An investigation of Economic stakes of industrialization in sub-Saharan Africa adopted by Kenya

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Abstract
Industrialization as a multidimensional subject result from a variety of factors which equally have wide dimensions and as a result requires a multiplicity and sometimes unrelated factors and tools to achieve it. Even though often underestimated and/or relegated to the background, one of such factors that have exerted important impacts on industries especially those found in Sub-Saharan Africa is economic stakes that they adopt. This paper investigated economic stakes of industrialization in sub-Saharan Africa with reference to Kenya. The industrialization orientation of a country depends not only on its industrialization policies but also on a host of other factors including geographical features, economic size and natural resource endowment. For example, in some cases the resistance of Sub-Saharan African policy makers to industrial liberalization is advanced as an explanation of the poor overall economic performance of the continent. However, estimates strongly suggest that countries in Sub-Saharan Africa industrialize as much as expected if account is taken of these factors.

Keywords: Economic stakes, manufacturing, industrialization, Kenya

1. Introduction
According to Dollar, (2011) the fundamental policy challenge facing most developing countries, especially Sub-Saharan Africa, is how to establish a broad and robust industrial base as the key to flourishing development, and how best to control investment and industrialization to this end. Wairimu & Mingaine, (2014) argue that turning away from dependence on the export and production of primary commodities towards industrial products has often been viewed as a means of more effective participation in the international division of labor. Manufactures are expected to offer better prospects for export earnings not only because they allow for a more rapid productivity expansion and growth of production, but also because they hold out the promise of greater price stability even as volumes expand, thereby avoiding the declining terms-of-trade that has frustrated the development efforts of many commodity-dependent economies.

According to Golley, (2014) one area of consensus in recent work on industrialization is that specialization in primary exports is bad for growth. Consequently, the recent industrialization performance of developing countries should be a reason for considerable optimism, since much of the increase in their exports has taken place in manufactures, which today account for more than 70 per cent of their total exports, after hovering around 20 per cent during much of the 1980s and early 1990s. Chang (2012), noted that the share of developing countries in world manufactured exports now exceeds 30%, compared to some 20% in the 1980s. Moreover, many developing countries appear to have succeeded in moving into technology-intensive manufactured exports, which have been among the most rapidly growing products in world industrialization over the past two decades. For some products such as conductors and transistors, office machines and computers, electric power machinery, developing country exports now account for between 45 and 55% of total world exports.

However, Rudiger, (2009) observes that on closer examination, the picture is much more nuanced and less optimistic. Mingaine & Rick, (2013) argue that most countries which shifted from inward-oriented to outward-oriented development through a rapid liberalization of imports and FDI, particularly in
Sub-Saharan Africa, have not shared in the expansion of manufactured exports, but have experienced surges in imports and mounting trade deficits, resulting in increased dependence on private capital inflows for growth. Rudiger, (2009) noted that much of the expansion in manufactured exports of developing countries has concentrated in East Asia and, to a lesser extent, Central America.

According to Sebastian, (2011) this expansion has taken place primarily as a result of the growing participation of these countries in labor-intensive processes in IPNs organized by TNCs seeking low-cost producers for export to world markets. As a result, according to Mingaine & Rick, (2013) the exports of Sub-Saharan African countries, especially Kenya, are still concentrated on products derived essentially from the exploitation of natural resources and the use of unskilled or semi-skilled labor which have limited prospects for productivity growth and lack dynamism in world markets.

According to Mutwiri & Mingaine, (2014) industrial statistics showing a rapid expansion of technology-intensive, high value added exports from Sub-Saharan Africa are misleading because of double counting of industries among these countries. Barry, (2012) observers that some products appear to be produced by Sub-Saharan Africa, but in reality those countries are often involved only in the low-skill, assembly stages of production, using components and technology-intensive parts imported from more advanced countries.

