



SMME MANUFACTURING DECLINE IN SOUTH AFRICA - DRIVERS AND LESSONS FROM OTHER DEVELOPING ECONOMIES

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1. Introduction

In both the National Development Plan Vision 2030 (NDP) and the Economic Reconstruction and Recovery Plan (ERRP), industrialisation and Small, Medium and Micro-Enterprise (SMME) Development are regarded as key channels for driving economic and socio-economic development in South Africa. Since at least the mid-2000s, an evolving strategic effort has seen several measures introduced to promote manufacturing in the country, with a strong emphasis placed on participation by SMMEs to broaden participation and drive job creation (Bhorat et al., 2018; Lukhele and Soumonni, 2020). Yet the proportional contribution of manufacturing to the national economy has declined since the early 2000s.

This study therefore examines the following questions:

- What factors contributed to the decline in the manufacturing contribution in South Africa?
- Have any countries of broadly similar population and developmental status achieved notable success in growing their small business manufacturing sectors?
- Can any differences be determined between the policies, strategies and implementation of those countries and the approach followed by South Africa?

2. Status of manufacturing in South Africa

The development of manufacturing in South Africa – and specifically manufacturing by SMMEs – can be considered from the perspectives of policy and national strategy, economic contribution, and output performance.

a. Policies and strategies

Increased local manufacturing to reduce overreliance on the primary sector and promote greater labour absorption has a long history but, from the perspective of the post-2000 era, the beginning of a continuing effort can be seen in the successive Industrial Policy Action Plans (IPAPs) published from 2007 to 2018. The IPAPs adopted approaches such as prioritization of high-potential sectors for comprehensive support, promotion of localisation, including through targeted funding measures and designations for local content, and alignment of Broad-Based Black Economic Empowerment measures binding upon the private sector with government preferential procurement to incentivize the development of new suppliers and sub-contractors.

With the adoption of the National Development Plan Vision 2030 (NDP) in 2012, SMME and industrial development became firmly entrenched as elements of national development strategy. The NDP set an ambitious target of reducing unemployment from approximately 25% in 2011 – and 33% in Quarter 1 of 2023 – to 6% by 2030. To achieve this, realization of the plan called for 11 million jobs to be created, of which 90% were expected to be created in small businesses. Mass entrepreneurship, regulatory reform, improved support services and improved access to domestic and export markets were intended to empower the SMME contribution to the target.

Regarding manufacturing, the NDP acknowledged that South Africa would face challenges in competing globally in low-cost manufacturing but promotion of manufacturing for export still featured as significant element of the growth strategy, since the country was considered to be well-positioned for mid-skill manufacturing and agro processing. Competing in this field was expected to require product and brand excellence, calling for investment in research, development and commercialisation. Other enablers identified by the NDP were an efficient logistics platform, effective economic diplomacy, and strategies based on local assets and capabilities. These included increased mineral beneficiation to underpin local value addition and leveraging of existing expertise to introduce niche-market services and manufactured goods, such as products for the global mining industry.

Industrialisation, localisation, and small business inclusion also feature strongly in the Economic Reconstruction and Recovery Plan (ERRP), the main strategic document currently guiding national growth. The ERRP mandates a focused programme to build and support SMME participation in the manufacturing value chain for purposes of localisation. Focus areas are manufacturing by township and rural enterprises, SMME production of light and fast consumer goods, involvement of SMMEs in minerals beneficiation, and revival of dormant production infrastructure (Republic of South Africa, 2020).

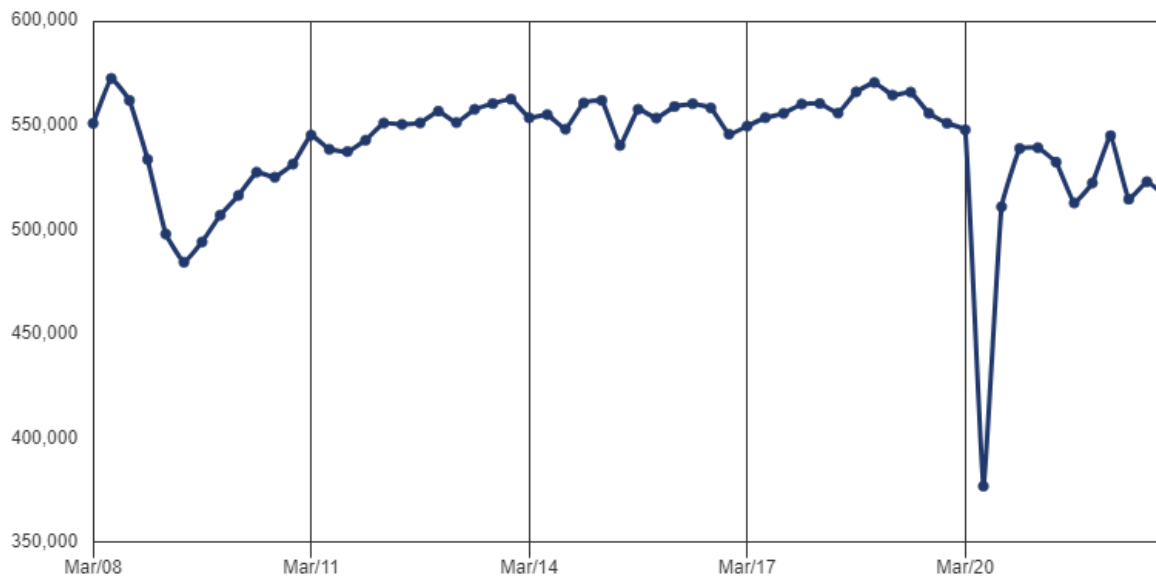
b. Statistical overview:

The current contribution of the manufacturing sector and extent of SMME participation was examined by consulting published sources covering the period from SMME 2008 to 2022. This period coincides with the beginning of the series of IPAPs and allows for facilitated comparison through the availability of consistent interactive data from the mid-2000s onwards.

i. Manufacturing output

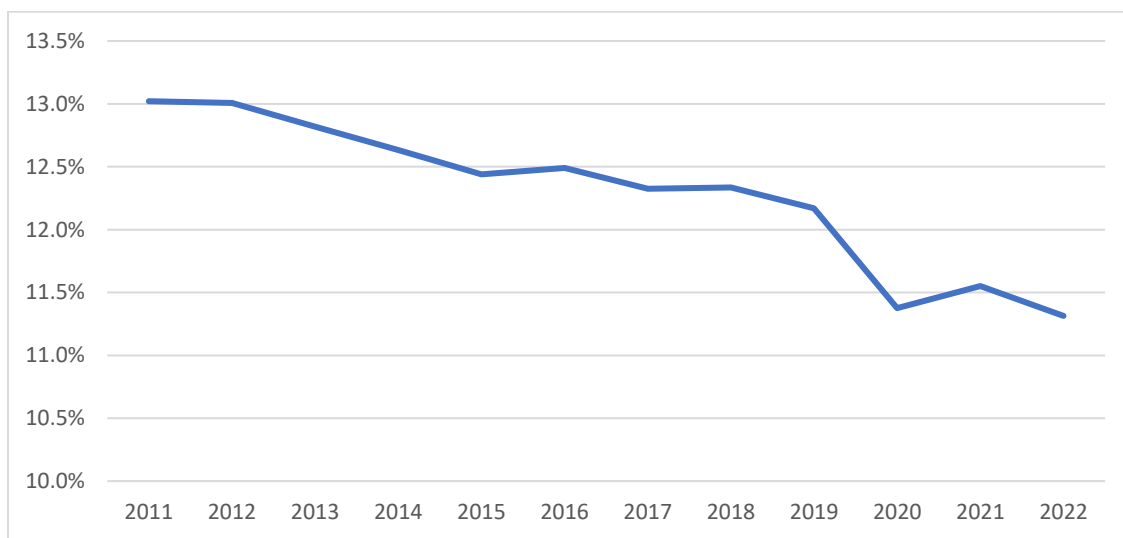
Against the national impetus behind industrialisation and localisation, figures on manufacturing from the South African Reserve Bank (SARB) indicate that real value add reached a high point of approximately R573 billion in 2008 shortly before the effects of the Global Economic Crisis took hold. Performance normalized by 2013 but adopted a stable trend thereafter. Although performance approached that of 2008 in late 2018 and early 2019, the predominant pattern – except for Quarter 1 of 2022 with a return to a post-Covid high point of R545 billion– was one of gradual decline.

