



TOWARDS AN EFFECTIVE INDUSTRIALISATION PROCESS IN THE SUDAN

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ABSTRACT

PURPOSE: To analyse the performance of the industrial sector in Sudan and assess the enablers and inhibitors to its full contribution to the Sudanese economy.

DESIGN/METHODOLOGY/APPROACH:

- Review and analyse bench-marking industrial policies around the globe with the objective of extracting the main lessons to be learnt for the case of Sudan, and assess enablers and inhibitors.
- Review and analyse the contribution of the industrial sector to the Sudanese economy, applying lessons learnt from above.

- Assess the performance of the industrial sector in Sudan, examine enablers and inhibitors to the industrialization process, and make appropriate recommendations to improve it.

FINDINGS: The contribution of the industrial sector to the Sudanese economy is small. A significant injection of industrialization is required. However, the lack of effective industrial strategy and policy is very clear and reflected in a general weakness of the Sudanese economy. An analysis of enablers and inhibitors to the industrial sector led to the identification and categorization of the main ones. It is recommended that each of these categories needs to be tackled in order to improve the contribution of the industrial sector to achieving sustainable development goals and improving the Sudanese economy.

ORIGINALITY/VALUE: Industrial strategy and related policies in Sudan have not been reviewed recently. This paper reviews the impact of this on the industrial sector and its contribution to the Sudanese economy. The paper also provides a critical analysis of enablers and inhibitors to an effective industrialization process, categorizes them and recommends special attention be paid to these categories.

KEYWORDS: Sudan, industrial strategy, industrial policy, national development plan, enablers, inhibitors

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INTRODUCTION

It is evident that the Sudanese economy is in a state of crisis. Professor Issam Mohamed (2011) described its performance as an enigma of failures, even with all the potential of the country's resources. The failure started in the year 1970 and continued its descent, even with massive economic support over the following decades. He claimed that excluding the political instability and the epidemic of corruption that continued to engulf the economy, there are reasons that mismanagement affected the performance of the Sudanese economy. There are also strong signs that other real economic production sectors deteriorated in their income sharing. Moreover, the entry of oil production into the Sudanese economy did not improve the macroeconomic situation and income per capita, but did result in improving the urge of the authorities to control the money supply (Mohamed, 2011). The secession of the southern part of the country in 2011 did not help either, as it took with it almost three-quarters of the existing oil fields at the time. These were designated to the newly formed independent state of South Sudan, rendering this sector less prominent than it was for the Sudanese economy unless new discoveries and investment are urgently injected into it. Equally significant, timber and other forestry products had been largely lost, impacting the trade balance of the country.

However, Sudan is not unique in this unfortunate situation. Many other developing countries, particularly in Africa, are yet to find a development path that takes them outside the poverty zone and opens the gates of sustainable development in front of them. The current global economic downturn may, ironically enough, present these countries with a golden opportunity to play some crucial role in recovering the required balance to the global market. This is because the biggest multinationals and industrial companies, feeling the pinch of the economic downturn, are now seeking refuge in exploiting resources and cheap labour well beyond their traditional market zones. They are also exploring every opportunity to mitigate business risks and reduce their base costs through restructuring and off-loading costs to suppliers and strategic risk-sharing partners. However, in expanding globally, these companies would be looking for places with a developed infrastructure, skilled labour and appealing investment opportunities (Dafa'Alla, 2016).

It should be remembered that all the developing countries that managed to get out of the poverty trap and significantly improve the standard of living of their citizens, such as the South East Asian countries, have adopted a clear industrialization path as part of their development models. Sudan will not be the exception. Therefore, the present industrial output of 8.5% of the GDP, according to the comprehensive industrial survey of 2001 (Dissman, 2004), is not enough and a big injection of heavy industry is required. Indeed, Sudan is still far away from having an effective industrial sector. The value added per capita of the Sudanese manufacturing sector, which is a measure of the contribution of the industry to the gross domestic product (GDP), is only US\$89.92 according to the 2012 industrial statistics published by NationMaster (2012). This is very small relative, for example, to the corresponding average of the G7 countries of US\$5,289.76 per capita, and hence ranked Sudan as number 147 out of the published 187 countries in the world. Sudan, therefore, ranks in the group of "countries with low industrial production", and can be seen as a mainly agriculturally-based economy.

