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POLICY BRIEF 10: CAN CLUSTERING DRIVE SOUTH AFRICA'S ECONOMY FORWARD IN THE AFTERMATH OF THE COVID-19 PANDEMIC? EVIDENCE FROM THE THAI AUTO INDUSTRY

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Jason F Bell¹

Industrial Development Think Tank²

The COVID-19 pandemic will have an immediate and long-lasting economic impact on the South African economy in the coming months. We need to collectively consider how to rapidly reopen and safely ramp up production in the economy's already struggling manufacturing sector, post the lockdown. The economic disruption caused by the pandemic presents some opportunities to restructure production systems and for export growth and import substitution, which must be explored. The reopening of the economy will not be business as usual, and, notably, the pandemic has had a significant negative impact on [manufacturing activity](#) in many leading manufacturing economies such as China.

One key industry that will be impacted significantly is the automotive sector. The automotive sector is an important industry in many economies given the productive linkages and spillovers it can generate with adjacent sectors while also being a source of employment and industrial capability accumulation. **The economic implications that this pandemic has for the survival of many of South Africa's auto component manufacturers make clustering an attractive method with which to sustain and develop the necessary capabilities and capacity of the local supply chain.** This is vital given the sharp decline in automotive sales that is already taking place with passenger vehicles experiencing consecutive double-digit falls in sales.³

The massive disruption in autos caused by the pandemic is likely to dramatically change the existing operating landscape and global market. These shifts will occur alongside other factors that will fundamentally re-shape the industry in future, as set out in a previous Industrial Development Think Tank (IDTT) [brief](#)⁴, including the tightening environmental legislation in core global markets and the rapid emergence of disruptive technologies such as those linked with Industry 4.0.

¹ Researcher at Centre for Competition, Regulation and Economic Development (CCRED), University of Johannesburg. Many thanks to Thando Vilakazi and Reena das Nair for their insights and helpful comments. All errors are the author's own.

² The Industrial Development Think Tank (IDTT) is supported by the Department of Trade and Industry (the dti) and is housed in the CCRED in partnership with the SARChI Chair in Industrial Development at the University of Johannesburg.

³ Nedbank Group Economic Unit Vehicle Sales (February 2019).

⁴ Barnes, J. (2018). Repositioning the future of the South African automotive industry. Industrial Development Think Tank, Digital Industrial Policy Brief 2. *Centre for Competition, Regulation and Economic Development Policy Brief*.

South Africa's ability to compete, and engender inclusive development of the auto sector, has been limited somewhat by a failure to develop local inputs suppliers. Clustering can be an effective method for kickstarting the struggling economy given the global nature of many supply chains. [Clusters](#) are "geographic concentrations of interconnected companies and institutions" that "often extend downstream to channels and customers and laterally to manufacturers of complementary products". In many respects, industrial clusters are seen as 'repositories of competencies' in that they offer mechanisms for the effective diffusion, accumulation and absorption of knowledge.⁵

In a time where global value chains are severely disrupted, cost and margin pressures on local manufacturing businesses will increase due to constraints on input supplies.

On the other hand, the thinking on clustering and agglomeration economies argues for bringing related entities together in economic zones and clusters, which allows for knowledge and infrastructure sharing that can support more than one firm and reduce costs over time for a sector. Under crisis conditions and periods of prolonged economic recession, firms will be more willing to engage in clusters and partner with the state. This is because industrial clusters allow companies to be [more productive and innovative](#). Through the sharing of knowledge, ideas, and collaboratively engaging in research and development, firms in clusters stand to realise tremendous gains in competitiveness. However, effective clustering, particularly for small- and medium-enterprises (SMEs), requires a favourable environment in which to share this knowledge.⁶

The Department of Trade and Industry and Competition (dtic), in its latest iteration of the Industrial Policy Action Plan (IPAP 2018/19-2020/21), has identified Special Economic Zones (SEZs), a form of clustering, as a potential key contributor to economic development. South Africa currently has five SEZs (or Industrial Development Zones) located mainly in port-regions that offer a logistical competitive advantage to the firms located within them. These existing SEZs house operations ranging from minerals beneficiation to agro-processing and green technology.

SEZs are touted as significant achievements of institutional coordination, deal-making, planning, and collaboration on the part of the state and private enterprise. Several late-developing economies, such as Thailand and China, are prime examples of the benefits that can arise from the successful implementation of SEZs as an industrial policy tool. Evidence from the [World Bank](#) emphasises that SEZs have the potential to be tremendous drivers of foreign direct investment (FDI) attraction, job creation, export diversification, innovation, and value addition.

