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International industrial policy responses to COVID-19: Lessons for South Africa

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Introduction

The COVID-19 pandemic and the resulting lockdowns of many economies have led to a massive decline in industrial production, trade, and foreign direct investment worldwide. It has also presented us with one of the most pertinent examples of market failure and supply chain disruption. In response, countries across the globe are grappling with how to tackle these challenges, and there is a recognition that mainstream economic thinking cannot correctly provide solutions (Perry, 2020). Properly designing and implementing stabilisation and recovery policies requires an in-depth understanding of whether a shock is primarily supply- or demand-side driven (Brinca, et al., 2020). The dual effects of this pandemic on both global supply and demand make it difficult to capture the full effects (Hartwich, et al., 2020).

From a South African perspective, the pandemic has disrupted the economy's supply and demand side. The economy's supply-side suffered disruptions because of production declines and import restrictions due to lockdown and containment measures. These also had knock-on impacts for domestic demand, while export demand fell as South Africa's major trade partners reduced their demand for primary and intermediate products. In response, South African policymakers prioritised short-term relief at the macroeconomic level targeting both the supply and demand sides of their economies.

While short-term measures are necessary, policymakers must grapple with designing supporting policies to achieve economic growth and development in the long term. One way to realise this is through enacting well-thought-out industrial policies that centre on manufacturing as the engine of growth. Research shows that manufacturing is innovation-intensive, exhibits spillover effects, and strengthens linkages with other sectors, mainly services (Clemes, et al., 2003).

This brief explores the vital role of manufacturing and industrial policy in leading the recovery of the South African economy post-COVID-19. It argues for building stronger linkages and more dynamic capabilities leading to more sustainable outcomes and reducing South Africa's economic vulnerability. Building a solid and diversified export-led manufacturing base is key to achieving this (Al-Roubaie, 2018). We further argue that South Africa's industrial policy response should seek to understand and benchmark against the industrial policy responses of other economies.

In this brief, we first review why South Africa is particularly vulnerable to the shock brought on by COVID-19, and why industrial policy is the right option to develop economic resilience. Next, we discuss the industrial policy commitments of other countries, drawing insights and lessons as South Africa grapples with its industrial response. Finally, the brief concludes with a call to action that seeks to achieve a more resilient and sustainable South African economy by calling for a reconsideration of South Africa's industrial policy agenda given the changing global and regional economic landscape.



Lack of diversification and linkages in the South African economy: Implications for economic vulnerability and resilience

The economic impact of this pandemic has meant that many economies have simultaneously entered recessions due to the effects on global supply chains and demand, with the world economy facing the prospect of the worst recession since the Great Depression. Before the pandemic, South Africa was experiencing depressed economic conditions of which the pandemic has exacerbated. These depressed economic conditions and the degree of openness of the economy increased South Africa's exposure to economic shocks. The ability of an economy to counteract these effects is the country's economic resilience.

One of the determinants of a country's resilience to economic shocks is the level of diversification of its product space and the level of industry linkages.¹ A country's degree of diversification embodies the products it exports. Over time, the product space evolution indicates how countries have leveraged existing capabilities to produce new products (Hidalgo, et al., 2007). Thus, the clustering of exports in the product space indicates a certain degree of capabilities (see Figure 3). Conversely, isolated dots of exports generally indicate a lower level of diversification in the economy. This lack of diversification makes the economy vulnerable.

Figure 1: South Africa's exports product space 2018



Source: *Atlas of Economic Complexity*

Comparing South Africa's product space to another middle-income country like Thailand, shows that South Africa's linkages are significantly underdeveloped. In Thailand, the COVID-19 pandemic has had the most substantial negative impact on the automotive, petroleum, and petroleum products, malts and malt beverage, air conditioning systems, and sugar resulting in a decline in the manufacturing performance index (UNIDO, 2020a). However, these are industries where Thailand has successfully built these broad capabilities around a cluster of exports and linkages to closely linked sectors. As a result of its diversified product

¹ The rationale behind a product space is that industrial development is path-dependent and thus countries will grow by producing products that require similar capital requirements, knowledge, skills, and institutions.

space and stronger linkages in the economy, Thailand has shown less vulnerability to the pandemic's shocks than South Africa.