Hence, to get out of the poverty zone, Sudan needs to adopt an integrated sustainable development plan, in which industry represents the pivotal point. As argued by Dafa'Alla (2016), an injection of heavy industrialization to the Sudanese economy, with particular focus on higher value chain products for export, is required in order to improve the trade balance and lift the country out of the poverty zone. This should be built on the back of an effective industrial policy that can safely and efficiently stir the economy in the right direction to achieve the objectives of boosting the economy, increasing employment opportunities, fighting poverty and moving a step closer to achieving sustainable development.

This paper discusses the role of effective industrial policy in the performance of the industrial sector in Sudan, and assesses the enablers and inhibitors to its full participation in the Sudanese economy.

DEFINITIONS

Note that the word “industry” is often used to refer to all sectors of the economy. For example, the financial services and entertainment sectors are all referred to as industries. However, in this paper we confine our definition to include only those categories of the production industries with measurable physical output, such as manufacturing, mining and quarrying, ICT, energy generation and water supply and waste management.

Industry is crucial to economic development. Hence, the existence of an industrial strategy to set the direction and guide the industrialization process is essential for achieving the targets of the national development plan. However, due to its historical development, the term “industrial strategy” is now used loosely, with little distinction between strategy, policy and plan. Indeed these three terms are often used interchangeably. Nevertheless, Jenkin (2006), in an article for the Canadian Encyclopaedia, defines the “industrial strategy” as a term that generally refers to any attempt by government to apply a coherent and consistent set of policies that are designed to improve the performance of the economy. The institution of engineering and technology (IET), clarifies this definition further by defining the role of “industrial strategy” as to set out the government’s tactical objectives for the economy, outlining what objectives or challenges it will seek to address and why they need to be addressed, and aligning these objectives in order to avoid unintended consequences IET (2012). On the other hand, the role of the industrial policy is to set the measures or policy levers that will be used to guide the economy toward the stated strategic objectives, including areas such as tax and skills policy, procurement practices or research and innovation funding priorities. Then the plan comes into play at the implementation stage of any specific task or project identified to achieve the objectives of the industrial strategy.

As such, industrial policy (IP) refers to any kind of intervention by the government to influence the economic structure of the country. This intervention can take different forms, from regulations to direct actions, to boost specific sectors of the economy. Consequently, several definitions of “Industrial Policy” were used in the literature. For example, Price (1981) defines IP as any government measure that promotes or prevents structural changes, whereas Harrison and Rodrigues-Clare (2010) define it as any government intervention that shifts incentives away from policy neutrality. Pack (2000) became more specific by defining IP as government actions designed to target specific sectors to increase their productivity, and their relative importance within the manufacturing sector. A softer approach was taken by Rodrik (2007), who defined IP as a process involving a “dialogue” between the state and private sector to generate information for identifying and removing the binding constraints to development. The word “dialogue” here is key, as IP is there to ensure that the long term direction of an industrialization journey remains clear, and that it needs to survive beyond the governmental and electoral cycles and hence requires the support of all industrial stakeholders to succeed. It is therefore wise