Therefore, the recently launched [Tshwane Automotive SEZ](#) has been met with excitement from key stakeholders and the automotive industry alike, and it is expected to create approximately 6 500 jobs.⁷ The Tshwane Auto SEZ found its home close to Ford's assembly plant in Silverton, Pretoria, and next to the operational headquarters of the Automotive Industry Development Centre (AIDC). Ford is the anchor investor with nine of its suppliers (at the time of writing) committing to setting up their operations in the SEZ. This is with the aim of realising

⁵ Götz, M. and Jankowska, B., (2017). Clusters and Industry 4.0—do they fit together? *European Planning Studies*, 25(9): 1633-1653.

⁶ Bell, J., Kaziboni, L., Nkhonjera, M., Nyamwena, J. and Mondliwa, P. (2018). Firm Decisions and Structural Transformation in the Context of Industry 4.0. CCRED Working Paper 2018/12.

⁷ <https://www.sowetanlive.co.za/news/south-africa/2019-11-05-6700-direct-jobs-to-be-created-at-tshwane-automotive-special-economic-zone-ramaphosa/>

efficiency gains between Ford and its suppliers. It also further increases opportunities for production capacity growth to feed into both the domestic and export markets, which suggests that the SEZ can be used to nurture a fledgling or struggling industry in the current global context.

Along with China, Thailand has successfully used a clustering model to develop its automotive sector. Comparative research conducted by the IDTT at CCRED, including visits to facilities in Thailand, sought to understand the reasons behind Thailand's relative technological advancement and its success in building an auto supply chain.⁸ The research focused on why Thailand, while being relatively less developed compared to South Africa in terms of real GDP per capita in 1994, was able to successfully grow its automotive sector while South Africa's automotive sector continues to [flounder](#) in some respects.

What worked for Thailand and where it went wrong for South Africa?

Thailand has a history of utilising clustering and SEZs to locate and connect suppliers and original equipment manufacturers (OEMs) within close proximity to each other to develop strong horizontal linkages along a vertically aligned supply chain. Clustering has been a strong driver of much of Thailand's industrial success over the last few decades. However, other political economy characteristics unique to the Thai case such as a strong initial influx of Japanese capital (who hold around [85% of the market share](#)) and, more recently, American capital (accounting for the remaining 15%, approximately), along with the presence of a strong regional market have combined to help Thailand become a global leader in automotive assembly and component production. Because of this, Thailand has been able to achieve strong growth in its employment while also more easily integrating many of its domestic auto component producers into the global auto value chain.

Over the 50-plus years since the formation of Thailand's auto sector, the Thai auto industry has [grown](#) to become the 13th largest auto manufacturer in the world, accounting for 12% of Thailand's GDP and employing over 500 000 people in 2017. In terms of automotive exports, auto parts make up almost [75%](#) of this figure with more than half of the top 100 Original Equipment Manufacturer (OEM) part suppliers manufacturing out of Thai auto clusters. In addition, the level of OEM involvement and investment in Thailand's auto industry has increased at a rapid rate such that there are now at least 16 OEMs who have major production and assembly facilities located in Thai auto SEZs. The strong growth in foreign OEM involvement in the Thai auto industry has also been matched with substantial growth of Thai-owned, SME firms mainly through joint-ventures between the Thai state and the international OEMs. The Thai state has exhibited an unwavering commitment to its SEZ policy. This has led to the creation of what it calls Super-Clusters, which forms part of the Eastern Economic Corridor. Through this policy, Thailand has also expanded its auto clustering initiative in the development of the automotive and parts Super-Cluster that spans across seven provinces.

In contrast with the Thai experience, South Africa's experience with clustering has not necessarily met expectations. The South African auto industry has received strong [state support and protection](#) for more than a century and has been the focus of successive industrial development policies since 1994. These policies included the Motor Industry Development Programme (MIDP) and the Automotive Production Development Programme (APDP) that

⁸ Monaco, L., Bell, J. and Nyamwena, J. (2019). Understanding Technological Competitiveness and Supply Chain Deepening in Plastic Auto Components in Thailand: Possible Lessons for South Africa. CCRED Working Paper 2019/01.

sought to increase the share of locally made components in assembled vehicles as well as create more local suppliers in the automotive industry. However, South Africa's auto industry has, as of yet, failed to develop into a production hub like Thailand and Malaysia. Arguably, the most significant achievement is the success of the Durban Auto Cluster (DAC). Established in 2002, the DAC in 2019 housed 45 companies collectively employing close to 17 000 workers.⁹ Similar to much of Thailand's evidence, the DAC boasts strong ties to Japanese capital in the form of Toyota.

The IDTT research showed that despite some similarities in terms of policy design, the Thai and South African automotive sectors ultimately diverged because of a few critical factors that impacted their relative success. First, the relationship between the Thai state and the OEMs allowed the OEMs to pursue their agendas if they adhered to strict guidelines and met stringent targets aimed at growing the automotive sector in Thailand. This resulted in a sharp rise in the FDI into Thailand aimed at the development of its local industry. On the other hand, the post-apartheid government in South Africa pursued a strategic international integration agenda¹⁰ that culminated in liberalisation in an effort to attract large sums of FDI for its targeted industrial projects. This included the automotive sector, for which FDI did not occur as expected until much later.