**Purpose of the Study**
This study aims at the following:
- To investigate some of economic stakes affecting industrialization in Sub-Saharan Africa
- To establish the principals and policies adopted by Sub-Saharan Africa in industrialization
- To identify some of the hindrances in economic and industrialization of Sub-Saharan Africa

**Statement of the problem**
More recent studies have focused on the impact of economic stakes on industrialization, capital accumulation and productivity growth in Sub-Saharan Africa. While some of these studies show that a reduction in economic barriers is followed by increases in industrialization and productivity, this is not always associated with an acceleration of growth. A recent study by Wairimu & Mingaine, (2014) found evidence that an increase in the overall industrialization share does have long term benefits on economic growth primarily through productivity increases, but such impact varies over time and across levels of development. According to Golley, (2014) these benefits were greater for poorer countries than for the more advanced economies during the 1970s and 1980s, thereby promoting convergence.

After 1990, as a result of faster liberalization, economic shares of poorer countries increased much more rapidly than those of rich countries, but industrialization generated substantially greater benefits to more advanced countries, leading to income divergence. Therefore, this study aims at investigating those economic stakes of industrialization that increase greater benefits to poorer countries of Sub-Saharan Africa with reference to Kenya.

**Significance of the Study**
The outcomes of this study will be useful to establish extent to which economic stakes have effects on industrialization, with a view of increasing economic benefits to people of Sub-Saharan Africa. Moreover, this study will open gates for more research on the economic stakes affecting industrialization in Sub-Saharan Africa.

2. Literature Review
According Frankel & Romer, (2009) the case for industrialization rests firstly on the proposition that structural transformation, and in particular the development of competitive manufacturing activities, is a necessary condition for sustained and inclusive economic growth rather than simply a side product of this process, and secondly, on the argument that government action is necessary to promote structural transformation. David, (2013) argue those who are sceptical of the benefits of industrialization often adopt this position because they see the economic growth processes in terms of an aggregate production function in which added inputs of various kind (labour, capital) and productivity growth
(technological progress) lead to economy-wide increments to output. Krugman, (2014) observe that those who are sceptical of industrialization do not think economic structure matters, do not see some (leading) sectors as having more propulsive effects on aggregate activity than others and do not conceptualize economic change as a process of creative destruction in which some activities are in decline whilst other new activities are introduced into the economy through the innovative activities of entrepreneurs. From this perspective, industrialization is perceived as irrelevant from the outset because structural transformation is not an integral aspect of a successful growth process. Therefore, a question arises as to why government action is necessary to promote structural transformation and in particular the development of manufacturing capabilities. According Amadu & Mingaine, (2014) in the past, the justification for industrialization in developing countries rested on the need to protect infant industries. However, Rodrik, (2014) argues that in recent years, the economic case for industrialization has focused on either the need to counteract market failures, or more broadly the need to address systemic failures and build capabilities.

2.1 Some of failures affecting industrialization in Sub-Sahara Africa

2.1.1 Capability failures
According to Mingaine & Rick, (2013) lack of resources and competences for firms to adapt to changes in markets and to new organizational concepts and technological capacities - linked to a limitation of the right skills, knowledge and information to achieve an adjustment to new market or industry developments, so that support for structural adaptation of innovation systems from public authorities may be required.

2.1.2 Network failures
According to Rodrik, (2014) network failures relate to a lack of inter-organization cooperation in the development and design of services, goods, market solutions, organizational concepts, best practices, etc. These limit the transfer of knowledge among companies, research centers, public institutions and specialized knowledge-based organizations. Knowledge advances are increasingly more experience-based, and a lack of collaborative-networks may lead to increasing obstacles and to a reduction in the formation of successful interactive actions.

2.1.3 Institutional failures
According to Sebastian, (2011) institutional failures mostly refer to deficiencies in labor laws, legal contractual system, regulatory framework, and intellectual property rights, etc, that lead to a reduction of the economic performance of the productive sector. Some other potential constraint factors, such as those more related to social and cultural values or implicit business interaction non-written patterns or conducts, are also to be taken into consideration.

2.1.4 Infrastructural failures
According to Golley, (2014) the successful economic performance of an industry relies on infrastructural resources that facilitate the development of specific activities or functions. In this respect, infrastructural failures mainly refer to a deficiency of: (i) and transport aspects such as adequate railways, roads and air facilities (Physical infrastructures); and (ii) attributes to the generation and diffusion of knowledge by publicly-supported technical institutes, universities, libraries, regulatory agencies, and databanks, or even government ministries Since most of these infrastructures include very large scale, indivisibilities and very long time horizons of operation, firms are not able to undertake these kinds of investments and public intervention is required to support such developments.