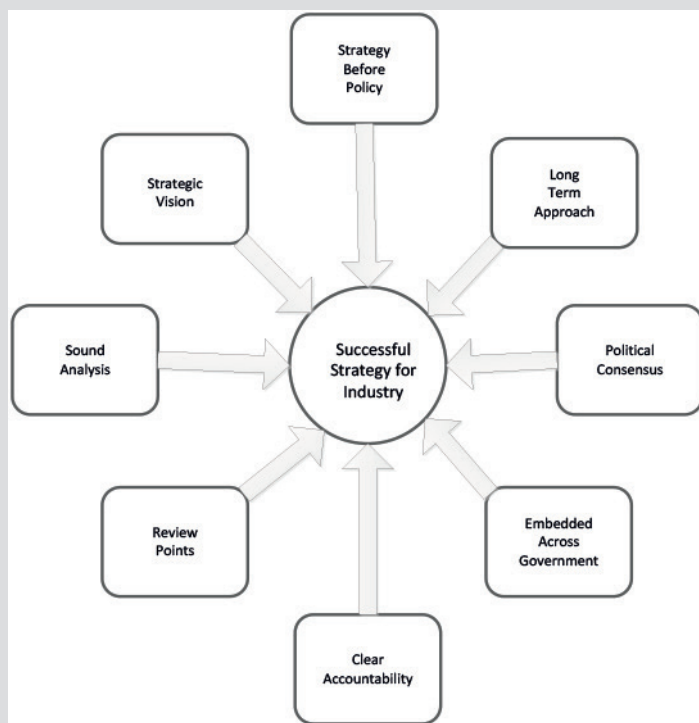
to take it outside the political arena and find a reasonable consensus between and commitment from all key players, such as politician, industrialists, entrepreneurs and academics, to back it up. UNIDO (2011), however, widened the scope by setting the objective of IP as to promote growth, trying to shape structural change in ways that are socially inclusive and environmentally sustainable. More recently, Di Maio (2014) defined IP as the set of government measures targeted at specific industries or firms, implemented with the objective of supporting the development and upgrading industrial output. Thus, he did not limit it to the manufacturing sector alone.

Trying to combine all these definitions, we define IP as:

the set of government measures, drawn in consultation with stakeholders, targeted at specific industries or firms, and implemented with the objective of supporting the development and upgrading industrial output in ways that are socially inclusive and environmentally sustainable, with the ultimate goal of boosting the economy and improving the standard of living of all its citizens.

In other words, the role of IP is to become an enabler to the industrial strategy and a tool to support industrial planning. As such, IP naturally includes a large set of policies belonging to different domains of intervention, such as innovation and technology, education and skills formation, trade and competitiveness policies, as well as targeted industry support measures and competition and anti-corruption regulations (Di Maio, 2014). It is therefore the key to creating an “investment-attractive” environment by providing Guidance, Encouragement, Access to finance, and Reassurance to investors, i.e. satisfying the “GEAR” condition for a successful industrial strategy implementation.

Hence, an industrial strategy sets the long term direction or vision, together with tactical SMART objectives for the related industrial policy and must be written in clear and concise language that provides clarity in order to help attract international investors. It must detail key performance indicators against which policy decisions will be measured. Once a clear strategic vision had been identified, objectives should be developed by using well researched evidence. The industrial strategy must be developed based on the country's social, cultural, economic and industrial structures, and hence cannot be a simple copy of another country's strategy (IET, 2012): it must be endogenous to its environment. An important point to note is that the industrial strategy cannot be the responsibility of just one government department. Achieving policy coordination and commitment requires leadership and accountability at the highest government levels. This means that an industrial strategy should set the long term direction, predict the future, and is subject to local as well as international developments. This is difficult, and clear accountability can help mitigate this risk by ensuring such predictions are continuously reviewed and validated (IET, 2012). Figure 1, which is reproduced from IET (2012), shows the different ingredients required to make a successful industrial strategy.

Figure 1: Required Ingredients for a Successful Industrial Strategy

Source: Reproduced from ETI, 2012

REVIEW OF THE ROLE OF INDUSTRIAL STRATEGY/POLICY

While there is almost consensus regarding the importance of the industrial strategy as defined above, the role of the industrial policy has gone through ups and downs through the industrialization history. However, it should be noted that industrial policies have been in action since the early 18th century; they were successfully implemented in England in 1800, Germany in 1880 and the USA in 1900. Industrial policy (IP) is an important enabler to support the industrialization process. Indeed, it has been an integral ingredient of the development path in most recent success stories in the newly industrialized countries (NIC) in South East Asia since the 1960s, and more recently in the BRICS (Brazil, Russia, India, China and South Africa). Even today, the USA is intervening to prompt Boeing's position in the world market, Europe to boost Airbus, and China to protect its car industry, for example. Hence, there is overwhelming evidence that all countries have used IP at some stage of their development path or history.