Figure 1: Manufacturing gross value added in 2015 prices (R million)



Source: SARB, 2023

Figure 2: Annualised GDP Contribution at constant prices 2011 - 2022



Source: Based on Stats SA, 2016, 2023

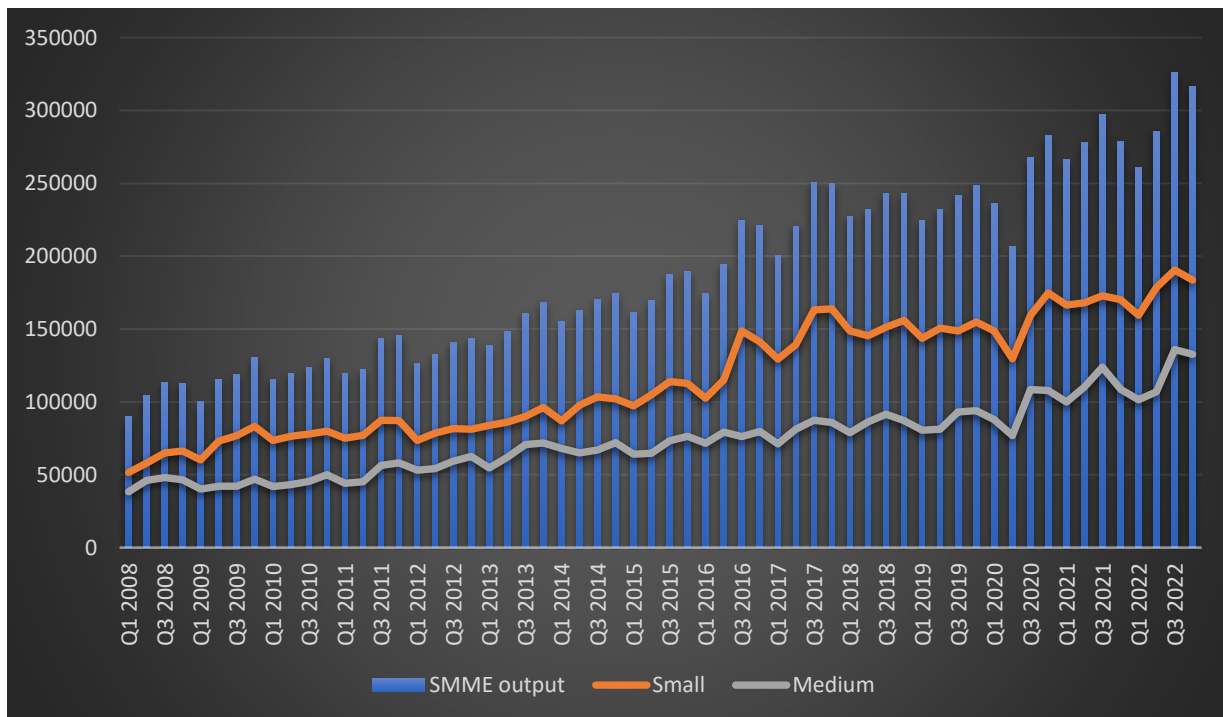
Regarding the contribution of manufacturing to overall output, Stats SA figures indicate that annualised manufacturing value add at constant prices declined from 13% in 2011 to 11.3% in 2022.

ii. SMME output

Although a method has been applied in studies to estimate the overall SMME contribution to GDP, use of assumptions and inherent biases complicate the calculations (Department of Trade and Industry, 2004). Applications of a similar approach to estimate the specific contribution of SMMEs to manufacturing would call for further given data and assumptions to applied, introducing further possibilities for inaccuracy.

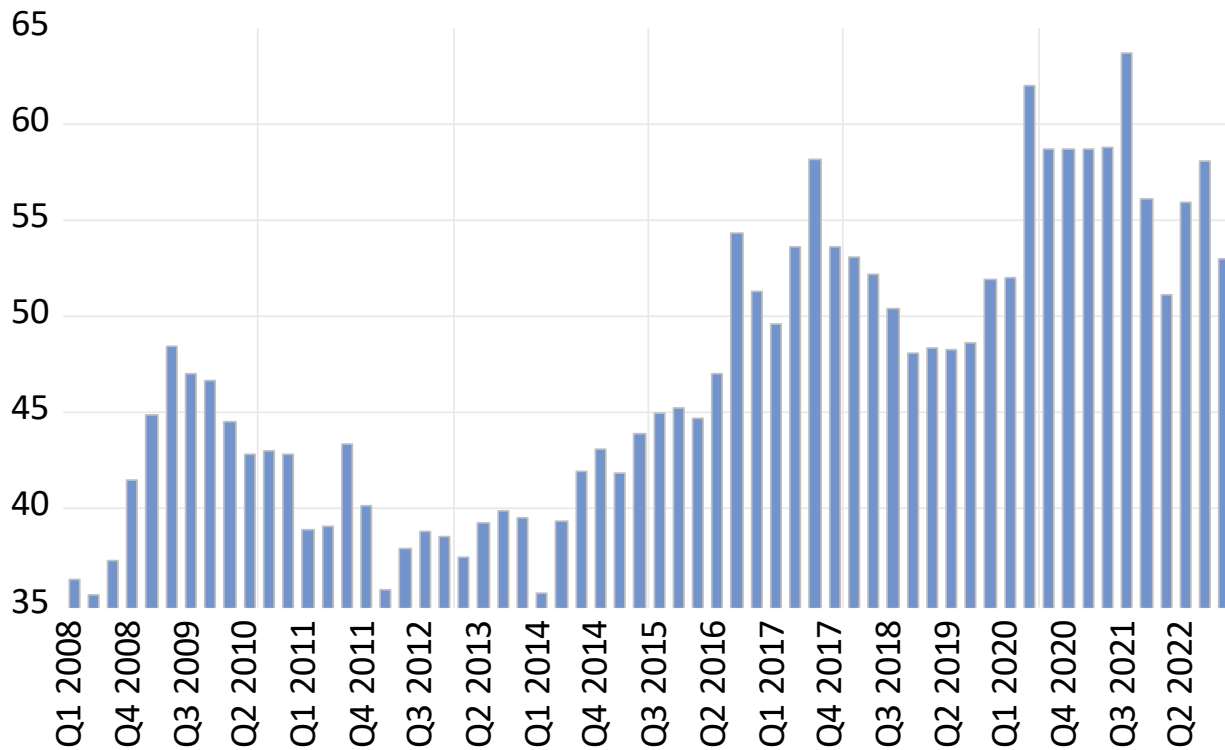
As an alternative, the SMME Quarterly Updates, regularly published by Seda since the mid-2010s, make use of the turnover figures from the Stats SA Quarterly Financial Statistics (QFS), which are presented according to the categories of large, medium, and small enterprises by sector. A disadvantage of this source is that businesses with turnovers less than R2 000 000 are excluded. Figures from the QFS suggest that SMME manufacturers have achieved higher turnover performance over the 2020 to 2023 period than previously. While overall turnover for this group was generally below R250 billion before 2020, figures for Quarter 3 of 2020 and later ranged between R260 billion and R326 billion.

Figure 3: SMME manufacturing turnover



Source: Quantec

Figure 4: SMME turnover contribution to total manufacturing turnover



Source: Quantec

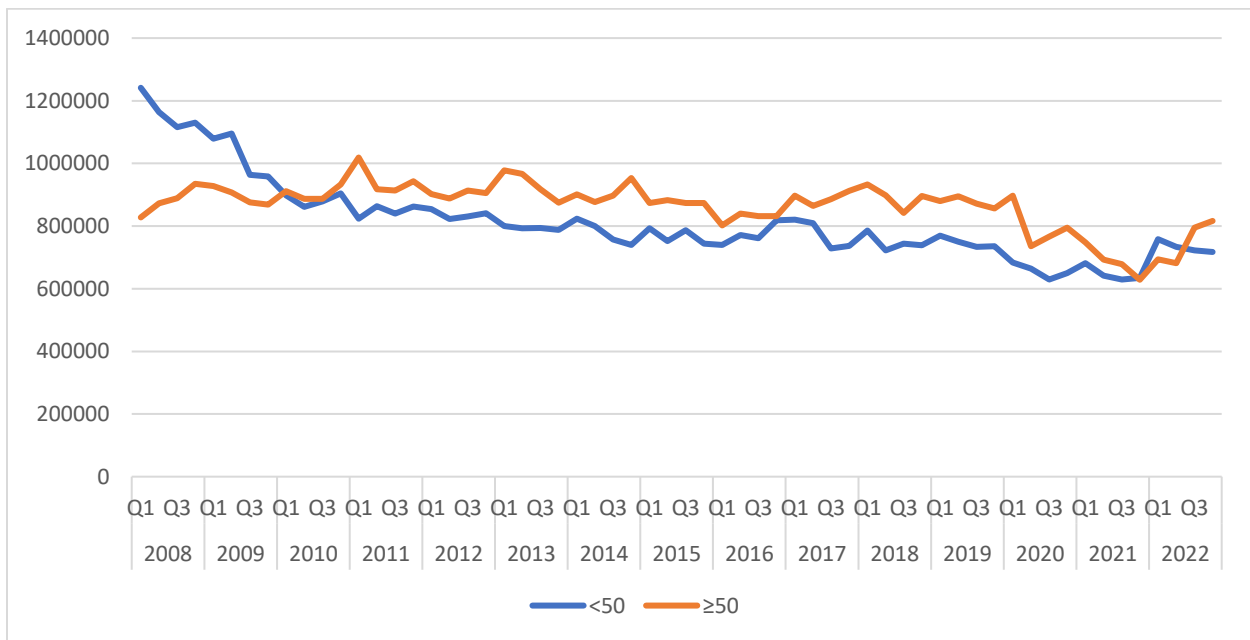
Figures 3 and 4 show trends in SMME manufacturing turnover for the period 2008 to 2022. An upward trend in turnover is observed, which is an indication of increased production and demand for manufactured products from SMMEs. The contribution of SMME manufacturing turnover to the total has grown from below 40% in first quarter of 2008 to 53% in the fourth quarter of 2022. The Global Entrepreneurship Monitor South Africa (GEM SA) report, prepared by Bowmaker-Falconer and Herrington (2020), also highlighted that entrepreneurial activity in the manufacturing sector has been growing, especially during the 2015 – 2019 period. It should be noted that turnover of small businesses is larger than that of the medium businesses.