2.2 Economic stakes supporting industrialization

2.2.1 Supporting and challenging entrepreneurs
According to Rodrik, (2014) there is understanding that government support to private firms is essential to control and direct their investments to activities or sectors deemed significant for long term economic growth and development. However, according to Sachs & Warner, (2010) new thinking on
industrialization also recognises that the role of the government is not only to support entrepreneurs. It is also to challenge them to perform better and become more competitive in export markets. The author argues that this implies that any support which businesses get from the government is made restricted of the achievement of certain overall policy goals, such as increased exports or investment. Wairimu & Mingaine, (2014) argue that governments that have had accomplishment in using economic stakes to promote industrialization and enhance competitiveness are those that have been able to enforce discipline and terminate assistance to firms when there is evidence that they are not performing. In this context, there is the need for sunset clauses to ensure that inefficient firms are not supported indefinitely.

2.2.2 Encouraging search, learning and experimentation by governments and private sector
According to Francisco & Rodrik, (2014) an important feature of the new thinking on industrialization is the emphasis on industrialization as a social learning or search process in which the government interacts with the private sector to identify the key constraints facing domestic firms and how to overcome them. Ralph & Baumol, (2010) adds that the idea is governments do not have enough information on the market failures that constrain industrial development and would need to interact with the private sector on an ongoing basis to elicit the relevant information. Mingaine & Rick, (2013) observe that in doing so, however, there is the need for transparency and accountability on the part of the government to ensure that its involvement with the private sector does not encourage rent-seeking and corruption.

According to Wairimu & Mingaine, (2014) the new emphasis on industrialization as a learning process rather than a list of policy instruments differs from the traditional (top-down) mode of implementing industrialization policies which involve the government setting sectorial priorities and using certain policy instruments to support the preferred sectors. Sachs & Warner, (2010) adds that it is oriented to encourage search processes by the private sector so that they discover what can be competitively produced and search to maximize the diffusion of best practices. Unforeseen development trajectories can emerge through this process.

2.2.3 Adopting a mix of horizontal, functional and vertical measures
According to Busse & GroBmann, (2014) industrialization can take three forms: horizontal, vertical and functional. Functional refers to government interventions aimed at improving the operation of markets, in particular factor markets, without favouring activities. Examples would be interventions to prevent collusion and facilitate entry by entrepreneurs into markets, or measures to reduce the transaction costs of doing business. Vertical on the other hand refers to interventions that favour specific sectors, industries or firms. Examples of vertical policy are sector-specific subsidies and giving certain firms or sectors preferential access to capital. In contrast with vertical policy, horizontal is geared towards promoting specific activities across sectors. For example, the provision of support for research and development or finance for innovative activities is a horizontal, as are measures which in a coordinated way seek to promote manufacturing exports. According to Mingaine & Rick, (2013) functional measures, such as improving the general investment climate and upgrading infrastructure, remain an important strand of industrialization. Wairimu & Mingaine, (2014) argue that successful industrialization generally also include horizontal measures, which include the promotion of socially desirable activities across sectors (such as the institutionalization of technological learning routines, or the organizational competences required for exporting), as well as vertical policies which focus on particular products or sectors or clusters of activities. According to Busse & GroBmann, (2014) the horizontal activity of firm formation is particularly important in very low income countries such Sub-Saharan Africa. The relative importance of these different types of measures may also change over time as governance capabilities develop.

2.2.4 Focusing on lifting binding constraints
According to a paper by COMMESA, (2012) the tendency for governments to put in place ambitious industrial development programmes without recognising limits imposed by available resources
generally results in poor development outcomes. A credible and effective industrial policy should target specific constraints facing domestic entrepreneurs. This requires identifying the key binding constraints facing domestic firms as well as possible measures that could be put in place to lift or relax them.