However, the reluctance to develop and enact an active industrial strategy over the past few decades can be attributed in part to past industrial strategy and policy

failures. Indeed, Harrison and Rodriguez-Clare (2010) cited numerous studies that provide evidence on both successful and unsuccessful industrial policies. However, when faced with the risk of failure, one should seek to devise ways to minimize that risk, not avoid setting strategic objectives in their entirety. As with all strategies, careful monitoring is required to ensure objectives are being met (IET, 2012). Additionally, IP had a bad name during the cold war as the word “intervention” was used by the Western Alliance, under the leadership of the USA, to mock the communist bloc, led by the Soviet Union, and in exchange promoted the “free market” ideology as the panacea for all economic ills. However, the end of the cold war has made it convenient for the capitalist countries to use IP when it is necessary to deal with major market failures or address imbalance in the economy. In this context, the United Kingdom Labour government during the period 1997-2010 made attempts at “industrial activism” and the promotion of key sectors, along the lines of their “third way” ideology (IET, 2012).

It is interesting, for example, to contrast the stance of Mrs Thatcher, the Conservative Prime Minister of the UK in the 1980s, when she adamantly refused to “rescue” the then wobbling coal industry and insisted that “one cannot buck the market”, with the stance of the British Labour government in 2008, supported by the conservative party, to nationalize the struggling banks by pumping £37 billion of tax payers money into HSBC, Royal Bank of Scotland, and Lloyds TSB. Gordon Brown, the Labour Chancellor of Exchequer described it as an “unprecedented but essential move”, while his Prime Minister, Tony Blair, justified the action by saying *“we must, in an uncertain and unstable world, be the rock of stability on which the British people can depend”*. This shows that some commercial institutions, such as major banks, have become “too big to fail” as their failure will have strong repercussions on the country’s economy and, indeed, the fabric of the whole society.

Vince Cable (2012), the Liberal Democrat Secretary of State for Business, Innovation and Skills in the British coalition government between the conservatives and his party, ended a major speech in which he set his industrial strategy by asserting:

“support for sectors; clear choices and backing for core emerging technologies; continued efforts to boost skills; and extracting the maximum value from the government’s position as a market-shaping customer. It will be backed by strategic deals with business and a cast-iron commitment, right across Whitehall, to identifying and dismantling the barriers to growth”.

This is a clear return to IP by design, not default, and Cable justified his “intervention” by highlighting that:

“the government shapes the British economy with its decisions every day. It makes many decisions about skills and universities, on research, on technologies, and on infrastructure. Through what it buys, and how it goes

about buying it, the regulations that exist, the markets it overseas and tax policy. All of these send messages to the economy”.

Additionally, more recently, the British Conservative business secretary, Sajid Javid, has indicated in the British Parliament on 18 April 2016 that the government will consider “co-investing” with a private partner to rescue the struggling British Steel industry and save the 4,800 jobs that are currently under immediate threat of disappearing.

Such actions by the United Kingdom, as well as other capitalist countries, signalled a strong return to IP after being abandoned during the last century in the western world. This is not surprising as the unchecked “free market” will undoubtedly lead to an imbalance between the commercial and industrial sectors: this is inevitable as the free market is driven mainly by maximizing profit. As the returns on investment are higher in the commercial sector, and it is less capital intensive than the industrial one, private investment will naturally be directed there. Job creation, employee compensation, balanced development opportunity within the country and fair re-distribution of wealth and opportunities and looking after the environment, for example, would be welcome if they come as a “by-product” of investment opportunities. After all, it is not the job of the private sector to look after these developmental and welfare targets; they are the direct responsibility of the elected government.

This is why the government had to intervene to readdress the imbalance when it reached a stage that threatened the health of the country’s economy, or distorted the very fabric of the society. To clarify this further, the impact on the UK economy due to the financial crisis of 2007/8 has revealed that the economy had been too reliant on financial services and domestic consumption for economic growth. Rebalancing the economy by growing other sectors, including manufacturing, was seen as a necessary step to end this over-reliance and provide resilience to the economy (IET, 2012).