iii. Employment

The Stats SA Quarterly Labour Force Surveys allow for numbers of employees in each industry to be determined in businesses according to the number of employees corresponding approximately to the pre-2019 criteria for micro, very small and small enterprises. However, they do not allow for direct disaggregation between medium and large businesses. All businesses with 50 or more employees are grouped into one category.

For this research, the criterion of fewer than 50 employees was considered acceptable to represent the SMME group of most interest from a development perspective. The Organisation for Economic Cooperation and Development (OECD) has previously found that small establishments with fewer than 100 employees account for 40% to 80% of manufacturing employment internationally, with higher net job creation rates in the smaller size classes (OECD, 1997). The figure below, based on Stats SA Quarterly Labour Force Survey (QLFS) data from Quarter 1 2008 to Quarter 4 2022 shows that South Africa did not follow this pattern for a period of approximately 11 years between 2010 and 2021.

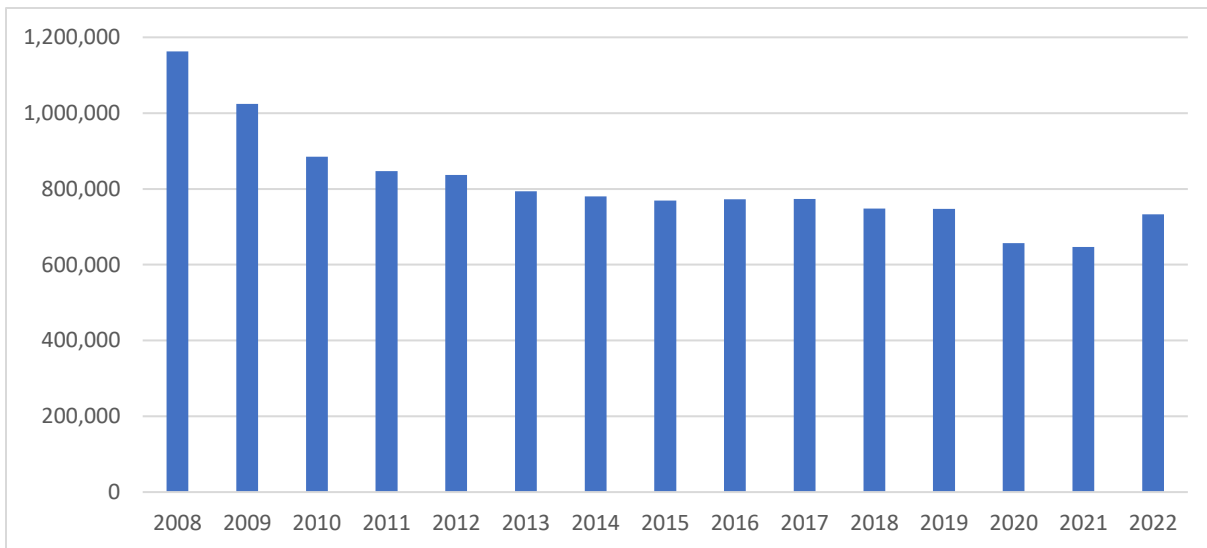
Figure 5: Employment in manufacturing - firms with no of employees <50 and ≥50 2008 - 2022



Source: Based on Stats SA, 2008 - 2022

As shown in the figure below, data from the Stats SA Quarterly labour Force Surveys from Quarter 1 2008 to Quarter 4 of 2022 suggests that employment in manufacturing firms with fewer than 50 employees declined from an annual average of approximately 1.16 million in 2008 to an average of 733 000 in 2022, or by 37%. The largest part of the loss for the smaller enterprises was sustained between 2008 and 2013, corresponding with the recovery period from the 2008/2009 global financial crisis, the number falling below 800 000 and never exceeding that level since.

Figure 6: Average Annual Employment in Manufacturing in firms >50 employees:



Source: Stats SA, 2008 - 2022

Examination of the industries within the manufacturing sector reveals the ten leading industries for employment on average across 2008. Each industry employed at least 45 000 people. The numbers employed on average across 2022 are presented in the table below alongside the 2008 figures for purposes of comparison.

Table 1: Top 10 manufacturing industries for SMMEs employing fewer than 50 people by employment, 2008 versus 2022

Industry	2008 average employment	2022 average employment
Manufacture of wearing apparel; except for apparel	91 052	74 990
Manufacture of other fabricated metal products; metalwork service activities	82 274	55 483
Manufacture of products of wood; cork; straw and plaiting material	74 376	14 951
Manufacture of non-metallic mineral products N.E.C.	71 119	51 023
Manufacture of structural metal products; tanks; reservoirs and steam generators	61 183	34 358
Manufacture of basic iron and steel	59 847	19 246
Manufacture of other chemical products	49 307	33 142
Manufacture of beverages	48 612	28 939
Manufacture of other food products	46 866	79 970
Printing and service activities related to printing	45 081	39 878

Stats SA, 2008, 2022

It is notable that all but one of the leading 10 industries employed fewer workers in 2022 than in 2008. The exception was Manufacture of Other Food Products. This was an industry that was permitted to remain active throughout the Covid-19 Pandemic period, however the other industries related to food processing, i.e., Manufacture of Beverages, Processing of Meat, Fish, Fruit, and Vegetables, and Manufacture of Dairy Products, were not spared from losses in worker numbers. The gain of approximately 33 000 workers on average in Manufacture of Other Food Products represented the largest rise among all major groups within manufacturing between 2008 and 2022, while the decline of 59 000 in Manufacture of Products of Wood; Cork; Straw and Plaiting Material was the largest fall. The second highest was Manufacture of Basic Iron and Steel, with 41 000 fewer workers in 2022.

3. Literature review

The Seda SMME Quarterly Update for Quarter 3 of 2017 pointed out that approximately 10% of SMMEs were in the manufacturing sector, yet they accounted for approximately 24% of Small and Medium Enterprise turnover according to the QFS. Furthermore, manufacturing led productivity in the secondary sector of the overall economy. These factors were said to support the promotion of manufacturing from an economic development perspective. However, the update recognised a trend towards de-industrialisation, noting that real manufacturing GDP between 2010 and 2017 expanded by only 1.5% per annum, a growth rate below that of the rest of the economy at the time (at 1.9% per annum). Contributing factors mentioned were:

- General uncertainty in the aftermath of the Global Financial Crisis
- Domestic economic policy uncertainty
- Infrastructure constraints. Electricity outages were cited as an example.
- Labour market instability
- Stagnation in the mining sector, and
- Loss of competitiveness due to rising labour unit costs.

A strong rand exchange rate further prevailed in 2017, which reduced the earning from exports (Seda, 2018).

Although a far older source, the possibility of a long-term structural threat to manufacturing was raised in the Manufacturing Bulletin for Quarter 1 of 2012, published by the Manufacturing Circle.

The report referred to research indicating that the decline in manufacturing began in 1981 and noted from a then-recent study that small manufacturing enterprises tended to be older firms, with more than half being more than 20 years old. In addition, 60% of business owners were 51 or more years old and tended to be matriculants or holders of diplomas, rather than graduates, having started their careers in technical manufacturing operations. At the time, manufacturers were more likely to have lost staff than firms in other sectors. The owners mainly shared an unfavourable outlook for the future for the sector and prospects for new entrants. Approximately one-third (35%) did not expect to still be involved in their businesses after ten to twenty years and one-fifth had no long-term plan for their businesses. The report alluded to a sense that many enterprises would close on the owners' departure, rather than being sold or transferred to a successor. Optimism for business growth was correspondingly lower in manufacturing than in small businesses in other sectors (Manufacturing Circle, 2012).

