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EVALUATING SOUTH AFRICA'S IMPLEMENTATION OF ITS INDUSTRIAL POLICY (1994 - 2023)

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Abstract

Abstract: We evaluate the effectiveness of the implementation of South Africa's industrial policy between 1994 and 2023, to provide policy makers with informed recommendations for improving the effectiveness of this policy. The methodology used in this paper is that of the desktop literature review of government policy documents, legislation, industrial output reports, and academic work related to South African industrialization. We find that South Africa's industrial policy in South Africa failed to reach its stated targets as there were many problems that contributed to its ineffective implementation. The study recommends that policymakers must revise its industrial policies (to improve its clarity, consistency, and scope) and improve the services provided by the public sector, to enhance industrialization's effectiveness in growing South Africa's economy.

*Keywords**: economic growth, structural reform, public sector, manufacturing***

1. INTRODUCTION

Industrialization refers to the systematic increase in manufacturing production or the overall expansion of the manufacturing sector (Simandan, 2020; Trade Law Centre, 2020). Industrialization is more than just manufacturing; it is a comprehensive process that converts inputs into products with added value across the entire economy. This process relies heavily on services, particularly infrastructure and network services such as transportation, telecommunications, water, and energy (Trade Law Centre, 2020). Industrial policy has changed over time in response to shifts in the political, social, and economic climate (Cherif et al., 2022). Governments often engage in industry to strategically organize and alter the industrial structure towards industries, technologies, or jobs that they anticipate will provide better opportunities for economic growth or social welfare compared to what would happen without such intervention (Lippolis and Peel, 2018).

South Africa faces severe structural problems that include low economic growth, high unemployment (32.1%), poverty (more than half the population lives on less than USD$85 per person, per month), and the highest income inequality rate in the world (Gini coefficient of 0.67) (Shah, 2022; World Bank, 2022; Matyana and Thusi, 2023; StatsSA, 2024). Poor planning and subsequent large scale power station breakdowns have compromised the country's energy generation capacity, leading to electricity grid blackouts, commonly known as 'load shedding' (Hartley et al., 2023; Mohlakoana & Wolpe, 2023). Implementing industrial policies helps stimulate transformation and promotion of industrialization in the country, which is critical for attaining the government's broad vision to address the developmental challenges (Andreoni et al., 2021; Zoogah et al., 2023; DTIC, 2023). However, it is unclear if the implementation of South Africa's industrial policy has successfully fulfilled its purpose. This study aims to evaluate the efficacy of South Africa's existing industrial policy and provide recommendations for its enhancement over the period 1994–2023.

2. INDUSTRIAL POLICY IN SOUTH AFRICA: A HISTORICAL PERSPECTIVE

African policymakers, face difficulties in establishing and implementing an effective industrial strategy in today's global economy (Andreoni et al., 2021). According to Fotoyi et al. (2016) and Zalk (2014; 2021), we can categorize the history of South Africa's industrial policy into three distinct periods:

(a) The pre-1994 period was marked by industrialization, centered around the dominant minerals-energy complex (MEC), is a group of capital-intensive industries and related interests.

(ii) Between 1994 and 1996, the democratic state implemented the Reconstruction and Development Program (RDP), which did not prioritize the development of the industrial sector. In 1996, the government implemented the Growth, Employment, and Redistribution (GEAR) strategy, incorporating the principles of the Washington Consensus (WC). This approach proposed that by liberalizing important markets, the allocation of capital would become more efficient, resulting in increased levels of private investment, economic growth, and employment rates. In 2006, the Western Cape deviated from the traditional approach by implementing the Accelerated and Shared Growth Initiative for South Africa (AsgiSA) to reduce the disparity between the "first" and "second" economies and facilitate the rise of black capitalists through B-BBEE (Zalk, 2014; 2021). This pertains to the promotion of a black capitalist class through B-BBEE regulations. The B-BBEE policy has undergone several revisions since the mid-1990s, mostly focusing on sectors where the state holds a direct advantage, such as license issuance or procurement.