It is also interesting to note that Dafa’Alla (2016), in his analysis of the contribution of the manufacturing sector to the Sudanese economy, noted that the public sector pays the largest compensation per employee in the large establishment sphere, followed by mixed public and foreign ownership. The private Sudanese with foreign partners, and the pure Sudanese private sector come third and fourth respectively, while the pure private foreign ownership lies at the bottom of the list. He saw this as a justification for government intervention, and argued that safeguarding employees’ interests requires a level of public “policing” or monitoring of foreign investment (Dafa’Alla, 2016). Indeed, the recent admission of VW and Mitsubishi car manufacturers to doctoring the fuel emission results of some of their respective models to gain advantage in the market is further proof that supports this call. However, it would have been a lot wiser and less damaging if an industrial policy was implemented well ahead in order to avoid such scenarios arising in the first place, not just to deal with them when they happen. Having an IP in place removes

the need for frequent government interventions to correct for market failures or enforce investment coordination on a case-by-case basis.

Due to its agility, capacity to create a significant number of jobs with different levels of qualification and skill, and ability to attract services and other supporting businesses around it, a flourishing industrial sector is vital in achieving the wider strategic goals of any national development plan as it is more socially inclusive. Therefore, it makes good sense for governments, particularly in the developing world, to have industrial strategies that help achieve these goals. However, for the industrial strategy to work, it needs to be enabled and supported by a pragmatic industrial policy with clear objectives that supports the national development plan. These objectives should include creating an investment-attractive environment, protecting the domestic industrial sector from market failures and unfair competition.

Foreign investment should be encouraged, but monitored. However, a pre-requisite for an effective IP is that the discounted future benefits of intervention should exceed the cost of distorting the market it is going to cause (Di Maio, 2014). Otherwise, it will turn into a protectionist tool that will lead to fat, inefficient institutions reminiscent of the old Soviet Union. In fact, the collapse of the Soviet Union is the best reminder of the complete failure of the “control freak” model of IP, where the state controls all development aspects with very little, if any, contribution from the private sector. However, world history is full of examples of practical failures of both the typical “control freak” and “free market” models of IP, as advocated by their respective communist and capitalist theoreticians.

Therefore, getting the balance right between allowing the free market and fair competition to work on the one side, and taking action to ensure investment coordination and correct market failures on the other is crucial. The IP should therefore be a “living” document that needs to be revisited, evaluated and modified as required, if not on regular basis. Indeed, this is important as we live in a world where the economy is changing rapidly, new international rules are drawn, new actors appear, new products and technologies emerge and, consequently, opportunities and challenges are different. Di Maio (2014) highlighted that it is true that the world and the rules of the game have changed, but there is still room for government intervention to favour industrialization. However, flexibility in the type and use of policies may be crucial to the effectiveness of the industrialization strategy.

However, while it is now clear that industrial policy (IP) is back in both the political and economic discourse, it is not at all clear how to design an effective IP. In fact, there are several factors that may make IP worse than the problems it aims to solve (Di Maio, 2014). It should be noted, however, that the objective, form and role of the industrial strategy differ from one country to another, as noted above. Consequently, the IP must be tailored to the objective it is supposed to achieve and the development stage of the country it is aimed to serve. Hence, industrial policy decisions should be taken based on “strategic” underpinning.

The above discussion shows that if the IP is desirable for developed countries to guard against “unexpected” results, it is a must for developing countries in order to ensure that long term strategic goals are cared for, a balance between public and private investments is struck, social inclusion is achieved (via fair distribution of resources and services), and sustainable development requirements are observed.

THE CASE OF SUDAN

Despite the recent additions in the fields of heavy machinery, motor vehicle assembly, aerospace and oil industries, the Sudanese economy can only be described as agriculturally based. As iterated above, the industrial contribution of 8.5% to the GDP and 1.7% to the employment market quoted by Dissman (2004) is significantly small. A heavy injection of industrialization of the economy is essential in order to improve the trade balance and help the country out of the poverty zone. A competitive manufacturing sector is a key element of this injection.