Several other challenges to local manufacturing were further highlighted in the bulletin, some of which remained in 2023. They included –

- Increases in administered prices as electricity and fuel.
- Cost of imported components.
- Competition from lower-priced imports backed by industry subsidies in the countries of origin. Approximately 50% of manufactured goods sold in South Africa were claimed to be imported.
- Protectionist trade practices in key export markets.
- Onerous labour laws and regulations for small businesses.

Lower employment in manufacturing was ascribed to:

- A tendency by local government to procure imported goods.
- High fixed costs
- investment in assets requiring less labour.
- Uncompetitive labour costs.

In contrast to the negative outlook that predominated in 2012, the Manufacturing Circle published an investment tracker between Quarter 4 of 2016 and the same quarter of 2018 that indicated expanding investment by manufacturing firms in property, plant and equipment, inventory, human capital, and Research and Development (Manufacturing Circle, 2019). Although the companies involved were large, each with 200 employees or more, the trend revealed by the tracker suggested underlying resilience in the manufacturing sector in which firms were willing to invest.

In 2019, the Manufacturing Circle published the results of a further industry survey on inhibitors to investment in manufacturing. The most significant emerged as weak local demand for locally manufactured products, high input costs and regulatory constraints. The leading measures to address these were, respectively, strengthening of buy local campaigns, increased incentives for investments in efficient production technologies, and improved coordination within government when developing and implementing policies (Manufacturing Circle, 2019).

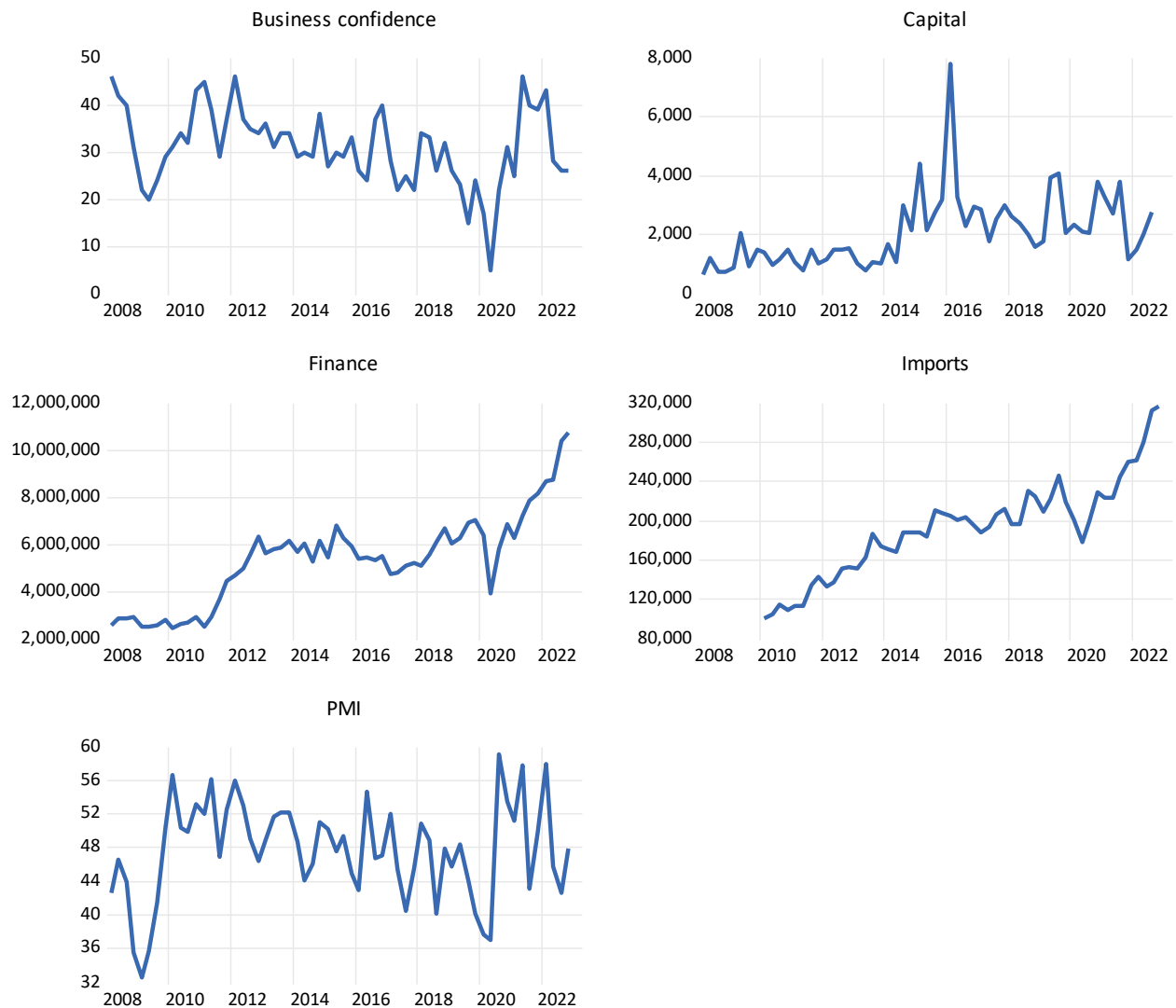
4. Methodology

The first objective of this study is to investigate the factors contributing to SMME manufacturing growth or decline in South Africa. Regression analysis was applied to analyse the drivers of SMME manufacturing sector output. Data for the period 2008Q1 to 2022Q4 was gathered from Stats SA, the South African Reserve Bank (SARB) and Quantec. Table 2 provides a description of the variables used in the regression model, while figure 7 shows the trends of the variables.

Table 2: Description of the variables and sources

Variable	Description	Source
Output	Turnovers of SMMEs in the manufacturing sector	Quantec
Finance	Number of credit applicants rejected	Quantec
Imports	Total value of manufactured imports	SARB
Capital	Capital expenditures by SMMEs in the manufacturing sector	Quantec
PMI	Purchasing Managers Index as a measure of business activity	Quantec
Business confidence (BUS)	Business confidence in the manufacturing sector	Quantec

Figure 7: trends of drivers of SMME manufacturing



The choice of the independent variables is guided by literature. Cheong, Lee and Weissmann (2020) showed that access to finance is important for the growth and performance of SMMEs. Imports have an ambiguous effect on SMME performance. On one hand, imports of manufactured products may lower domestic demand and thus hinder the growth of SMMEs. This view is in line with the calls for import restrictions to protect domestic infant industries (Salvatore, 2014). On the other hand, imports of intermediate and capital goods may support domestic production and thus encourage SMME production (Raju, 2023). As alluded to by Khan and Upadhayaya (2020), high business activity and confidence is crucial determinant of future output and investment. Grozđić et al., (2020) showed that capital investments have a positive long-term impact on firm performance in the manufacturing sector.

5. Empirical results

The empirical results are shown in the form of Dynamic Multiplier Graphs, which highlight the marginal contribution of an explanatory variable to a dependent variable (SMME output). An upward (downward) sloped graph suggest a positive (negative) relationship between the variables. The technical coefficients of the regression technique are shown in the appendix. The results show that imports have a positive effect on SMME manufacturing output as reflected in the turnover figures from the QFS. Imports of manufactured goods in the form of metals, machinery, and transport equipment comprise a large proportion of total manufacturing imports, which contribute to manufacturing output.

Lack of access to finance is negatively related to SMME manufacturing output, which is in line with theoretical expectations. Matekenya and Moyo (2022) highlighted that access to finance promotes firm performance in South Africa, and lack of access to finance is regarded as a major contributor to the high failure rate of SMMEs and their inability to expand operations and innovate. Capital expenditure is not a major driver of SMME turnover in the manufacturing sector. This is as a result of the low and declining capital expenditure recorded in the sector. Mnguni and Simbanegavi (2020) highlighted the decline in manufacturing capital expenditure since the global financial crisis of 2008/2009, which has contributed to job losses. This is a reflection of the de-industrialisation witnessed in South Africa.

PMI and business confidence are measures of economic activity and optimism of business owners about current and future growth in the manufacturing sector. PMI has a positive effect on SMME manufacturing turnover which indicates that higher levels of economic activity contribute to demand for manufactured products. Business confidence and SMME turnover are negatively related, which suggests that, despite the low optimism surrounding the growth and development of businesses in South Africa, SMME production has been on an upward trajectory. For sensitivity analysis, the SMMEs were split into small and medium businesses. The results (presented in the appendix) are relatively similar to those obtained with grouped SMME data.