(iii) In the period after 2007, the South African Cabinet officially approved the National Industrial Policy Framework (NIPF) in January 2007, followed by the implementation blueprint called the Industrial Policy Action Plan (IPAP) in August 2007 (DTI, 2007; 2018; Zalk, 2014; 2021; Andreoni et al., 2021). During this period, South Africa transitioned its industrial policy from a neoclassical approach to one focused on structural reforms. This shift has specifically addressed persistent limitations related to monetary policy, capital formation, industrial financing, infrastructure provision, and the availability of essential intermediate inputs (Zalk, 2014; 2021). The observation that newly industrialized countries (NICs), who have uncritically adhered to the World Bank's Washington Consensus (WC) approach, have achieved the most remarkable economic progress and advancement, drives this transition. In contrast, countries that have blindly embraced the WC route have experienced unsatisfactory growth and development outcomes. Consequently, the NIPF does not endorse a policy approach that is universally applicable.

In theory, the NIPF has the potential to prioritize the reallocation of resources towards any activity within the "modern sector." Jomo (2019), Andreoni et al. (2021), and Bruhn et al. (2021) emphasize that industrial policy seeks to bring about structural transformation by fostering the growth of key industries and an inclusive economy that generates increased employment opportunities and economic expansion. However, Page and Tarp (2017), Andreoni et al. (2021), and Bruhn et al. (2021) assert that for industrial policy to effectively promote industrialization, it must combine various microeconomic interventions in a coherent and integrated manner. NIPF plays a crucial role in achieving South Africa's ASGI-SA goals, which include increasing GDP growth to over 6 percent by 2010, reducing unemployment and poverty by 2014, and further promoting industrialization towards a knowledge-based economy beyond 2014 (DTI, 2007). Hence, the main aim of the NIPF is to delineate the government's strategy for fostering industrial growth in the South African economy. The NIPF outlines a vision for the industrial economy in the short-medium term and medium-long term. We should emphasize the NIPF as a framework, not a plan, for South Africa's industrialization process. We will derive most of the specifics about intervention from current or upcoming procedures influenced by the document (DTI, 2007).

However, the scope of this analysis does not encompass all aspects of the industrial growth trajectory. Instead, it focuses on fundamental principles and proposes a series of strategic procedures to facilitate structural change towards more productive activities (Andreoni et al., 2021). The main objective of the NIPF is to offer enhanced transparency and assurance to both the private sector and social partners when making investment choices. DTI (2007) states that the NIPF serves as a benchmark for significant enhancements in coordination across government agencies for the various and intricate policies and initiatives it will include. In addition, Bell et al. (2018) and Sibanda (2020) suggest that re-industrialization is a crucial strategy of the South African government aimed at fostering an equitable and sustainable economy. Kaplan (2019) reports that South Africa has implemented its industrial policy (NIPF) for over a decade through a series of

annual IPAPs, in line with the Program of Action (PoA) for the Economic Cluster. The aim is to encourage and facilitate the process of re-industrialization (DTI, 2007; DTI, 2018; Bell et al., 2018). The NIPF tackles overarching limitations and potential advantages in various sectors of the South African economy by concentrating on strategic Programs (SPs) that align with the Program of Action (PoA) for the Economic Cluster.

3. HIGHLIGHTED SUCCESSES OF SOUTH AFRICA'S INDUSTRIAL POLICY

The Department of Trade and Industry (DTI, 2018) has highlighted several areas of excellence in various sectors and some of these achievements include:

3.1 Increased manufactured exports

The percentage of manufactured exports has significantly increased, rising from 41.2% in 1994 to approximately 52% of the total merchandise export basket in 2013 (Tsedu, 2015; Fotoyi et al., 2016; DTI, 2018). Government support for specific industries through historical ownership, incentives like the MIDP/Automotive Production and Development program, financing from IDC, and, most importantly, foreign direct investment (FDI) has primarily fueled this growth, surpassing mining, and other sectors. Programs such as the Automotive Incentive Scheme in industrial financing have successfully obtained investment pledges exceeding R45 billion, resulting in the preservation of 38,267 job positions (DTI, 2018).