The discussion on how the pandemic has disrupted supply chains has emphasised the necessity to create interconnectedness among domestic industries. However, South Africa's product space diversification will require a coherent industrial policy that increases sectoral productivity and strengthens linkages across value chains and the local economy. The policy environment must be reengineered and reorientated to encourage domestic and international firms to invest in the local economy to reduce economic dependence on a small number of products and from a smaller set of industries. Investment should target industries with the most robust linkages (Hirschman, 1958). Developing these linkages requires a coordinated effort from both the public and private sectors. Robust forward and backward linkages will help foster increased economic activity, notably trade, employment, and investment in productive assets—industrial policy re-emerging as the preferred policy instrument that can make this a reality.

The re-emergence of industrial policy as a tool for growth

In deciding the best course of action to mitigate the pandemic's economic impacts, many economies, including South Africa, are looking to develop more resilient economies and ignite growth and development. Although, before the pandemic, there were slow levels of growth in many economies, both developed and developing, there has been a resurgence in thinking around the role of industrial policy in supporting sustainable development beyond the supply-side fundamentals. The pandemic has helped to bring these ideas into the mainstream.

The massive economic disruptions because of the COVID-19 pandemic have forced developed and developing economies alike to explore possibilities for making economies more resilient and considering policy options for more robust growth and development. It has brought the neoclassical ideology of *free* markets and *free* trade into question (Olson, 2020), since the ideology has neglected the importance of production and employment in many development discussions and has resulted in the implementation of policies that have diminished the dynamism of economies (Andreoni & Chang, 2016). The uncertainties surrounding the future of globalised trade and manufacturing due to the pandemic are affording developing countries the necessary leeway to pursue industrial policies on their terms (Perry, 2020).

Many economies are favouring a focus on industrialisation to recover from the pandemic and to drive longer-term development. The industrial sector is a solid contributor to development and expansion in several related sectors such as agriculture, mining, and many services. This solid contributing role of the industrial sector is partly due to its significant spillover effects that foster the development of linkages and technological, capacity and capabilities upgrading (Al-Roubaie, 2018). Moreover, industrialisation or structural transformation also drives an economy towards achieving several complex social and economic goals (Bellandi & Di Tommaso, 2006).

The industrial sector is therefore crucial in an economy's drive towards greater resilience. However, the pursuit of resilience will require joint solutions that create new markets and opportunities for growth and innovation (Arcesati & Rasser, 2020). Industrial policy is key to

this process. Although typically, theory views industrial policy as an institutionally structured process, it encompasses a range of mutually reinforcing processes. These include the strategic coordination of design, implementation, and enforcement of packages that interact among different actors in an economy (UNIDO, 2020b). However, the question remains how states can effectively coordinate industrial policy because governance of industrial policy is crucially a political process rather than a technical process (Andreoni & Chang, 2019).

In developing a well-thought-out industrial policy program, it is essential to review and delve into the decisions taken in other economies. Drawing lessons from these can help South African policymakers to formulate a policy package that promotes economic resilience and prepares the economy for a digital and greener future in line with the shifting global environment.

Industrial policy examples from international comparators

The pandemic could drastically change the global business landscape in many ways with massive economic and social consequences. Responses to the pandemic have unsurprisingly varied. Estimates provided by UNCTAD showed that, until May of 2020, there was a massive, although not surprising, chasm between the total size of the COVID-19 rescue packages between developed and developing economies (UNIDO, 2020c). Most notably, firms that the pandemic has significantly impacted have changed the way they operate.