The history of modern industry in Sudan goes back to the beginnings of the 20th century, when the first cement factory was established in Sennar to help in the efforts to build the dam there. However, this was shut down immediately after the dam was built. Likewise, some industries, such as cooking oil, soap and sweets, were established during the Second World War to meet local consumption, only to be closed down after the war was over. Atbara Portland Cement factory, which was built by a private English company in 1948, was the only serious attempt to establish modern industry in Sudan to meet the high demand for quality cement in the flourishing construction industry in the UK at the time. So, it was clear that the colonial British Authority was not interested in any kind of industrial strategy for Sudan, and consequently the contribution of the industrial sector to the GDP during that period was minimal, if any.

However, the initial period following the independence of Sudan in 1956 witnessed the emergence of small and medium scale industries, such as tobacco, glass, mineral water, sweets and soap. These factories were built by some foreign communities, particularly Syrian, Armenian and Greek. Although encouraged, these efforts were clearly individual private initiatives rather than coherent strategic direction by the government: they are not underpinned by any strategic objectives. The following period was marked by political instability, which impacted the industrial strategy and policies in Sudan in different ways. The strategy pendulum swung from complete nationalization of small and medium enterprises (SMEs), following the May 1969 socialist coup, to market liberalization, with only a few “strategic” industries remaining under public control after the June 1989 uprising.

The lack of clear strategic direction, and the frequent change of related policies, made it very difficult for local, let alone foreign, investors to contribute to the industrialization process in Sudan so far. The analysis of Dafa’Alla (2016) reflected that private investors follow their own instinct and are therefore only interested in

industries of high return on investment, such as the tobacco industry, rather than being encouraged through positive policies to invest in capital intensive industries, such as manufacturing, in order to help realize the national development plan. Only recently, the Ministry of Industry in Sudan has published an industrial strategy for the manufacturing industries sector for the period 2007-2030 (MoI, 2016). However, it is not clear how much consultation and dialogue took place with stakeholders in formulating the strategy; an important step towards developing consensus around the strategy and making it resilient to political instability in the country. Although this strategy document identifies the sectors or “challenges” it wants to address at different phases of the 25 year period, it sets out vague objectives for a 5 year period, rather than 25 years, which are not smart enough. To some extent, it does specify “what” needs to be done, but not “why”. Equally importantly, there is no mention of the in-depth analysis that was carried out to justify the selection of these objectives, and no key performance indicators (KPIs) were stated (c.f. the section on Definitions). Additionally, the set of objectives is not linked to any set of “measures” regarding, for example, access to finance, taxes, skills, procurement, research and innovation, which are required to make a coherent “industrial policy”. These issues are crucial to buy-in support from perspective investors and win their trust.

Although there is no mention of supporting “industrial policy” in the “industrial strategy” document, it is fair to assume that the set of policies for the manufacturing sector during the period 2002-2007 published in MoI (2016) is still valid. However, this set of policies includes a combination of 25 objectives, targets and ideas rather than clear policies. As mentioned above, the industrial policy should comprise a set of measures defining how the government would intervene by regulation or otherwise in order to guide the economy toward the stated strategic objectives set in the industrial policy. It is not a list of “wishes”, but an enabler to the industrial strategy and a tool to support industrial planning. It also needs to be supported by the whole government to guarantee cross-departmental coordination and support. Hence, we strongly recommend formulating a clear industrial policy, passing it through Parliament and enforcing it as soon as possible for the industrial strategy to have any credibility in the eyes of investors, despite its weaknesses.

ENABLERS AND INHIBITORS TO THE INDUSTRIALIZATION PROCESS IN SUDAN

The Sudan Chamber of Industry held a very useful national conference on Sudanese Industry in 2010. The conference reflected on the state of the industry in Sudan generally and deliberated the major ones in more detail. The proceedings of the conference, SCOI (2011) give a good account of the problems facing the Sudanese industry and recommended solutions as seen by the industrialists and entrepreneurs themselves. However, our approach in this paper is to categorize the

enablers and inhibitors rather than list them all. This will make it easier to analyse the issues and address the root causes of the problems. We also acknowledge that it is difficult to be exhaustive in this paper due to space limitations. However, we will try to account for the main ones as we see them, and encourage interested parties to follow the same approach to add any other categories as they see fit. The categories we have chosen to cover here are Industrial Strategy, Industrial Policy, Coordination, Finance, Infrastructure, Skill and Innovation, Communication, Good Governance and Political Stability, and Corruption. We will explain below why each of these categories will act as an enabler, inhibitor or both.