3.2 Creation of Special Economic Zones and Industrial Parks

Special Economic Zones (SEZs) are designated areas that typically offer advantageous provisions for administrative procedures, streamlined legislation or compliance requirements, and fiscal benefits, often in the form of tax incentives provided by the government (Haasbroek, 2019; Alansary and Al-Ansari, 2023). The South African government has highlighted the Special Economic Zone (SEZ) plan as a crucial tool for boosting the country's industrialization (DTI, 2018). The DTI and the Ministry of Commerce of the People's Republic of China signed a five-year agreement (MoU) in 2014 to derive maximum benefit from the development and implementation of SEZ policies, leading to the training of 108 officials (DTI, 2018; Casarini et al., 2022). China has successfully maintained a positive trading account and generated a significant number of jobs over an extended period, mostly through its extensive network of over 200 Special Economic Zones (SEZs) (DTI, 2018; Haasbroek, 2019).

Therefore, considering global trends, the South African government implemented the SEZ policy tool for the following sons (DTI, 2018; Dube et al., 2020; Qumba, 2023): (a) To enhance proficiency in specific industrial capabilities as part of the Industrial Policy Action Plan (IPAP) and the National Development Plan (NDP). (b) To encourage the process of enhancing the value and quality of the nation's minerals and other natural resources. (c) To allure both international and domestic direct investment (FDI). (d) To improve or develop the existing infrastructure into a globally recognized infrastructure that is essential for the expansion of the designated industrial activity. (v) To establish novel industrial clusters. (e) To expedite economic expansion and generate a substantial quantity of new, highly necessary, quality employment opportunities.

Currently, there are eleven authorized or designated Special Economic Zones, with nine fully operational located at Saldanha Bay in the Western Cape, Dube Trade Port in KwaZulu-Natal, OR Tambo in Gauteng, Coega and East London in the Eastern Cape, Richards Bay in KwaZulu-Natal, Musina in Limpopo, Tshwane Auto SEZ in Gauteng, Nkomazi SEZ in Mpumalanga (not yet operational), Musina Makhado SEZ in Limpopo (not yet operational), and Maluti a Phofung in the Free State (DTIC, 2021; Gumede, 2023). The number of active or operational investors in designated Special Economic Zones (SEZs) is currently sitting at 164, with a cumulative private investment worth about R21,9 billion (DTIC, 2021; Gumede, 2023). DTI (2021) and Gumede, (2023) report that the current number of direct jobs produced stands at 19,013, with the expectation of a significant increase as the new investments commence operations.

As of 2018 and 2021, the Department of Trade and Industry (DTI) has directed significant investments towards many Special Economic Zones (SEZs), projecting these investments to generate over 2,000 employment opportunities (DTI, 2018). For instance, Dube Trade Port has successfully secured additional investments worth nearly R600 million, expected to create 841 jobs (DTI, 2018; Slater, 2021).

3.3 Localization and the Proudly South African (SA) program

Proudly SA, initiated in 2001, is a national campaign that encourages the purchase of locally produced goods and services. The campaign focuses on promoting South African companies, organizations, products, and services that exhibit superior quality, local content, fair labor practices, and environmentally responsible standards (DTI, 2018; Avenyo et al., 2023). Localization aims to redirect demand from imported goods (Altbeker, 2021). The objective is to safeguard and potentially generate employment by advocating for the purchase local initiative, boosting local manufacturing, and exerting significant influence over procurement in both the public and private domains (Altbeker, 2021). Major corporate institutions and small, medium, and micro enterprises (SMMEs) can accomplish these objectives by influencing their supply chain management decisions to support local products and services (DTI, 2017; Fourie & Malan, 2020). Thus, purchasing goods from local sources can have both economic benefits and wider social consequences. These endeavors resonate with our genuine feelings of patriotism and communal unity, as we are all aware of individuals who are unable to secure employment or have recently become unemployed (DTI, 2017; Brand South Africa, 2020). Government creates favorable conditions for the emergence of work rather than directly generating employment opportunities. This implies that enterprises are responsible for creating tangible employment opportunities.