Firstly, there has been an increased short-term focus on survival. This short-termism includes cost-cutting measures and seeking debt relief, with employees being put on short time or asked to take leave. However, this has come at the expense of longer-term goals such as developing more advanced capabilities and expanding their business into new markets. Secondly, there has been a change in working conditions, such as shifting towards working remotely, where applicable, and social distancing and other health precautions. Firms unable to sufficiently afford to alter and operationalise these changing working conditions most likely had to shut down their operations. Firms with higher cash flows have tended to fare better. Thirdly, many firms plugged into global value chains have stalled their production activities because of lockdown regulations in countries where parts of their value chains exist. The stalling of GVCs has increased debates around business models and the potential reshoring of some economic activities along value chains due to potential disruptions from 4IR (De Nicola, et al., 2020).

From the State's perspective, in the first few months of the pandemic, many countries dealt with the health crises while also supporting firms' operations during respective lockdowns. These policy choices were a necessary short-term response to the immediate effects of the pandemic. In addition, governments introduced debt relief measures and deferral programmes for businesses (UNIDO, 2020c). However, one of the main concerns for policymakers has been the effect on small- and medium-sized enterprises (SMEs) (ILO, 2020). These firms are vital sources of employment, innovation, and growth in any economy. Because of this, these firms are also likely to be the hardest hit because of this crisis.

Data from UNCTAD shows that a large portion of COVID-19 rescue measures has provided relief in the form of loans and loan guarantees for businesses (Kozul-Wright, 2020). These

support measures include credit guarantees, extensions of concessionary working capital, subsidised loans, and deferrals for rent, water and electricity, and taxes. These interventions are focused on ensuring the survival of existing industries and weathering the storm of COVID-19. However, post-COVID-19, the economic response will need to incorporate a longer-term vision.

In recent months, more countries have shifted their focus to economic recovery, with interventions increasingly taking on the shape of industrial policy. This shift to focusing on economic recovery is required to realise growth and development over-and-above recovery levels while addressing both the demand and supply shocks within a given economy. Given the forecasted downturns in industrial production and the fragmentation of important markets, economies turn to demand and supply-side responses. Supply-side responses aim to increase an economy's ability to produce, whereas demand-side responses will seek to renew consumers' and businesses' abilities to consume and invest, respectively (Brinca, et al., 2020). It is important to note that many policy responses, while aimed at either the demand or supply side of the economy, can affect both.

Additionally, policymakers are grappling with redeploying underutilised factories while also uncovering new ways to secure and build local, regional, national, and global supply chains (WEF, 2020). Some countries utilise strong demand-side policies to reconfigure and strengthen domestic supply chains while also employing multiple supply-side interventions to help local industries survive. Demand-side policies include the construction of industrial parks and other mechanisms to channel investment into new productive capacity. In contrast, the supply-side responses have been numerous and include rent exemptions, energy subsidies, working capital facilities, and job protection and subsidies for workers.

Evidence from the International Monetary Fund's (IMF) COVID-19 policy tracker² shows that countries have implemented a range of policies that will affect their respective manufacturing sectors and industrialisation endeavours in the aftermath of the pandemic (Table 1). For example, the policy tracker shows that Afghanistan, Barbados, Pakistan, and Uganda, have all positioned their resources to develop industrial parks. For example, Uganda's policy to build industrial parks is part of the country's acceleration of its industrialisation agenda (IMF, 2021). This accelerated industrialisation agenda includes the Ugandan government earmarking additional funding and recapitalisation for the Uganda Development Bank and Uganda Development Corporation to help realise its import substitution and export promotion goals.

² The policy tracker summarizes the key economic responses governments are taking to limit the human and economic impact of the COVID-19 pandemic. The tracker includes 196 economies. The tracker focuses on discretionary actions and might not fully reflect the policies taken by countries in response to COVID-19, such as automatic insurance mechanisms and existing social safety nets which differ across countries in their breadth and scope.