2.2.5 Monitoring, evaluation and performance criteria
According to report by EAC, (2012) because of scarcity of public resources, the risk of political capture, and the need for public legitimacy, it is vital that decisions about sectors and activities to be supported should be made in a transparent manner and also based on a fair amount of research and consultation with firms and other relevant stakeholders. Wairimu & Mingaine, (2014) maintains that once decisions have been made on which activities to support, there should be clear benchmarks or criteria for judging success or failure. For example, the performance of supported firms in export markets could be used as an indicator of success as was the case in the East Asian countries. Karingi & Oulmane, (2013) adds that there is need for continuous monitoring and independent evaluation of the activities of supported firms to ensure that non-performing firms do not continue to receive support. According to Krugman, (2014) this is important because the process of industrialization is a learning-process fraught with errors and mistakes. What is important is that quick and appropriate actions are taken when errors are identified.

2.2.6 Leadership, coordination and accountability

2.2.7 Recognizing domestic political conditions
According to Tekere & Ndlela, (2013) in designing and formulation of industrialization it is important for policymakers to recognise the political circumstances and environment in which it will be implemented because any industrialization program or strategy that does not take into account the political feasibility of proposed policy actions is bound to fail. Mingaine & Rick, (2013) argue that the main reason industrialization was successful in East Asia but failed in Africa has to do with differences in the political equilibrium of these societies. Promoting industrialisation is not only about economic policies, it is also about the politics of policy. According to Meyn, (2014) the political institutions, power structure and environment prevalent in a country affect the set of feasible policy actions. Consequently, Mingaine, (2013) adds that whether or not economic stakes succeeds or fails in promoting industrialisation in a country depends in part on the degree to which the incentives of political leaders are aligned with those of society.

2.2.8 Recognizing country-heterogeneity
According to Rodrik, (2014) industrialization has to be tailored to the needs and challenges facing each country. Francisco & Rodrik, (2014) argue that one-size-fits-all approach will be counterproductive and unlikely to achieve desirable outcomes. Consequently, according to Mingaine & Rick, (2013) there is need for country and context-specific interventions and policymakers should be mindful of this fact in the design and implementation of industrialization. David, (2013) observe that copying the policies and strategies used by other countries without regard for the differences in structure, political situation, global environment and endowments will lead to poor outcomes. According to Frankel & Romer, (2009) the content of economic stakes needs to be calibrated to the industrialisation path chosen, resource requirements and availability, geography, and domestic political realities.
2.3 Conceptual framework

Conceptual framework refers to how a researcher conceptualizes relationship between variables in a study and shows them graphically or diagrammatically. It shows independent variables and dependent variables and how they are related or influences one another Mugenda, (2013). This study adopted a conceptual framework vital in identifying economic stakes important in accelerating industrialization. The framework identifies failures to industrialization as; capability failures, network failure, institutional failures and infrastructure failures. Economic stakes important for effective industrialization are identified as; supporting and challenging entrepreneurs, encouraging search, learning and experimentation by governments and private sector, adopting a mix of horizontal, functional and vertical measures, focusing on lifting binding constraints, monitoring, evaluation and performance criteria, leadership, coordination and accountability, recognizing domestic political conditions and recognizing country-heterogeneity as show by figure 1.

![Economic stakes of industrialization](image1)

**Figure 1. Economic stakes of industrialization**

3. Methodology

Orodho, (2008) defines research methodology as the framework within which facts are placed so that meaning can be extracted from them. It gives the direction that a researcher must follow in order to get the answers to issues with which he or she is concerned. This study employed a literature review methodology. According to Mugenda, (2003) literature review methodology is useful not only in securing evidence concerning an existing situation or current conditions but also identifies standards or norms with which to compare present conditions in order to plan the next step. Mugenda, (2003) notes that literature review methodology is intended to produce statistical information about aspects of study that interest policy makers and researchers.

4. Rationale of the methodology used in the study

A review of the literature was adapted for this study. Review of the Literature was appropriate for the study since as Mingaine, (2013) observed, ‘Literature review was conducted to determine the status
given and were concerned with the gathering of facts rather than the manipulation of variables’. In the study the research was interested in getting facts from literature on the economic stakes affecting industrialization.

Furthermore, according to Mingaine, (2013) a literature review was useful in that it not only secures evidence concerning existing situations or current conditions but also identifies standards or norms with which to compare present conditions in order to plan the next step. Studies were identified through an electronic search of the databases such as Science Direct, Web of Science, library files and reference list. In addition, the literature review was extended to the Internet, by use of Google, Yahoo, Baidu, and other internet search engines.