Proudly SA has had an increase in its database of local products and services since it restructured itself to provide priority support to IPAP sectors (DTI, 2018; Brand South Africa, 2020). This indicates that the campaign has started to have a vital impact on facilitating market entry for domestically produced goods. DTI (2018) reports that since the database's re-launch on in April 2017, Proudly SA's membership has grown to 1,130. Additionally, the number of marketed items has reached a total of 9,700. To promote local procurement, Proudly SA has established localization partnerships and implemented a Local Procurement Accord with several retail companies, such as Edcon, Massmart, Foschini, and others, as well as social partners (DTI, 2018). The competition filings included the agreements with Massmart and Edcon as conditions. The Buyback SA campaign promotes local procurement decisions among consumers and enterprises, aiming to increase the circulation of money within the domestic economy (DTI, 2018).

4. CHALLENGES AFFECTING THE IMPLEMENTATION OF INDUSTRIAL POLICY IN SOUTH AFRICA

Despite achieving excellent results in important areas and the significant impact of IPAP initiatives in preventing further and potentially disastrous de-industrialization, South Africa still encounters numerous significant obstacles in its journey towards re-industrialization (DTI, 2018). The implementation of IPAP has been challenging due to the inconsistent and hesitant global economic recovery, as well as deep-rooted domestic structural problems and limits. These factors collectively hinder the competitiveness of the manufacturing sector (DTI, 2018). Consequently, the existing literature highlights the following difficulties or shortcomings encountered during the execution of intellectual property (IP) in South Africa:

4.1 The impact of both the Global Financial Crisis and Economic Recession

The introduction of NIPF and IPAP in 2007 occurred at the same time as the GFC of 2008/2009 and the accompanying economic downturn in South Africa (DTI, 2018; Andreoni et al., 2021). DTI (2018) reveals that the crisis has severely impacted South Africa's manufacturing sector through an examination of industrial advancements. Hausmann et al. (2022) found that the

manufacturing sector saw a significant decline in employment during the 2008/2009 global recession, resulting in the loss of millions of jobs. Furthermore, the industry has not been able to regain its pre-recession levels of employment. This suggests that the economy continues to struggle to reach its pre-recession levels due to the financial crisis (Adams & Yu, 2022). Employment levels declined from two million in 2008 to 1.7 million by mid-2016 (Altman, 2022). The 2008/2009 financial crisis and ensuing economic slump had a significant impact on all regions. South Africa allocated a fund worth R6 billion as part of its Framework Response, a significant component of its response to the global economic crisis. The Department of Trade and Industry (DTI) was responsible for overseeing the execution of the Industrial Policy in South Africa, as stated by UNEP (2018).

4.2 Effects of Climate Change and Global Warming

According to Averchenkova et al. (2019), industrial development and climate change mitigation have traditionally conflicted with each other, as shown in the policy frameworks for industry and climate change in South Africa. The existence of two conflicting frameworks, as well as the challenging and intricate process of transitioning to a low-carbon economy, make the establishment of a climate change regime perceived as a potential danger and hazard to industrial progress. South Africa is among the world's top 15 greenhouse gas (GHG) emitters due to its reliance on coal as its primary fuel source for electricity production (Nicol, 2021; IMF, 2023; USAID, 2023). Estimates project net emissions in 2020 to be 442 metric tons of CO2 equivalent (DFFE, 2023; USAID, 2023). According to Naidoo (2023) and Konhert (2024), this represents a slight drop of 0.8 percent from levels in 2000, mostly due to a brief decrease in emissions brought on by the COVID-19 pandemic. The energy industry and transportation are the primary sources of approximately 85% of the energy sector's gross emissions (USAID, 2023; IMF, 2023). Given current trends in these sectors (USAID, 2023; Johnston et al., 2024), there could be a rise in net emissions as well as a return to pre-pandemic emission rates.