Table 1: Examples of industrial policies in response to COVID-19

Industrial Policy	Countries
Supply-side responses	
Rent exemptions, subsidies, and deferrals	Austria, Bahrain, Oman, France, Lesotho, Malta, Netherlands
Lower energy costs, payment deferrals, and subsidies	Egypt, Saudi Arabia, Equatorial Guinea, France, Gabon, Pakistan, Republic of Slovenia
Working capital loans (12-months) (including granting and opening access)	Egypt, Saudi Arabia, The Bahamas, Bahrain, Belgium, Chile, Netherlands, Gabon, Guatemala, India, Israel, Italy, Kazakhstan, Mexico, Morocco, Paraguay, Peru, Romania, Singapore, United Kingdom, Zimbabwe
Subsidised short-term (2-3 year) and concessionary and soft loans	Armenia, Brunei Darussalam, Bulgaria, Cambodia, China, Cyprus, Hong Kong, Fiji, Finland, Hungary, Macao, Korea, Kuwait, Lao P.D.R., Morocco, Netherlands, Panama, Republic of Lithuania, Russia, Rwanda, Thailand, United Kingdom, West Bank, and Gaza
Credit guarantees and or payment holidays on loan repayments	Argentina, Australia, Brazil, Colombia, Croatia, European Union, Finland, Ghana, Guinea, Honduras, Hungary, India, Indonesia, Ireland, Israel, Italy, Kazakhstan, Lesotho, Republic of Lithuania, Luxembourg, Malawi, Mali, Mongolia, Morocco, Myanmar, Netherlands, New Zealand, Norway, Philippines, Russia, Saudi Arabia, Serbia, Slovak Republic, Republic of Slovenia, Sweden, Switzerland, Thailand, Uruguay
Tax relief (including utilities, rates and taxes exemption and other tax deferrals, reductions, exemptions, credits, refunds, and green investments)	Australia, Chad, Egypt, Eswatini, Oman, Gabon, Honduras, Hungary, Italy, Kyrgyz Republic, Peru, Romania, Russia, Rwanda, Senegal, Sri Lanka, Trinidad and Tobago, Uganda, Vietnam
Job protection and wage subsidies	Australia, Bangladesh, Botswana, Bulgaria, Cambodia, Canada, Cyprus, Ethiopia, Hungary, Ireland, Lesotho, Malaysia, Malta, Mauritius, Montenegro, Namibia, New Zealand, Norway, Peru, Poland, Republic of Lithuania, Republic of Slovenia, Serbia, Seychelles, Singapore, Sweden, Vanuatu
Demand-side responses	
Building or renovating of industrial parks and/or special economic zones (SEZs)	Afghanistan, Barbados, Pakistan, Panama, Uganda
Funding support for industrial R&D	Malta, New Zealand, Singapore, Spain
Loans to promote digital transformation and modernisation of the industrial sector	Pakistan, South Korea, Spain
Support for green investments (for example, tax breaks)	Australia, Denmark, France, Germany, Ireland, Japan, Kiribati, Luxembourg, Norway, Sweden, South Korea, United Kingdom
State-led investments in advanced infrastructure	South Korea
General infrastructure investment	Australia, Colombia, Guinea, Malta, New Zealand, Solomon Islands, Sweden, Zimbabwe

Source: IMF (2021)

Other countries also employ an aggressive policy package to rebuild and reorient their economies for the post-COVID-19 era. For some, the pandemic allows them to take a longer-term view and are opting to gear their economies for the new digital and green economies. South Korea, for example, has unveiled its own "New Deal" built on the back of state-led investment in AI and 5G infrastructure (Olson, 2020). This policy fundamentally reshapes the South Korean economy with funding sourced from a combination of the Treasury, local governments, and the private sector (Kim, et al., 2020). What makes South Korea's New Deal different from others is that the private sector primarily leads it with the State acting in a

supporting role. Consequently, this presents a range of different challenges in terms of governing this new industrial policy agenda.

The South Korean New Deal develops three pillars (IMF, 2021). These are the digital economy, green technologies, and a social safety net. From the standpoint of its green policies, South Korea's Green New Deal tends to differ from its European and American counterparts, with its additional focus on eradicating social poverty and inequality (Lee & Woo, 2020). Overall, South Korea's Green New Deal is lauded by most as an opportunity to develop its industries with improved technology, higher wages, and more significant export and job creation potential. However, critics argue that South Korea's green transition is more grey than green, pointing to replacing dirty fossil fuels with cleaner fossil fuels (Kim, et al., 2020). Despite this, South Korea has remained committed to a greener future aiming for zero carbon emissions by 2050 and furthering its renewable targets.