Figure 8: Imports and output relationship

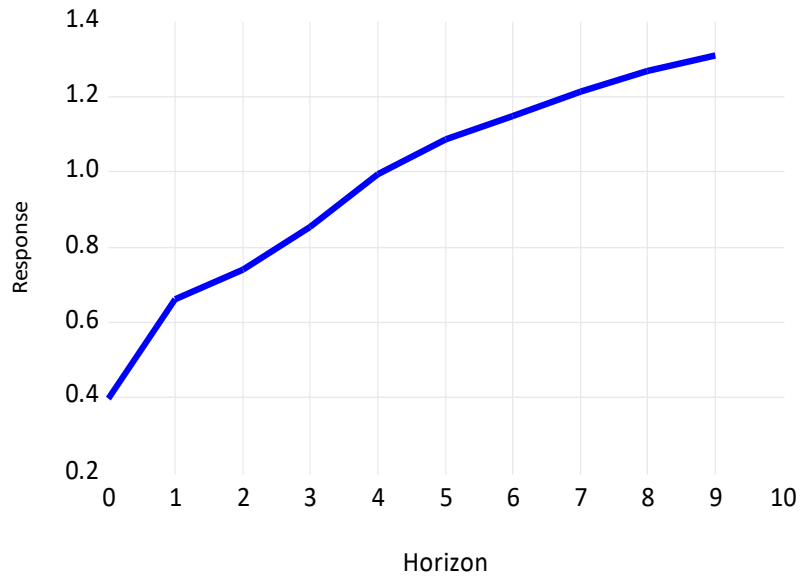


Figure 9: Finance and output relationship

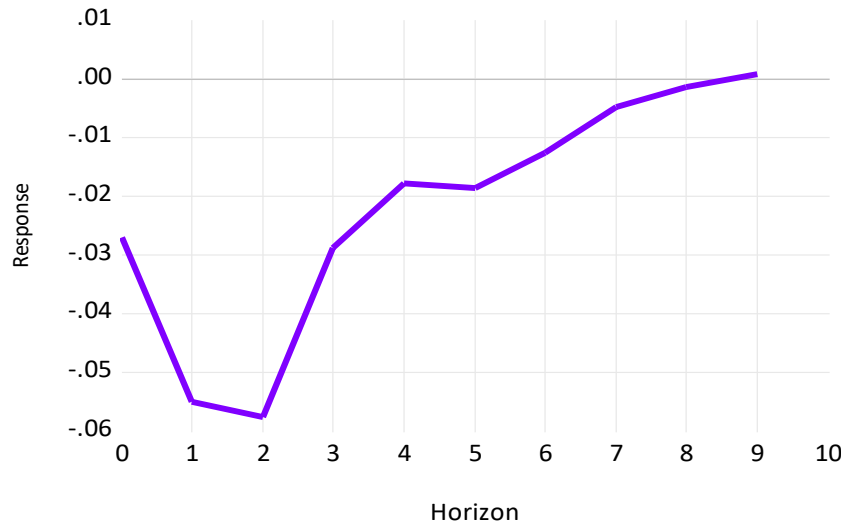
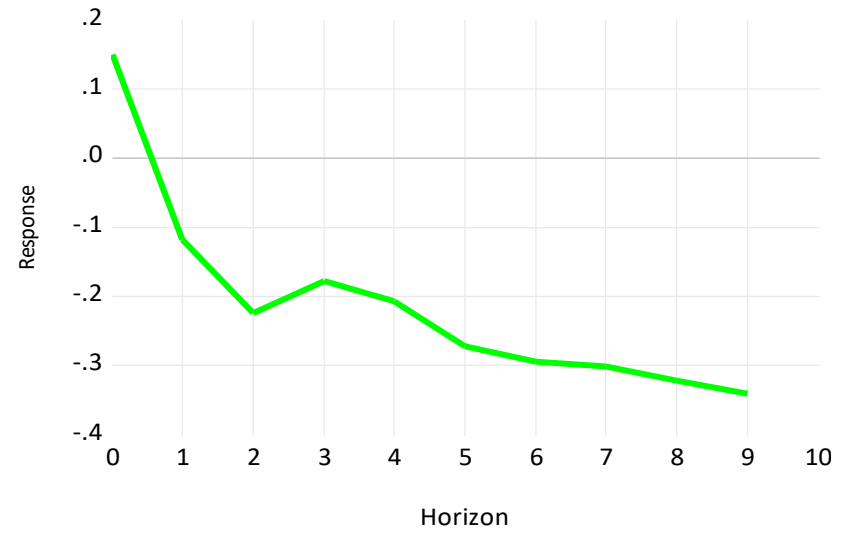


Figure 10: Capital and output relationship

Figure 11: PMI and output relationship

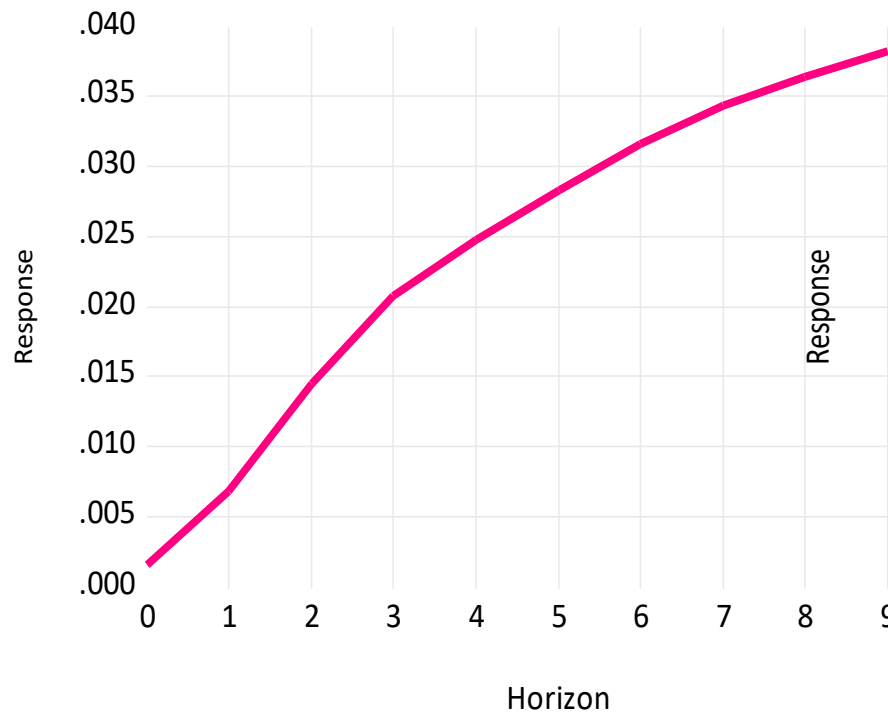
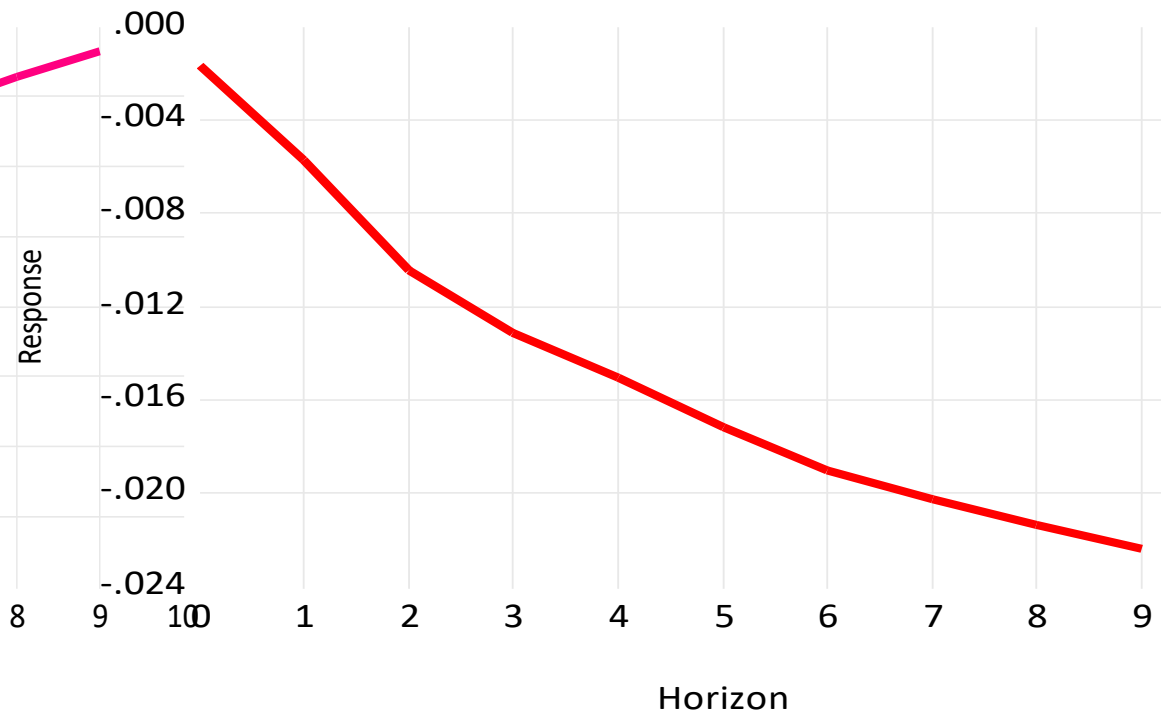


Figure 12: Business confidence and output relationship



Note: An upward (downward) sloped graph suggest a positive (negative) relationship between the variables

The second objective of the study is to review how countries of broadly similar population and developmental status to South Africa have achieved notable success in growing their small business manufacturing sectors. To achieve this objective, secondary sources such as working papers, journal articles and reports from credible institutions were analysed.