The 2015–2016 drought in southern Africa experienced the lowest amount of rainfall in more than a hundred years. Future forecasts predict a more frequent alternating pattern of hot waves and heavy rainfall (DTI, 2017; Mbokodo, 2023). These patterns are especially significant for food production, which has been a key driver of growth in the industrial sector since 2008 (DTI, 2017; Gebre & Gebremedhin, 2019). The 2015/2016 drought significantly impacted the manufacturing industry, leading to a decline in sales growth and significant employment losses (Schreiner et al., 2018; Food and Agriculture Organisation, 2021). Climate change has a significant negative impact on the coal value chain, which plays a crucial role in South African manufacturing by providing electricity generation and supporting Sasol's petrochemical plants (DTI, 2017; Makgetla, 2021; Pandarum et al., 2022). As climate change worsens, it is probable that both domestic and international carbon taxes may increase the expense of coal consumption. Additionally, if pricing mechanisms prove ineffective, there may be a need to limit coal usage to meet agreed-upon targets for reducing greenhouse gas emissions. These restrictions would impact the manufacturing sector by raising electricity costs and potentially jeopardizing the feasibility of coal-dependent petrochemicals (DTI, 2018). Manufacturing and other businesses can benefit from adapting to and reducing the costs associated with climate change (Averchenkova et al., 2019). Essentially, the decline of the commodity boom and the impact of climate change are forcing South Africa to move away from its traditional reliance on mining-related exports (Andreoni et al., 2021). The transition will undoubtedly result in significant expenses, but it appears to be inevitable. The primary goal of industrial policy is to reduce the costs associated with adapting to and mitigating climate change while also identifying potential regions or prospects for economic expansion (DTI, 2017; Stern & Stiglitz, 2023).

4.3. Overreliance on the manufacturing sector

The manufacturing sector plays a key role in long-term economic growth and development, despite not being the primary source of employment (Goga and Avenyo, 2021). Nevertheless, manufacturing alone is incapable of addressing high unemployment. Infrastructure and network services, such as transportation, telecommunications, water, and energy, also play a crucial role in this process (Trade Law Centre, 2020). South Africa has failed to make substantial advancements in restructuring its economy and, according to certain indicators, has seen a decline. South Africa has seen premature deindustrialization, as evidenced by the fall in the manufacturing sector's contribution to the country's GDP. South Africa experienced a decrease in its manufacturing sector's contribution to GDP between 1995 and 2012 (Black et al., 2018). During this period, the manufacturing share of GDP decreased by approximately eight percentage points, dropping from 21% to 13%. This decline was a result of a trade liberalization policy that allowed international competition into the local markets. This trend is concerning because it goes against one of the main goals of industrial policy after apartheid, which is to restructure the economy and prevent deindustrialization. Similar trends in the selected locations suggest that external global variables may influence the performance of manufacturing industries worldwide (Black et al., 2018).

Unfortunately, this decline has had a negative impact on economic growth and job creation (DTI, 2018). Hence, solely depending on the manufacturing sector for economic growth and job creation could potentially hinder the country from attaining the essential structural development offered by other sectors. In 1994, the proportion of manufacturing to total value added was 16%, but it decreased to 13% in 2017 (DTI, 2017; 2018; StatsSA, 2021). In 1994, manufacturing value added accounted for around 15.9% of the total GDP, but by 2017, this figure had decreased to 13.5% (DTI, 2017; 2018). The period between 2009 and 2011 saw the highest amount of employment losses (DTI, 2017; 2018; African Development Bank, 2019).

4.4. State support for agriculture is declining and ineffective.

Between 2011 and 2016, more than 500,000 households in South Africa's former homelands ceased agricultural activities (Shackleton, 2019). Ngam (2021) and Marais (2022) contend that the reduction and inefficiency of government assistance to agriculture have hastened the consolidation of commercial agriculture and been unsuccessful in revitalizing agriculture in the former Bantustans. The loss in support for agriculture on international comparisons can be attributed to the legacy of apartheid, the slow rate of land reform and redistribution, resettlement policies, and congestion induced by forced removals and liberalization (Ngam, 2021). Furthermore, this is since young people are increasingly seeking a career in occupations that require less physical exertion and offer greater financial benefits (Shackleton, 2019). Despite South Africa's agriculture's connection to global markets, Ngam's (2021) grim outlook indicates a decrease in its proportion of global exports, investment in infrastructure, machinery, equipment, and agricultural output. This has exacerbated South Africa's persistent unemployment issue, as there have been substantial job cuts in the formal agricultural sector.