Spain, too, supports futureproofing, digitalising, and modernising much of its existing industrial capabilities (del Mar Martínez, et al., 2020). This investment plan amounts to \$167bn. The investment plan marks Spain's most fundamental shift in its economy and ecology in 37 years (McMurtry, 2021). This program sets its sights on digitalising small businesses from a manufacturing perspective, installing 5G to promote the digital economy, fostering the circular economy, and improving energy infrastructure with more renewable energy.

Similarly, Pakistan is also focusing on providing loans to fast-track its adoption of digitalisation and modernisation in much of its industrial sector (Digital Pakistan, 2020). Nevertheless, this modernisation approach forms part of Pakistan's larger post-COVID-19 industrialisation agenda and seeks to reignite Pakistan's overarching export promotion policy that has characterised its focus over several years. As part of its post-COVID-19 agenda, Pakistan has drafted a 10-point plan to attract investment into the country (Naz, 2021). This agenda brings together interrelated sectors from manufacturing, construction, and the digital economy.

Specifically, from a manufacturing perspective, Pakistan's 10-point agenda focuses on several initiatives. Firstly, Pakistan is seeking to promote the industrial relocation of Chinese companies into Pakistan. This strategy forms part of a more comprehensive policy of building special economic zones and exploiting the knowledge of these relocated companies to develop backward linkages with local industries. Secondly, Pakistan aims at fast-tracking many planned construction and infrastructure projects with increased investments. Thirdly, the rise of Chinese technology firms and 5G internet has expedited the desire to create a *digital* silk road. This policy goal is dependent on Pakistan significantly improving its IT capacity and capabilities. Fourthly, in line with the previous policy, Pakistan is looking at reorientating its economy to favour priority sectors to align with the global production system's ongoing paradigm shift to favour greater digitalisation levels. Overall, Pakistan aims to transform and recalibrate its industrial sector to meet the needs of the new post-COVID-19 world.

Lessons for South Africa's post-COVID-19 industrial policy

The post-COVID-19 world will present several unique challenges for the design and governance of industrial policy in South Africa. What is becoming more evident as the

pandemic persists is that developing countries will increasingly face more difficult choices regarding their policies to recover and grow in the post-pandemic world. Rising fiscal deficits and increased protectionism will impact how countries respond, and how countries respond will have significant implications for the future (Davies, 2020). The industrial policies discussed above are just some being pursued by other countries to kick-start their economies.

Currently, South Africa's post-COVID-19 policy stance does not represent a fundamental transformation or reorientation of the existing structure of the economy. An analysis of the proposed recovery plans released by both the State and a leading business association are currently vague on specifics relating to sector-specific green and digital manufacturing and industrialisation interventions. Instead, these recovery plans largely reiterate previous industrial policy objectives with limited reference to the changing global economy. As a result, the recovery plans have crucially missed an opportunity to achieve proper structural transformation, longer-term economic dynamism, and inclusion. Failure to prioritise these goals will weaken South Africa's prospects of a strong economy and social recovery in the immediate aftermath of the pandemic.

However, there are a few key lessons to be drawn for South Africa from the above case studies. One of these is the commitment by many economies to a package of policy interventions to stimulate economic activity and attract investment rather than pool all their resources into one perceived silver bullet. Australia, New Zealand, and Sweden provide pertinent examples of this. Table 1 discussed above indicates that these countries have committed to industrial policy packages comprising supply- and demand-side interventions. In addition, some countries are taking a longer-term view aiming to prepare their industrial sectors for the coming paradigm shift in the global economic order. As a result, some countries appear to be altering their policy focus towards improving their economies to achieve greener and more sustainable outcomes for their industrial sectors. This alteration also goes hand-in-hand with readying their economies for the new digital age. For example, Spain and Pakistan are good examples due to their focus on modernising their industrial capabilities.