The South African state's developmental agenda up to this point has been less successful in effecting noteworthy growth and development. From the available evidence, key South African industries have failed to effectively attract sufficient FDI and properly channel investments into productive capabilities with strong linkages to other industries.¹¹ There has also been [limited leveraging of linkages](#) in other sectors to build and develop a broader set of capabilities.¹² Furthermore, the South African state's collaborative governance approach during the early days of the MIDP, diminished and reduced its own bargaining power. This limited the state's ability to effectively bargain with the international OEMs in a similar manner as the Thai state.¹³ As a result, the South African state ended up assuming a paradoxical interventionist role in its attempts to govern the actions of the OEMs towards meeting the state's automotive sector objectives.¹⁴

The second influential factor in determining the success of the Thai auto industry is the strong institutional coordination that existed involving various role-players within the Thai state. The Thai state's coordinated effort to develop its economy and specific sectors using SEZs was linked with the broader vision for the economy buy in from multiple actors, including technocrats within the country's Central Economic Agencies, and investors. This high level of institutional coordination, which has largely been missing in South African policymaking and

⁹ Monaco et al. (2019).

¹⁰ Masondo, D. (2018). South African business nanny state: the case of the automotive industrial policy post-apartheid, 1995-2010. *Review of African Political Economy*, 45(156), pp. 203-222.

¹¹ Masondo, D. (2018).

¹² Mondliwa, P. and Roberts, S. (2018). From a developmental to a regulatory state? Sasol and the conundrum of continued state support. *International Review of Applied Economics*, 33(1), pp. 11-29

¹³ Hamann, R., Khagram, S. & Rohan, S., (2008). South Africa's charter approach to post-apartheid economic transformation: Collaborative governance or hardball bargaining? *Journal of South African Studies*, 34(1), pp. 21-37.

¹⁴ Monaco et al. (2019).

implementation¹⁵, also assisted in the successful development of its cluster programmes in multiple sectors with automotives and components being a key example.

Responding to an ever-changing global economic system

The economic system as we know it is rapidly changing and the future of many global value chains is increasingly in flux as more countries begin rethinking the international model of production. Similarly, the policy dynamics within South Africa are also adding to the uncertainty regarding foreign investment. The Budget Review tabled by finance minister Tito Mboweni in 2020 has reduced the SEZs that qualify for investment incentives. The Tshwane automotive SEZ, as a result of the review, is no longer eligible for SEZ incentives. This shift is concerning given South Africa already performs poorly in terms of attracting FDI, and because many of the firms that stood to benefit from the SEZ incentives were local SMEs, including black-owned businesses.

There are other broader policy issues and many short-term challenges that the COVID-19 pandemic will bring for the South African auto manufacturing sector. However, the country's unique geographical location makes it a strong candidate to take up the reins as the industrial hub for the African continent. The use of SEZs, as evidenced in the Thai example, can be a strong and capable driver of structural transformation and economic development. Evidence from some South African SEZ projects emphasises problems such as a slow roll-out of these zones and issues regarding the low number of jobs created to date. Yet, the DAC, and other examples of South African clusters such as the Durban Chemicals Cluster and the Cape Clothing and Textile Cluster, serve as good examples of the benefits of clustering in South Africa and what is possible through productive and meaningful partnerships between government and the private sector.

International evidence from Thailand, as well as Germany, the UK, China, and Australia, shows that clustering and SEZs can be an effective tool to help guide the South African economy away from a potential long-term economic malaise. As the above discussion suggests, if the South African state is to achieve the enormous growth and development potential from a well-executed SEZ programme for key industrial sectors such as autos, it is imperative that it responds quickly in this changing environment and aligns strategies for the sector with the incentives of various social and investor partners behind common vision.

Additionally, many South African industrialists will be facing a host of challenges as phased re-opening of the economy takes place. Firstly, they will need to understand and adapt to the changes in demand in the major markets supplied by local manufacturers in the sector.¹⁶ Secondly, while the industry has identified various ways in which the government needs to assist to shield and support manufacturers¹⁷, it is just as important that manufacturers actively seek new ways to rapidly adapt and improve their competitiveness in order to make their exports more attractive under the scenario of a phased re-opening of production. This agility is especially critical in an environment where state resources are severely stretched across sectors, and in new opportunities may have opened up in some international markets due to the pandemic. Exploring ways in which existing and new clustering arrangements can assist

¹⁵ Bell, J., Goga, S., Mondliwa, P. & Roberts, S., (2018). Towards a Smart, Open Economy for All. *New Agenda*, Issue 70.

¹⁶ Barnes, J. (2020). Covid-19: The South African auto industry. *TIPS Policy Brief: 6/2020*.

¹⁷ Barnes (2020).

industry players at different levels to improve cost competitiveness over the medium- to long-term will be critical.

Time is of the essence, *khawuleza*.