The World Bank's World Development Indicators contain a series of statistics allowing comparisons to be made between countries across various criteria, including the value added by manufacturing as a percentage of GDP. Of the countries for which complete information from 2008 to 2022 was presented, 78 of 125, or 62%, reflected average annual declines in the contributions of their manufacturing sectors to GDP. Three countries indicated growing contributions to GDP at rates of more than five percent per year. These were Uganda (5.53%), Angola (5.23%) and Ireland (5.2%). Angola and Uganda are however both classified as Least Developed Countries, featuring growth from a lower base than South Africa (US \$883.89 per capita and 1 953.53 USD per capita versus US \$7,055.04 per capita). Ireland is a high-income country, with GDP per capita of US \$100 172.08, and has a far lower population of approximately 5 million. These factors complicate comparisons with growth of manufacturing in South Africa.

Three countries that offer potentially more useful benchmarks are:

- Malaysia, with a population of approximately 34 million in 2021, a GDP per capita in the same year of US \$11 109.26, and a Human Development Index (HDI) of 0.803, ranking 62nd in the world.
- Vietnam, with a 2021 population of 97.47 million, a GDP per capita of US \$3 756.49 (2021), an HDI value of 0.703, ranking 116th, and
- The Philippines, with a 2021 population of 113.9 million, a GDP per capita of US \$3 460.53, and an HDI value of 0.699, ranking 115th (UNDP, 2022; World Bank, 2023).

According to the World Bank, South Africa had a population of approximately 59 million people in 2021 and an HDI value of 0.713, ranking 109th. Aside from their similar HDI values to South Africa, and better in the case of Malaysia, the three countries feature higher contributions by their manufacturing sectors to GDP. In the case of Vietnam, manufacturing contributed 24.8% in 2022, rising from 18.6% in 2008. The contribution in Malaysia was 24.5% in 2022, almost unchanged from 24.6% in 2008, but between these years the percentage declined, reaching 21.4% in 2019 and rising again thereafter. In the Philippines, manufacturing contributed 17.2% of GDP in 2022, although the contribution had been higher in 2008 at 23%.

The economic strategies of these countries regarding the inclusion of small firms have focused on the following elements:

i. Vietnam

Vietnam converted from a centrally planned to a market led economy in 1986, but the country studied the experiences of South America and those of newly industrialised economies in Asia to determine the most favourable approaches. Anh, Duc, & Chieu (2016) noted that the country's industrial output grew at an average annual rate of 15.2% during the 2000s, led by a dualistic strategy featuring export orientation and import substitution. By 2010, approximately 71% of GDP was generated from exports with annual values rising by 18% over the decade. Between 2006 and 2016, Vietnam rose by 27 positions in the United Nations Industrial Development Organisation (UNIDO) Competitive Industrial Performance (CIP) Index (Nguyen, 2020). A strong focus was placed on the attraction of foreign direct investment and manufacturing by large organisations, with state-owned enterprises continuing to play a leading role.

Regarding SMME involvement, their number rose rapidly after Vietnam passed the Enterprise Law, 2000, but by the early 2010s large manufacturers still contributed significantly more to employment than smaller firms. Approximately 80% of registered Vietnamese manufacturing firms in 2012 were micro (1 to 10 employees) or small (up to 50 employees) in scale, but they employed just 11% of manufacturing workers (Thi Tue Anh, Duc, & Chieu, 2016). Nevertheless, the SMMEs held the advantage of a higher net turnover per worker and SMMEs were able to offset the foreign-owned and domestic large manufacturing firms' relative inability to harness the benefits of economies of scale (2014).

The Vietnamese Government issued its first decree to support small enterprises in November 2001. Measures introduced were similar to South Africa's Integrated Strategy on Promotion of Entrepreneurship and Small Enterprises, published three years later. They included:

- Expedited business registration and administrative procedures.
- Establishment of a small business promotion council to advise government and an agency to coordinate support activities.
- Creation of an enabling environment for business through management and employee training and support for research and technology development
- Encouragement of investment in SMMEs through financial and credit incentives, including introduction of a Credit Guarantee Fund,
- Market access support, including facilitation of exposure to export markets.

- Facilitation of access to land and business premises, including establishment of business incubators (Cuong, Sang, & Anh, 2008).

According to a report by the OECD on the small business and entrepreneurship policy in Vietnam, large firms continued to dominate the economy in 2021, with one percent of companies employing 51% of the workforce and 10% employing 83%. Of the largest 100 companies, 91 were in the secondary sector and primarily in manufacturing. However, small businesses comprised approximately 88% of exporting enterprises and produced half of the export volume. (OECD, 2021). Many SMMEs were stated to be foreign-owned firms that had relocated to Vietnam to support multinational customers with operations in the country. Entrepreneurial activity and business ownership were common among the population, with many high-growth firms and an unusually high rate of self-employment of 56%, although necessity-driven opportunities and limited prevalence of scale-up of small businesses were mentioned as possible causes.

Production for export and attraction of foreign direct investment remain key elements of strategy in Vietnam, with clothing and textiles, electronics, and food products as leading categories. The country has benefitted substantially as a lower-cost producer than its neighbour China, with a minimum wage in 2021 of approximately US \$2.99 per hour versus US \$6.50 for China (Gembah, 2022; Nguyen C., 2022). For this reason, the country has been stated to offer benefits for labour intensive products (Gembah, 2022). The lower labour cost has been ascribed to less technologically skilled workers, while standards of education, infrastructure and manufacturing quality have been described as being in a process of improvement, but still below those of other countries in the South-East Asia region. Vietnam has however been stated to offer strengths in Engineering, as well as in managerial skills. The capabilities of managers of medium-sized manufacturing firms are claimed to exceed those of other leading emerging economies, and to differ little from those in large firms (OECD, 2021; Gembah, 2022). Further foreign interest in Vietnam has been spurred by the “China plus one” strategy followed by companies sourcing from China that wish to reduce reliance on a single country (Gembah, 2022).

In 2018, the Vietnamese government adopted a resolution¹ setting out the national development policy to 2045. The policy sought to move the country towards higher value manufacturing, higher skills and quality, and greater readiness for participation in Industry 4.0. Low labour productivity, limited development of supporting industries, high rates of importing of production inputs, and excessive reliance on low-cost labour opportunities and foreign investment were further targeted as weaknesses to be addressed. Regarding small businesses, most domestic industrial enterprises were noted to be small and medium-sized. Measures to support them included:

- Encouraging the development of small and medium-sized industrial enterprises and supporting enterprises in all economic sectors.
- Establishment of criteria for selection and development of supporting industries with a view to concentrating on correcting the weak phases of the value chain that determine the quality and value of industrial products.
- Provision of assistance in the development of suppliers for target industries and as the core element of the supporting industry development policy.
- Increasing access by all industrial enterprises, including small, medium-sized industrial enterprises and startups to finance and credit, including foreign loans.
- Formation and development of a system of specialist consulting service providers for industrial development.
- Tailoring of policies to increase the technological capability and governance capability of industrial enterprises.
- Adoption of policies to encourage and support the formation of large economic groups within industry (Central Committee: Communist Party of Vietnam, 2018).

As an indication of the dominance of large enterprises in manufacturing in Vietnam, a comparison of figures from the General Statistics Office (GSO) of Vietnam for the numbers of manufacturing enterprises by size on 31 December 2020 (the most recent figures available), shows that the number of SMMEs across industries was lower than that of South Africa for Quarter 4 of that year, at 101 327 versus 184 473².

¹ Resolution No. 23-NQ/TW dated March 22, 2018 on orientation towards formulation of national industrial development policy by 2030 with a vision to 2045.