Additionally, South Korea's commitment to a New Deal presents perhaps the best illustration of a well-thought-out reorientation program to prepare the economy for the future. South Africa must follow this example to achieve the type of structural transformation that will be instrumental in developing medium- and long-term dynamism; priority needs to build an economy that is more competitive and sustainable. This process can be assisted by investing in innovation and high value-adding manufacturing industries, leading to better jobs with higher wages and strong linkages throughout the economy, strengthening linkages within the product space. Achieving these goals will be vital in strengthening South Africa's manufacturing sector given the fast-approaching waves of both digitalisation and climate change and the alterations to global production systems and supply chains these are bringing.

Moreover, given the number of pervasive social and economic problems that have limited South Africa's policy success in the past, South Korea's target of eradicating many of its social ills as part of its New Deal is worth emulating. However, adopting a social angle of this nature would require a significant alteration in South Africa's current policy design,

necessitating greater coordination among different government departments. Nevertheless, in designing and ensuring the success of such a broad policy package, South Africa can again take several lessons from South Korea's proposed New Deal. This crucial lesson is how South Korea coordinates and governs its New Deal (primarily led by the private sector). In contrast, the government departments often lead South Africa's public-private partnerships from where these policies originate. The decentralised nature of South Africa's policy governance has come at the expense of a fragmented State (Bell, et al., 2018). Nevertheless, this means that there needs to be closer collaboration between the public and private sectors to determine the goals of the industrial development agenda.

Overall, to achieve the most significant impact on South Africa's post-COVID-19 industrial policy, it should be designed as a broad policy package following the likes of New Zealand and Sweden. This policy package is to quickly get the economy back on track in the short-term while embracing a multi-faceted policy package in the long term that simultaneously fosters diversification, effective inclusion, structural transformation, and develops medium- and long-term dynamism and competitiveness. However, South Africa should also look to the examples of South Korea in terms of developing its industrial policy program to tackle more than purely industrial needs. Furthermore, South Africa's pursuit of a greener and digital industrial policy agenda must achieve buy-in and commitment from the broader development coalition and industrial ecosystem. With these considerations taken into account, policymakers can guide South Africa into the 21st-century with a more resilient and sustainable industrial policy agenda.

Conclusion: The need for a resilient and sustainable industrial policy agenda in South Africa

The COVID-19 pandemic has, to date, forced many economies to focus their responses on fiscal and social support packages to tackle macroeconomic (for example, GDP declines) and social problems arising from the pandemic (for example, social decay through increased unemployment). This pandemic and the resulting economic costs can be significantly worse in South Africa than in other developing economies because the South African economy has several vulnerabilities. However, to see how industrial policy can assist the South African economy requires an understanding of the economy's underlying vulnerabilities. It also entails understanding the nature of this pandemic and the costs that arise in South Africa.

Discussions surrounding South Africa's industrial policy agenda post-COVID-19, should effectively design and govern South Africa's industrial policy space to effectively achieve a more sustainable, resilient, digital, and greener economy. This changing policy space reflects the changing trends in production and industrialisation worldwide and further ensures that South Africa seeks out areas that offer competitive niches and opportunities to create value addition.

This brief argued that for South Africa to transform its economy and embark on a more sustainable economic development path led by industrialisation, it should look to international comparators for guidance. South African policymakers can and should draw lessons from these examples by enacting a comprehensive intervention package incorporating both supply- and demand-side industrial interventions. Similarly, there is a pressing need to realise South-South trade agreements, especially at the regional level.

Leveraging regional markets provides opportunities to increase exports to more diversified markets. It will also allow countries to navigate the uncertainties around the pandemic and create conditions that usher in a sustainable recovery to ensure regional resilience to global shocks in the future. South Africa's Masterplan initiative to develop domestic production capabilities with a regional export focus is a welcomed approach. However, for an industrialisation plan to work in South Africa, there needs to be a recognition of South Africa's unique challenges. Moreover, ensuring that this new industrial development agenda is coordinated and coherent requires that a few complementing mechanisms and institutions work together. Finally, ensuring success for this new industrialisation agenda requires more research into identifying new challenges and considerations better to visualise the future of industrial policy for South Africa.

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