrated circuit design and wafer fabrication, which can create more high skilled jobs.

- **Structured talent upskilling and development:** Nurturing a high-skilled and future-ready workforce will not only attract quality investments by ensuring a sufficient talent supply but also enhance knowledge transfer and innovation capacity. For instance, the shortage of engineers and the explicit target under National Semiconductor Strategy (NSS) to train and upskill 60,000 engineers underscore the importance of developing a well-equipped talent pipeline to remain competitive in attracting high-value investments and driving innovation. Moreover, a cohesive talent development plan should involve greater collaboration between the Government, industry and academia in enhancing the quality of higher education syllabus as well as Technical and Vocational Education and Training (TVET) programmes. Specifically, the industry should be encouraged to take on more active roles, given its familiarity with the current trends, technologies, and the critical skills workers need to meet industry demands.<sup>22</sup> More crucially, building a competitive talent pool right from the start would require a comprehensive plan to increase students' enrolment into the science, technology, engineering and mathematics (STEM) education at the secondary and higher education. These efforts would help in maintaining a balanced talent supply-demand dynamics and minimising skill mismatches.<sup>23</sup> In turn, the positive spillovers from the investment can be maximised, ensuring the benefits are widely shared and contribute to sustainable economic growth.

Over the longer term, it is imperative to continuously evaluate and review strategic investment policies to ensure they remain relevant and effective. This is especially important given the increasing competition and ongoing uncertainties in the global economy. Major developments, such as the recalibration of global supply chains, heightened geopolitical tensions and evolving economic fragmentation, present challenges as well as opportunities for all countries, including Malaysia. Considering these headwinds, it is increasingly vital for Malaysia's investment policies to not only attract quality foreign investment but also focus on enhancing the capabilities of domestic firms.

## Conclusion

This article established the presence and nature of Malaysia's third investment upcycle. While an investment upcycle can serve as a catalyst for structural transformation in the economy, it should be complemented by policies aimed at sustaining the upcycle and maximising benefits from it to achieve long-term economic resilience and prosperity. It is also vital to remain cognisant of the potential risks associated with the investment upcycle to ensure sustainable economic growth and financial stability.

<sup>22</sup> Bank Negara Malaysia (2023). The Case for Labour Market Reforms in Malaysia: Challenges and Opportunities. Economic and Monetary Review 2023.

<sup>23</sup> For example, the CREST programme in the E&E industry is designed to bridge the talent demand and supply through structured talent development ecosystem underpinned by government-industry-academia collaboration.

## References

- Bank Negara Malaysia (BNM). (2012). Potential Output and the Output Gap in Malaysia. Quarterly Bulletin 2Q 2012.
- Bank Negara Malaysia (BNM). (2014). Financial Imbalances and Policy Responses in Malaysia. Annual Report 2014.
- Bank Negara Malaysia (BNM). (2015). Assessing Demand-Supply Conditions in the Malaysian Property Market. Annual Report 2015.
- Bank Negara Malaysia (BNM). (2019). Securing Future Growth through Quality Investments. Economic and Monetary Review 2019.
- Bank Negara Malaysia (BNM). (2020). Developments in the Malaysian economy. Quarterly Bulletin 1Q 2020.
- Bank Negara Malaysia (2023). The Case for Labour Market Reforms in Malaysia: Challenges and Opportunities. Economic and Monetary Review 2023.
- Boushey, H. (2023). The economics of public investment crowding in private investment. Executive Office of the President.
- De Long, J.B., & Summers, L.H. (1991). Equipment Investment and Economic Growth. *The Quarterly Journal of Economics*, Vol. 106(2), pp. 445-502.
- Drehmann, M. & Yetman J. (2018). Why you should never use the Hodrick-Prescott filter—at least to generate credit gaps. BIS Working Paper No. 744.
- Fleming, M. (2021). Productivity Growth and Capital Deepening in the Fourth Industrial Revolution. The Productivity Institute Working Paper No. 010.
- Gita Gopinath, Pierre-Olivier Gourinchas, Andrea F Presbitero, and Petia Topalova (2024). Changing Global Linkages: A New Cold War? IMF Working Paper No. 2024/076
- Hamilton (2017). Why You Should Never Use the Hodrick-Prescott Filter. NBER Working Paper 23429.
- Herrerias, M. J., & Orts, V. (2012). Equipment investment, output, and productivity in China. *Empirical Economics* Vol. 42(2), pp. 181–207.
- Malaysian Investment Development Authority (2024). Investment Performance Report.