INDUSTRIAL STRATEGY

It should be remembered that the industrial strategy sets the vision and hence guides the industrialization process. Without it, investors will lack direction and may not invest in the required “strategic” sectors. Hence, it is an enabler for the strategic objectives of the national development plan to be achieved. Without it, private investment will lack direction and overall economic effectiveness.

INDUSTRIAL POLICY

Industrial policy is the key to realizing the objectives of the industrial strategy. As discussed above, it creates the right environment for investment via satisfying the “GEAR” condition, hence attracting investors, particularly Foreign Direct Investment (FDI). Indeed, most of the problems facing the Sudanese industry stated in SCOI (2011), such as the unregulated export of raw materials, process and requirements for launching new industries, lack of quality control, would have been automatically resolved if there was an effective industrial policy in place. Therefore, it is an enabler to the industrialization process. Consequently, not having one will become a huge inhibitor.

COORDINATION

As discussed above, accountability for the industrial strategy is the responsibility of the whole government: hence, all departments need to be involved. This is essential for the coordination of the different departmental activities. For example, signing regional or international agreements should take into consideration the impact of these agreements on the industrial sector, and corrective actions or measures should be taken in a timely manner to reduce, if not eliminate, the impact. Likewise, coordination between the treasury, local government agencies and the Ministry of Industry is required when dealing with, for example, launching a new industry. It is off-putting and confusing for investors to deal with different departments, some of them central and others provincial, with different responsibilities that are not talking to each other. As good coordination promotes the “investment-attractive” environment required to satisfy investors, the lack of coordination can be a serious inhibitor to the industrialization process.

FINANCE

Finance is another area that can make or break the industrialization process. It is the responsibility of the government to ensure that the central bank keeps enough foreign currency to meet the demand of the industry. Also, there should be clear policies to ease access to finance with reasonable cost to the investor, as well as incentives through taxation policy that encourage investment. Tax holidays, for example, for new investments, particularly those engaged in “strategic” industries, should be guaranteed by law. Likewise, customs on imported raw materials and semi-finished goods should be regulated in favour of local industry. Note that over 20% of Sudanese direct imports belong to the manufacturing sector (Dissman, 2004). Without such encouragement and access to finance, the industrial sector would be disadvantaged. Therefore, legislation to ease the financial burden on industry is an enabler, whereas its lack can be an inhibitor to the industrialization process.

INFRASTRUCTURE

This includes both physical, such as roads, oil, electricity and water, and informational, such as information and communication technologies (ICT). Clearly, availability of such vital services in today's world is important in facilitating businesses and attracting investors, particularly FDI.

SKILL AND INNOVATION

Industry needs staff and technical cadre with specific qualifications and skills. It is therefore important for the education system, including higher education and research centres, to meet this demand and help in raising the pool of skilled people for the industry to tap into. Therefore, in order to meet tough industrial requirements, technical education should pay special attention to all levels of training, from vocational training for skilled labour to middle ranked technicians through to engineers. Training for management and marketing staff is also equally important (Dafa'Alla, 2016). Dafa'Alla *et al.* (2015, 2016) argued that the education system in Sudan is currently dysfunctional, and argued for outlining an “Action Plan” that is capable of repairing the damage and putting the education system, and hence the country, back on track. Industry also has a role to play in raising the specific skills it needs among employees through targeted training courses.

COMMUNICATION

Once the industrial strategy has been formulated and relevant policies effected, it is then important to communicate that widely enough to engage, not just stakeholders, but also the general public to enable the implementation phase. This will ensure the wider understanding and support that the success of the industrial strategy needs. When the government, for example, imposes high customs rates on certain imported goods to encourage a local product, or pays higher rates for electricity and water than industrial users, the public needs to understand the reasoning in order to be content with such policies. Good communication

at all levels will bring understanding, however, only honest and transparent implementation of policies breeds trust.