5. Discussions, Summaries and Recommendations
This paper has shown that success of industrialization often depends on the presence of high-level political support and economic restructuring needs a political advocate who has the ear of the president or prime minister and can stand as equals with other members of the economic cabinet. This serves several purposes. First, it raises the profile of industrialization and enables problems of economic transformation to receive a hearing at the highest levels of the government. Second, it provides coordination, oversight and monitoring for the bureaucrats and the agencies entrusted with carrying out industrialization policies. If the bureaucrats are to have autonomy, it is critical that their performance be systematically monitored by such a high-level official. Third, it identifies a clear political principal as accountable for the consequences of industrialization. This political advocate could be a cabinet-level minister, the vice-president (in presidential systems), or even the president himself (as was the case in South Korea under President Park).

Industrialization needs to be viewed by society at large as part of a growth strategy that is geared to expand opportunities for all, rather than as giveaways to already privileged sections of the economy. The operation of the deliberation/coordination councils should be published and the decisions reached announced. There should be full accounting of public resources spent in support of new activities. An important constraint on effective industrialization in Sub-Sahara Africa is weaknesses in governance capacities. Experience from East Asia has suggested two critical institutional ingredients for success. The first was the existence of an effective, dedicated and capable bureaucracy. The second was that state institutions operated in a situation of "embedded autonomy" in the sense that they were at the same time closely collaborating with the private sector to formulate and implement policy but at the same time they were not influenced to favour particular interests. In Sub-Sahara Africa, state capacities for development policy formulation and implementation have been severely eroded and after years of neglect ministries of industry are often weak. Against this background some argue that however desirable industrialization is in Sub-Sahara Africa, it will only lead to huge societal costs owing to government failure. Whilst it is important to be cognizant of the governance challenge of industrialization, it is too pessimistic to argue that it is impossible. Firstly, it is clear from the East Asian success that there was a deliberate strategy to build up a few strategically important agencies rather than to improve government effectiveness across the broad all at once. Also the capabilities of bureaucracies were built up over time, with an emphasis on policy learning. This implies that an important feature of the elaboration of industrialization in Sub-Sahara Africa should be the adoption of policies to enhance government capabilities in managing the industrialization process. Also since most of the strategies and measures discussed imply some form of government intervention, there is the need to take into account the capabilities of the government in making decisions on the scope of intervention that should be put in place in an economy. In this regard, Sub-Sahara African governments should not try to attempt the kind of pervasive interventions used in the past. They should be pragmatic and give priority to improving government capabilities for industrial diagnosis and strategy design as well as policy formulation, implementation, monitoring and evaluation.

Industrialization requires mobilisation of resources to finance public investments in key priority areas, particularly infrastructure, education, and technology acquisition. It also requires private investments in the industrial sector. In this regard, the degree to which Sub-Sahara African countries are successful in achieving their industrial development objectives will depend in part on the extent to which they are

able to mobilise the required resources and channel them into productive investments in priority sectors. Consequently, Sub-Saharan African countries should pay attention to both resource allocation and resource mobilisation issues in the design and implementation of policies to support their industrial development programmes. In principle, Sub-Saharan African countries could finance their industrial development programmes through various sources:

- Domestic savings/domestic resource mobilization;
- Borrowing from banks and finance institutions;
- Foreign direct investment (FDI);
- Harnessing south-south cooperation as a potential source of development finance;
- Encouraging traditional donors to direct more official development assistance (ODA) towards promoting industrial development in the region

However, given the heterogeneity of Sub-Saharan African countries, there will be differences across countries in the degree of reliance on each of these potential sources of finance.

Many Sub-Saharan African countries rely on trade taxes as a major source of government revenue. For example Kenya trade taxes accounted for more than 40% of fiscal revenues in 2012. Whether it is better for the government to support particular activities (selective) or a wide range of related activities (functional) will depend on the specific economic context. However, if Sub-Saharan African government want to steer productive activities in a particular direction, they must decide on a specific way forward. Selectivity of course raises difficult issues which are often summarized with the advice that governments are wrong "to pick winners". But Sub-Saharan African countries face serious technical, capacity and time constraints. Thus it is impossible for them to tackle all economic constraints in all industries simultaneously.

References