² The GSO directly indicates the number of enterprises by employee number range in its interactive system. The number of SMMEs in South Africa was determined by applying the method of adding “Employers” and “Own Account Workers” as a proxy for the number of SMMEs. The same method is applied by the Seda SMME Quarterly Updates.

ii. Malaysia

From a history of industrialization in Malaysia related by Kinuthia (2009), the reason for the country's relative success in economic growth and human development appears to have followed from a continuous effort, dating from the 1950s, with several setbacks and redirections along the way. The country underwent two cycles of change from Import Substitution Industrialization to Export Oriented Industrialisation and back before 2000. Many of the developmental paths pursued by later-industrialising countries such as Vietnam were attempted by Malaysia several decades earlier, including an initial approach of attracting FDI through low-cost manufacturing, and a shift in the 1990s to investment in high technology to improve the value of manufactured products. By 2011, 40% of the country's manufactured exports were technology products. A further long-term investment was made in the establishment of a sophisticated export structure, securing an early advantage for Malaysia's manufacturing sector among developing countries (Chang, 2012).

Kinuthia's account furthermore suggests that the country's success in the 2020s was built over time through several phases of high growth, including a period in the early 1990s when Malaysia was described by the World Bank as the 'East Asian Miracle' (Kinuthia, 2009). Setbacks included costly investment in heavy industry that did not deliver intended results, and a severe economic decline in response to the Asian Financial Crisis of the late 1990s. A key feature of Malaysia's approach was the strategic and flexible use of FDI, which both delivered benefits and revealed the limitations of this source of investment.

In respect of manufacturing, the sector's contribution to GDP reached approximately 33% of GDP in 2000 but began a long-term decline thereafter. Increasing competition from China and smaller emerging manufacturing nations, failure to gain a lead in core technologies and organisational skills, as well as an inability to build well-known brands have received mention in literature as obstacles that prevented Malaysia from reaching the high-income status of Japan, Taiwan and South Korea (Chang, 2012; Kinuthia, 2009). The country turned to a greater emphasis on services from 2009 onwards.

On the question of SMME involvement, their development was included when Malaysia resumed the policy of Import Substitution in the 1970s. SMMEs were intended to assist in deepening and diversifying the country's industrial structure, offsetting balance of payment challenges, and building local capabilities. When returning to an export-led focus, SMMEs were included as a vehicle for maximising job creation. However, large conglomerates subsidised by the government, and in some years protected from import competition, led manufacturing activities.

According to Kinuthia, small firms did not develop as well as the conglomerates and efforts to support them had not borne fruit by the late 2000s. In addition, a clear technology development policy was not available to enable the upgrading of their capabilities.

Regarding the contribution of foreign investors to SMMEs, the companies assisted technology transfer and established some local linkages but did not substantially assist the development of SMMEs or support their competitiveness. In general, investors had mainly been attracted to Malaysia by comparative rather than competitive advantages and tended to only support activities that offered them success. However, they did create jobs, produce goods for export, and assist to strengthen Malaysia's balance of payments in the country's favour (Kinuthia, 2009).

The equivalent of Seda in Malaysia is SME Corporation Malaysia (SME Corp. Malaysia), an agency established in 1996 that coordinates the implementation of programmes for SMMEs across government ministries and agencies, undertakes, collects, and disseminates research on enterprises and entrepreneurs, and offers business advisory services (SME Corp Malaysia, 2023). According to the agency, there were 71 612 manufacturing SMMEs in the country in 2021, comprising 5.8% of all SMMEs. Their proportion rose from 5.1% in 2016.

Overall development in the country is guided by the 12th Malaysia Plan, adopted in 2021, which is aligned to the global 2030 Sustainable Development Agenda. The following measures relating to manufacturing SMMEs appear in the plan:

- Higher level participation in value chains.
- Modernisation and digitalization of operations and processes for the manufacturing, including through implementation of the country's Industry 4WRD Policy.
- Adoption of technology in product development
- Strengthening of entrepreneurs' financial capability to adopt emerging technologies.
- Expansion of procurement initiatives to increase demand for green products and services and catalyse the shift to green practices.
- Connection of suppliers to consumers through digital platforms, including positioning Malaysia and a regional logistics hub.
- Encouragement of collaboration across industry, including through incentivization of multinational companies to assist SMMEs to enter the global value chain. The Electrical and Electronics (E&E) industry is targeted as a specific beneficiary.

- Redirection of state and district offices of the responsible Ministry to provide regulatory support and information on financial assistance to SMMEs.
- Strengthening of specific industries through technology, capacity, and quality upgrading. Manufacturing is included through targeting the aerospace, creative, halaal, and smart farming industries.
- Promotion of market access through government procurement, a 'Buy Malaysia' campaign, advocacy for local procurement by multinational companies, and leveraging of South-East Asia Free Trade Area agreements.
- Increased investment in Research, Development, Commercialisation and Innovation.
- Revival of rural cottage industries (SME Corp Malaysia, 2023).

iii. Philippines

According to De Dios & Williamson (2013), the Philippines followed a development pattern that differed significantly from the other South-East and Far East Asian countries. The modern history of industrialisation in the Philippines can be traced to the 1870s. Strong growth after World War 2 suggested that the country would follow the same route away from the agrarian economy as others at the time, including Japan. Industry grew at 7% per annum between 1950 and 1972, the highest rate among the high-growth Asian countries. However, progress stalled in 1982 due to political and economic instability. Per capita incomes recovered during the 1990s, although the instability continued until 2010, and the growth that was then achieved resulted mainly from the services sector. The characteristic transition from a predominantly agrarian directly to a service economy, without a period of manufacturing-led growth, marked the Philippines as a rarity among the South-East Asian countries. Nevertheless, manufacturing productivity continued to grow within the sectors that remained active (De Dios & Williamson, 2013).

After 2016, the development of manufacturing was guided by the Manufacturing Resurgence Programme, due to run until 2025 and targeting manufacturing as a new growth driver. At the commencement of the programme, manufacturing was the third highest-contributing sector. The goal set for 2025 was to raise the contribution to national employment from 10% in 2016 to 15%, primarily through new production facilities and introduction of new product categories (Sourcify, 2018). As of 2022, the leading manufactured products exported were electrical machinery and equipment, electronic equipment including computers, optical technical and medical apparatus, mineral fuels and plastics including articles of plastic (Workman, 2023). A high degree of specialization is however evident, as the top 10 exports from the Philippines account for 80 percent of the overall value of global shipments (Sourcify, 2018).

The envisaged growth was expected to be facilitated by investments in infrastructure by China, the Philippines' largest trading partner. Like Vietnam, the Philippines represents an alternative for smaller foreign retailers and distributors that seek to source products from low-cost manufacturing countries but wish to avoid competition for manufacturers in China. Although most manufacturing is for industry buyers, the Philippines offers manufacturing of consumer products such as furniture, cosmetics, and apparel (Sourcify, 2018).

As of 2023, the most recent available information on manufacturing and enterprises dated from 2018. The source did not distinguish firms by size but indicated that a rise of approximately 16% had been achieved in the number of formal manufacturing enterprises since 2012, rising from 25 000 to approximately 29 000. Manufacturing employment rose by 6.3% from 1.2 to 1.3 million (Philippine Statistics Authority, 2020). This figure was approximately 400 000 lower than that of South Africa in 2018, despite the Philippines' larger national population.

In June 2022, the incoming Secretary of the Philippines' Department of Trade and Industry confirmed that the Manufacturing Resurgence Programme would continue under his tenure. The development of SMMEs was further set as a priority, with graduation of micro to small and small to medium enterprises as a key goal. Other strategic directions to be pursued were:

- Facilitation of ease of doing business, investment attraction, and expansion of export markets
- Adoption of digital technology and innovation,
- Linking SMMEs into supply chains, development of regional industries, improvement of their competitiveness, and closing of supply chain gaps in the domestic market.
- Continuation of One Town One Product and Shared Service Facility programmes already in place.
- Development of industry roadmaps for sectors with substantial job generation potential.
- Strengthening of selected industries, including manufacturing of pharmaceuticals, electronic goods and semiconductors to meet the needs of data centres and large cloud (hyperscale) service providers. Mineral processing was further to be developed to enable greater value-addition, as opposed to the trend of mainly exporting raw mineral materials.
- Securing of additional free trade agreements (Crismundo, 2022).

6. Conclusion and Recommendations

This study was based on the hypothesis that the contribution of manufacturing to growth was in decline among SMMEs, as it was in the broader economy. This assumption was based on the general pattern of decline in the percentage contribution of manufacturing to GDP, the decline in employment by manufacturing small enterprises suggested by employment statistics, and a long-standing body of literature alluding to a negative outlook for manufacturing in the country.