4.5 Policy coherence and program alignment are lacking.

Policy consistency and program alignment are essential for successful industrial interventions (Bell et al., 2018; DTI, 2018). The entire government should be involved in industrial policy, not just a few specific departments (DTI, 2018). Nevertheless, the fact remains that developing institutional capability and coherence is a laborious and challenging task, especially considering the disparities in existing skills within the South African government (DTI, 2018). Consistency and absence of conflict in the policy system are the defining characteristics of policy coherence, which refers to a system's condition (Miola et al., 2019). Recognizing that industrial policy builds upon various pillars and requires a comprehensive set of interconnected and mutually reinforcing policies and programs, it is crucial to carefully consider the practical aspects of coordinating institutions (DTI, 2018). The National Development Plan (DTI, 2018; The

Presidency, 2020) should guide these efforts. The National Development Plan (NDP), 2030, has identified a concern regarding policy instability. It states that to have a capable and developmental state, there needs to be effective leadership, well-formulated policies, competent managers and workers, transparent accountability, suitable systems, and consistent and equitable enforcement of rules (Presidency, 2020). The NDP also advocates for enhancing policy coordination and implementation, as well as ensuring policy clarity, to attract investment, decrease the cost of living, reduce the cost of conducting business, and minimize avoidable burdens, complexities, and duplications (Presidency, 2020).

As a result, decentralization of policymaking in national government departments creates policy coordination challenges (Presidency, 2020). This indicates the absence of a centralized framework for policy coordination among departments to supervise the creation and execution of departmental policies. The absence of alignment between skills development policy and industrial policy results in enterprises frequently privatizing the required training, leading to prejudice against smaller firms (DTI, 2018). In addition, the government's technological policy and industrial policy are disjointed and ineffectual in their collaboration towards industrialization (DTI, 2018). A lack of clear and definite policies, divisions within the government, intentional refusal to follow rules, and dishonesty in both private and public sector organizations guarantee less than ideal results (DTI, 2018).

4.6 The South African economy exhibits extreme concentration of ownership and control.

The South African economy has a significant economic issue due to the high level of ownership and control concentration, where a few major enterprises dominate most sectors (DTI, 2018). Debates about whether these companies are excessively accumulating cash or whether businesses are refraining from making investments fail to address the primary issue at hand. Some companies dominate the market and are leveraging that to generate substantial profit margins, while investment levels continue to be lackluster (DTI, 2018). There has been an increase in concentration and vertical integration within sectors since 1994 and the presence of significant barriers to entry has further strengthened this (DTI, 2018; Hadebe, 2020; Mondliwa et al., 2021).

4.7. Energy Security and Electricity Crisis in South Africa

Energy security refers to the guarantee of having a variety of energy sources that are sustainable, abundant, and affordable to support economic growth and reduce poverty (Besada, 2021). This includes considering environmental management needs and the relationships between different economic sectors (Besada, 2021; Ahmad et al., 2023). Presently, South Africa is facing an electrical crisis (unreliable and inconsistent power supply) (Kamanzi, 2021) caused by ESKOM, the state-owned utility (DTI, 2018; ESKOM, 2021; Meridian Economics, 2022a; 2022b). This is a significant and growing concern, as municipalities implementing a local government funding model are adding high premiums to ESKOM prices to cover costs and generate revenue from electricity. Substantial inefficiencies and discrepancies within municipalities, along with invoicing complications, frequently exacerbate this issue (DTI, 2018).

The country's industrial competitiveness is declining compared to other jurisdictions, leading to decreased production, plant closures, and job losses (DTI, 2018). Within this framework, the present disturbance in the electricity system presents both beneficial possibilities and potential dangers (Makgetla, 2021). Starting in 2008, the sharp rise in ESKOM prices initially boosted municipalities' income, but starting in 2015, this increase resulted in a decrease in demand, an increase in unpaid bills, and a loss in profits after paying for bulk electricity (Makgetla, 2021). The unintended consequences of this scenario included the promotion of irrational short-term decisions, such as moving to an ESKOM-served area (DTI, 2018). The ongoing increase in power costs, particularly for medium and small businesses in vulnerable industries like foundries, has resulted in municipal customers becoming less competitive compared to ESKOM-supplied competitors (DTI, 2018).

