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Active Industrial Policy for Accelerating Structural Change and Industrialization-led Transformation

By

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1.0 INTRODUCTION

While economic growth in quantitative terms alone is not a panacea for eradicating poverty in its multidimensional forms, it is still central to that process and for promoting sustained social development. This assertion is affirmed in the literature on the discourse on the link between growth and poverty reduction. Rodrik (2007) argues that economic growth is the most powerful instrument for reducing poverty. Ndulu, Chakraborti, Lijane, Ramachandran, and Woilgin (2007), examines the growth trajectory in Africa and concludes that poverty in Africa is essentially a growth challenge, noting an increase in absolute poverty from 36% to 50% between 1970 and 2000., which was accompanied by a much slower growth in per capita income of 0.5% compared to 2.5% for other developing countries during the same period. Page (2006) shows that in the countries where steady growth has occurred, incomes of the poor have also increased on average. This trend is also exhibited by the IMF and World Bank data which shows that, over the last ten years, for the six countries have had average growth rates above 9%[1], the corresponding poverty reductions are impressive. These countries include Qartar, Turkmenistan, Ethiopia, Azerbaijan, China and Mongolia, in that order. China has managed to lift approximately half a billion out of poverty, with current poverty headcount of a single digit. The World Bank database shows that levels of people living below $1.25 a day in these countries were below 10%, except in Ethiopia and Turkmenistan, but the levels have declined steeply in recent years in which data is available.

While there are exceptions to the rule, countries with higher per capita income growth tend to have lower levels of poverty. Exceptions to this rule occur in situations where a modest per capita income growth produces significant poverty reduction or in situations where very high per capita income growth does not translate to significant poverty reduction. Such outcomes are dictated by the structure of the economy, its pattern of growth, and the nature of income distribution. It is these factors that underlie the debate around the process of pro-poor growth and inclusive socioeconomic transformation, and on the role of state and other non-market institutions in that process. In Tanzania, structural change has occurred over the past two decades, but without effective transformation. As Wuyts and Kilama (2014) concludes, the distribution of GDP across sectors have shifted away from agriculture to industry and services, but labour moved in the opposite direction, with divergence in productivity growth between and within

[1] IMF (2015)

productive sectors. Increasing informalization in both and rural and urban non-farm activities may lead to further divergences in productivity and limit the benefits of economic growth and transformation.

The issue at stake in Tanzania, therefore, is how to maintain the growth momentum while ensuring effective transformation to raise factor productivity, to create competitive advantages, and to generate productive jobs and earnings growth. The role of state in this process must be more proactive, a subject of this paper contends. The paper is intended to contribute to the debate on the problems of economic development in developing countries, and in particular, the growth prospects in Tanzania and its quest for industrialization-led socioeconomic transformation.

This paper is organized as follows: section two discusses the links between industrial policy and the institutional dynamics of growth. Section three presents some examples of successful state initiatives and application of industrial policy in accelerating economic development. Section four outlines some factors that favour application of active industrial policy in Tanzania, and section five discusses implications for such a policy stance in the policy making process, institutional development, and challenges ahead. The last section contains concluding remarks.

2.0 INDUSTRIAL POLICY, ECONOMIC GROWTH, AND INSTITUTIONS

The pattern of economic development in the world today suggests that theories that promote the supremacy of the neoclassical notion of market superiority in the allocation of resources, in determination of appropriate growth path and in the distribution of income are not entirely correct. The existence of a multitude of imperfections and structural weaknesses that characterize economies in developing countries, especially those in SSA, necessitates the need for active policy interventions and strong institutions to steer economies towards the desired growth path. There is a further challenge to growth, in addition to market imperfection and weakness of institutions. This relates to the globalized character of production and markets today, which demands a more dynamic and novel system of production consistent with the dynamics of global markets. This challenge cannot be overcome by relying on markets alone, without selective and active actions of the state.

A wide array of literature and empirical work vindicates this position, recognizing that much of the growth realized by many countries, including OECD countries has been mediated by some form of active policy interventions in varying degrees. Policy and other forms of state intervention are necessary to respond to various structural and institutional barriers that limit the functioning of markets in allocating resources in the most optimal condition. As Rodrik (2007) and Hausmann, Rodrik, and Valesco (2005) suggest, growth policies need to be approached in ways that are contingent to the economic environment, taking into account the widespread imperfections and rampant distortions that prevents an economy from attaining possible productivity frontier. Understanding the impossibility of an economy to address all distortions and constraints to growth at once, they emphasize on focusing at distortions whose removal would make largest contributions to alleviate the constraints to growth.