GOOD GOVERNANCE AND POLITICAL STABILITY

From an economics viewpoint, good governance is required in order to establish the correct path for sustainable development, draw up effective national plans, and legislate for supportive policies and regulations to monitor and guide fair and strategic public and foreign investments. However, regulation is only one of the means by which society ensures that its values and priorities are reflected in the national development plan. It is equally important for investors to see the implementation of these regulations in practice before they have full confidence in the system. This means achieving political stability and creating a true investment-attractive climate (Dafa'Alla, 2016).

Post-independence Sudan, with six political regimes within 60 years, is characterized by political instability. Indeed, a change of political direction by the same regime has become a common feature as governments are changed so frequently, adding to the political instability. For example, the military regime of May 1969–April 1986 moved from the far left at the start, nationalizing all major industries and commercial enterprises as pivotal economic policy, to the far right towards the end of its reign, encouraging free market and liberalizing the economy. Likewise, the current regime has brought with it tough legislation to control foreign currency flow in 1989, only to revoke this policy a few years later. As predictable, this political instability brought with it step economic policy changes in Sudan. This, in turn, brought uncertainty to the market and deterred investors, particularly foreign investors, from investing in the country. Industry is a long term investment and, surely, such uncertainty is a huge inhibitor to the industrialization process. A way of mitigating this risk is by formulating the industrial strategy through consultation as early as the definition stage and finalize it by consensus. This will take it out of the political arena and engage all stakeholders to buy them into the process and guarantee their commitment.

CORRUPTION

Corruption is a huge problem in Africa. Indeed, Transparency International noted that 20 out of the 48 (41.7%) Sub-Saharan countries ranked in its CPI2014 survey scored less than 30 out of 100, a level that, according to Transparency International, indicates “rampant corruption”. Another 23 scored between 30 and 50, indicating that country’s experts and businessmen perceived corruption as a “serious challenge” (Transparency International, 2014). Only four countries, Botswana, Cape Verde, Seychelles and Mauritius, scored more than 50. With a score of 11 out of 100, the Sudan was ranked at 173, the second from bottom, followed by North Korea and Somalia, who, at 174, were the joint least ranked countries in the world; both of them have their own substantial internal problems. Likewise, the more specific Ibrahim Index of African Governance (IIAG) for 2009 ranks Sudan at 49

relative to the 53 countries in Africa, followed by the democratic Republic of Congo, Zimbabwe, Chad and Somalia respectively (Ibrahim, 2009). Similarly, Dafa'Alla (2016) has identified a strong positive correlation between internal conflict, good governance and public satisfaction on the one hand, and corruption and human rights abuses on the other. In fact, some of the problems facing industry in Sudan as summarized in SCOI (2011), such as an inability to implement presidential or ministerial decisions regarding industry, customs and tax credits for investment, and challenging official invoices submitted to officials, are all symptoms of the rampant corruption and lack of good governance in the country. This deters investors and inhibits the industrialization process.

CONCLUSIONS

- The Sudanese economy is in a state of crisis. Its performance is an enigma of failures even with all the potential of the country's resources. To get out of the poverty zone, Sudan needs to adopt an integrated sustainable development plan, in which industry represents the pivotal point;
- The current industrial contribution of 8.5% to the GDP and 1.7% to the employment market is significantly small. A heavy injection of industrialization into the economy is essential in order to improve the trade balance and help the country out of the poverty zone. A competitive manufacturing sector is a key element of this injection;
- There is no effective industrial strategy or industrial policy in Sudan. Political instability and corruption have also added to the lack of trust by investors rendering the industrial sector next to non-existent;
- To embark on a clear industrialization process, Sudan needs to establish a correct path for sustainable development, have good governance, draw effective national plans, and legislate for supportive policies and regulations to monitor and guide fair and strategic public and foreign investments;
- Some specific areas that can enable or inhibit the industrialization process are industrial strategy, industrial policy, coordination between different governmental departments, access to finance, infrastructure, skill and innovation, communication, good governance and political stability, and corruption. These areas are prerequisites for a healthy and effective industrialization process, and therefore require special attention if the industrial sector is contribute fully to the Sudanese economy.

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BIOGRAPHIES

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