Experts projected that ESKOM would endure continuous load shedding until 2023 (Makgetla, 2021; Kamanzi, 2021). This was due to the challenges faced by ESKOM in maintaining and repairing its power plants, as well as the aging infrastructure of the nation's electricity-producing system, which would require replacement. The frequent occurrences of load shedding, also known as rolling blackouts, have had a detrimental impact on the local industry and economic growth. As a result, ESKOM's energy supply has become increasingly unpredictable and prone to interruptions and limitations (Kamanzi, 2021; Makgetla, 2021; Trade Law Center, 2021). The security and predictability of electricity have become a significant and pressing concern for South Africa's industrial development and economy (the DTI, 2018).

4.8. Tensions over South Africa's future energy mix.

ESKOM's emissions exceed allowed levels as South Africa relies on coal-fired power stations for around 85 percent, or 42,000 MW, of its electricity generation (Crompton, 2020). Over the next ten years, we expect this reliance to persist, but with a significant increase in the contribution from renewable energy sources. South Africa, despite being aware of environmental concerns, ranks as the 14th highest emitter of greenhouse gases globally. The country is actively striving to enhance its subpar environmental performance (Trade Law Center, 2021). The Pretoria High Court, in December 2020, reversed the environmental clearance for the proposed 1.2 GW Thabametsi coal-fired power plant following successful appeals by environmental organizations. These groups contended that Thabametsi would have ranked among the most environmentally harmful power stations globally (Trade Law Center, 2021). Simultaneously, environmental organizations are advocating for the cancellation of the proposed Khanyisa coal power project. This presents a potential drawback for upcoming thermal power initiatives scheduled for South Africa. The country intends to retire around 10,000 MW of coal-fired power facilities by 2030 and substitute them with a combination of renewable energy sources and natural gas (Trade Law Center, 2021). In November 2020, announced its intention to achieve carbon neutrality by 2050 (Trade Law Center, 2021).

By 2050, the Just Energy Transition program aims to transition away from coal power (Trade Law Center, 2021). However, there are legitimate concerns about the likelihood of succeeding due to ESKOM's ongoing heavy dependence on coal power. The country's construction of the Medupi and Kusile coal power plants, each with a capacity of over 4 GW, further compounds this (Trade Law Center, 2021). ESKOM's initiatives have faced opposition from trade unions and vested groups in the coal sector, which has slowed their progress (Trade Law Center, 2021). The energy mix program, as outlined by Baker and Phillips (2019) and Todd and McCauley (2021), aims to achieve social and environmental acceptability by addressing public attitudes and the environment. This list encompasses factors such as deforestation, land degradation or soil acidification, indoor or local pollution, greenhouse gas emissions and global climate change, nuclear security, safety, waste management, proliferation, and the potential adverse effects of large dams or large-scale modern biomass development. Hence, the pivotal factor is the dissemination of clean technologies to emerging nations (Todd & McCauley, 2021).

5. CONCLUSION

This study established that the full implementation of South Africa's industrial policy in a coordinated manner has not achieved its intended objectives. Those tasked with implementing industrial policy often misunderstand it due to its unclear definition. The study also found that industrial policy was experiencing many challenges, namely: lack of inspections, monitoring, and evaluation, lack of sector-specific resources, lack of collaboration and support for public-private partnerships (PPP), insufficient industrial funding and financing, lack of or poor policy coordination and program alignment, and an energy crisis. We offer several recommendations for the Soth African government below:

One: Ensure that policy implementers have a clear understanding of industrial policy. Closing the knowledge gap would require a well-crafted and well-understood industrial policy to encourage learning and create a learning society (Cherif and Hasanov, 2019). Two: Ensure regular, consistent, and periodic inspections, monitoring, and evaluation, as well as independent evaluations of industrial policy interventions, to ensure that they are effective in meeting their objectives. Three: Make sure there is an adequate allocation of resources, including human, financial, and technical, and that there is enough skilled and expert staff and civil servants. This will help in the skills planning process, which will provide a clear sense of the required mix of skills needed to formulate appropriate policies that will improve alignment between skill demand and supply. Four: Ensure that industrial policy is the center of economic policy in South Africa. Furthermore, the government should ensure that structural transformation, not just manufacturing, is the central objective of the government's industrial policy, and that industrial policy is the center of economic policy.

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