The evidence suggests that, while the hypothesis is correct in respect of the employment contribution of manufacturing SMMEs, it is not correct regarding their contribution to output. This appears most notably from a long-term growth trend in small and medium business turnover and in a rising percentage of manufacturing SMME turnover to total SMME turnover, as well as from evidence of investment in manufacturing firms above the SMME scale during the 2018/19 period. The regression analysis of drivers appearing from literature supported expectations regarding promotion of manufacturing by SMMEs, except for higher importing activity which correlated positively with higher SMME turnover.

A shortcoming of the research method was the need to rely on turnover as an indicator of SMME output. This data has two disadvantages. Firstly, it almost certainly omits most SMME manufacturers of the highest interest from an SMME and socio-economic development perspective, namely new entrants, micro and informal micro-enterprises, and businesses from disadvantaged backgrounds. These enterprises are unlikely to meet the R2000 000 threshold for inclusion in the QFS data. Secondly, the differences between turnover and SMME manufacturing value added can lead to inaccurate results. The availability of a verified figure for SMME manufacturing value added would further offer a more direct and visible connection to GDP. The need for a consistent and generally accepted means of measuring the SMME contribution to GDP has previously been raised in literature on SMMEs in South Africa. The current study confirms that the method developed should accommodate SMME value added by sector and major groups/industries within the Standard Industrial Classification (SIC) codes. In addition, a need remains – in the absence of a regular business census or other direct survey data – for an agreed method to disaggregate the employment figures for medium and large businesses in the quarterly statistics. This deficiency has similarly received previous mention in the literature.

Regarding the lessons that may be learned from countries with higher GDP contributions by their manufacturing sectors, the strategies being applied for SMME inclusion coincided to a large degree with those being pursued by South Africa.

Greater inclusion of SMMEs in value chains of large businesses, promotion of greater cooperation between large and small businesses, and incorporation of technology into business and manufacturing processes, as well as current preparations for Industry 4.0 to achieve greater added value, echoed the national developments currently underway. Notable features of the countries' past or present development approaches were:

- An initial strategy of targeting opportunities through FDI or low-cost contract manufacturing by local companies for export to high income countries. Except for the Philippines, low-cost manufacturing was used to establish a foundation for further development. Populations were then capacitated to access opportunities in higher value products and services.
- Attraction of investors through offering favourable infrastructure and incentives.
- Dominance of manufacturing by large firms. South African manufacturing appeared from the sources available to be significantly more widely dispersed than those of the countries examined. However, the international sources dealt mainly with formal small enterprises and their informal manufacturing sectors may be larger.

In view of South Africa's current high unemployment rate, the macro-level developments emerging from the countries' industrialisation histories may be of greater interest than the detail elements of their SMME strategies since these appear largely similar. Among the macro-level developments, the following impressions stand out:

- The approaches were generally successful in raising the countries to middle income status and in positioning their populations for further development.
- A will appeared to exist within the governments to uplift their populations. Development approaches were actively steered towards outcomes that would meet this intention. Populations do not appear to have been left to languish as an entrenched working poor once low-wage job opportunities had been secured.
- The case of Malaysia stands out for the duration and dynamism of the country's industrialisation effort, and the pragmatic approach shown toward FDI, in which this resource was regarded it as a long-term strategic tool to serve the country, rather than as a necessary evil to eventually be reduced and eliminated. Other salient elements of Malaysia's approach were:
 - Early movement in response to emerging needs and opportunities, e.g., through timeous investment in an effective export management system and in the rise of technology.
 - Long-term success through building upon high-growth periods and minimising losses during downturns.

In respect of promoting greater manufacturing activity by SMMEs in South Africa, significant new measures may be highlighted that may not yet be showing an impact in the manufacturing statistics, but may do so as they develop. The measures include the comprehensive support model adopted by Seda in the late 2010s, the introduction of the Small Enterprise Manufacturing Support Programme by the Department of Small Business Development in 2020, the same department's initiative to collaborate with large retail chains to identify products that can be produced by SMMEs, and the closer tailoring of financial support measures to the circumstances of SMMEs.

In addition to the DSBD/Seda and sefa group, other government departments offer services that promote SMME participation in sectors that may have a direct or indirect bearing on industrial manufacturing. They include the Department of Trade, Industry and Competition (the dtic), Department of Forestry, Fisheries and the Environment (DFFE), Department of Agriculture, Land Reform and Rural Development (DALRRD), Department of Communications and Digital Technologies (DCDT), and Department of Science and Innovation, in particular through the Technology Innovation Agency (TIA).

Regarding exploration of labour-absorbing SMME manufacturing possibilities, it may be noted that the 2021 minimum wage figure quoted for Vietnam (\$ US2.99) translated at the time to an hourly rate of R20.84 at the World Bank Purchasing Power Parity Conversion factor for South Africa of 6.97. This rate was below the 2021 National Minimum Wage provision of R21.69 per hour (World Bank, 2023; Department of Employment and Labour, 2019). However, at the average Dollar/Rand exchange rate of R14.79 during 2021, US \$2.99 represented R44.22 per hour.

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APPENDIX

The appendix include the technical details of the regression analysis and the method of analysis.

The regression model is specified as follows:

$$OUTPUT_t = \alpha_0 + \alpha_1 FINANCE_t + \alpha_2 IMPORTS_t + \alpha_3 CAPITAL_t + \alpha_4 PMI_t + \alpha_5 BUS_t + \varepsilon_t$$

Where t is time subscript and ε_t is the error term

The study estimates a regression model to analyse the determinants of manufacturing output in SMMEs. The ARDL model, introduced by Pesaran, Shin and Smith (2001), is utilized to analyze the correlation between economic variables within a time-series framework. This technique offers a comprehensive approach to testing and estimating co-integration relationships in a single equation context. By employing ARDL, both the long-run and short-run associations can be estimated. It is essential for this method to assume the absence of autocorrelation and that the data follows a normal distribution consistently throughout the model. Additionally, the mean and variance should remain constant (Kripfganz & Schneider, 2016). In order to assess the effectiveness of the model, various diagnostic tests are conducted. These tests encompass the Breusch (1978) and Godfrey (1978) LM tests, which examine autocorrelation, the Breusch and Pagan (1979) test for heteroscedasticity, the Ramsey (1969) RESET test to evaluate model stability, and the residual normality test.

Unlike other techniques, the ARDL cointegration approach does not necessitate pre-tests for unit roots. As a result, it is particularly advantageous when dealing with variables that have different orders of integration, such as I(0), I(1), or a combination of both. Moreover, it remains robust even in cases where there is a single long-run relationship among the underlying variables in small sample sizes. Although pre-testing for unit roots is not required in the ARDL cointegration technique, it is advisable to conduct a unit root test to determine the number of unit roots present in the series under consideration, especially to avoid potential model crashes when an integrated stochastic trend of I(2) is present (Nkoro & Uko, 2016). Therefore, the Augmented Dickey Fuller (ADF) and Phillips Perron (PP) will be used to conduct unit root tests. The results of the unit root tests shown below suggest that there are no I(2) variables.

Table A1: Unit root tests

Variable	ADF		PP	
	Level	1 st difference	Level	1 st difference
Output	-0.99	-7.53***	-0.35	-10.32***
Finance	-0.24	-8.85***	0.10	-8.92***
Imports	0.31	-7.37***	0.19	-7.37***
Capital	-4.50***	-7.47***	-4.41***	-31.79***
PMI	-4.77***	-6.64***	-4.81***	-13.38***
Business Conf.	-4.13***	-7.27***	-4.14***	-9.22***
Small	-0.58	-10.38***	-1.29	-3.99**
Medium	1.79	-10.14***	-0.98	-5.23***

Note: *, ** and *** indicate significance at the 10%, 5% and 1% levels respectively.

Table A2: Empirical results

Variable	Small	Medium	SMMEs
Imports	1.67 (5.69)***	1.35 (4.55)***	1.52 (5.41)***
Finance	-0.58 (-2.94)***	-0.20 (-0.93)	-0.41 (-2.11)**
Capital	0.05 (0.53)	-0.08 (-1.09)	0.02 (0.19)
Business Conf.	-0.02 (-2.80)***	-0.03 (-2.62)**	-0.03 (-3.09)***
PMI	0.02 (1.73)*	0.06 (2.27)**	0.05 (2.31)**
Constant	-0.49 (-0.32)	-3.14 (-1.69)*	-1.51 (-0.92)
Bounds test (F-stat)	5.11***	4.58**	5.65***
Serial correlation	[0.89]	[0.18]	[0.28]
Heteroscedasticity	[0.63]	[0.58]	[0.76]
RESET test	[0.26]	[0.10]	[0.33]
Normality	[0.70]	[0.99]	[0.45]

Note: The figures in parenthesis () and [] are t-statistics and p-values respectively. *, ** and *** indicate significance at the 10%, 5% and 1% levels respectively.