Indeed, pure markets in the neoclassical sense of rational choices of a "rational man" does not work in situations abound with significant distortions and imperfections. As such, limiting the roles of the state to regulatory and facilitative alone cannot create conditions favourable for fast economic growth and transformation for inclusive development, thus warranting an active industrial policy by the state. The definition and understanding of the term "industrial policy" varies, but generally converges to the use of state instruments to address specific constraints to rapid economic growth and transformation desired by the state. Burton (1983) defined industrial policy as government intervention in the process of economic evolution. Westphal (2005) defined industrial policy as selective intervention using instruments of public policy. Rodrik (2007) applies the term to restructuring policies that favours more dynamic activities, and Schmitz (2007) sees industrial policy as set of actions concerned with influencing decisions of entrepreneurs. Adapting to this convergence of definitions, industrial policy is taken to mean a set of objectively selected interventions by the state, embodying all sectors whose activities are capable of generating and sustaining productivity, competitiveness, and growth. These sectors include manufacturing, agriculture, and services, such as transport and tourism. The distinguishing feature of "industrial policy" from "arbitrary state intervention" or "central planning per se" is its complementarity rather than distortionary effect on allocative efficiency of market forces. Mkandawire refers to the process of active state engagement as one of being a "developmental state". He states:

> ".recognition of episodes and possibilities of failure leads us to a definition of a development state as one whose ideological underpinnings are developmental and one that seriously attempts to deploy its administrative

> and political resources to the task of economic development." (Mkandawire 2001, pp 291)

The question then remain on active industrial policy can be expected to mediate market failures and institutional weakness, and above all, stimulate innovation required for success in the globalized economic environment, without creating results that have led the opponents to vilify it. Obviously, for an economy to be vibrant and resilient, structural constraints must be overcome, and economies must shift away from dependency on comparative advantages to dependency on competitive advantages. This shift entails a series of innovative measures that can ignite growth and sustain it. These outcomes are only possible with a correct policy response; an industrial policy set to continuously complement and coordinate the private sector in the process of creating value, and generating and appropriating rents.[2]

One clear choice when implementing an active industrial policy is context specificity. Rodrik (2007), for example, suggests a sectoral focus with an effective management of risks through information, coordination, and technology management, mediated by industrial policy for better results. He draws evidence from experiences in South East Asia and Latin America that increased domestic productivity and gained competitive advantages through self-discovery, made possible by the presence of institutions with the ability to put in place sound industrial policy.

Apparently, the soundness of growth policies must be determined by their outcomes. Countries in South Eastern Asia, Latin America, and Africa pursued different policies, and the results have varied accordingly. Within Africa, different countries pursued various policies, also producing differing growth outcomes. Recent waves of polices in SSA have focused on attracting foreign direct investments through incentives and export processing zones, but these have been criticized for their failure to stimulate innovation and technological externalities. Rodrik (2007) sees such policies as serving to transfer income from the poor country taxpayers to the pockets of shareholders in rich countries without compensating benefits. Some SSA states have continued to exhort investors to invest in national "backbone" sectors, notably in agriculture, without actively dealing with poor infrastructure and thin financial markets. Thus

[2] The concept of rent as used here is drawn from Kaplinsky's (2005) extension of this neoclassical concept based on Ricardian theory of rent, but recognizes its dynamic nature, the ability of economic agents to create rent by creating barriers through building some unique capabilities, or by taking advantage of already available set of resources.

coordination failures and the inherent problem of information externalities, continues to inhibit innovation and investment, even if profitable opportunities are seen by entrepreneurs. This means that any successful industrial policy must be preceded by a detailed, localized diagnostics of growth drivers and they key constraints.

The integration into the global economy is inevitable, and this means that countries and economic agents within them have to figure out how to maximize the benefits of global growth, rather than attempt to and options can disengage from it. Without a well informed and coordinated process, however, both economic agents and states will be relegated and marginalized, and getting out of the bottom will be a very daunting challenge. What this implies is that industrial policy must be adapted in such as way that competitiveness and growth are induced within its global economic context on one hand, but carry within it, local demands for inclusive growth and poverty reduction on the other.

Schmitz (2007) provides a useful way of assessing the appropriate industrial policy and actions under different constellations of challenge and policy support types on one hand, and of technology and marketing gaps on the other. He use the former set of constellations to distinguish active industrial policy from the classical import substitution industrial strategy and the "Washington Consensus", while the latter set gives some pointers on how to choose appropriate industrial policies. Active industrial policy regime requires high levels of *both challenge* and *support* to influence behaviors of economic agents, principally entrepreneurs, and the private sector in general. However, the degree, character, and length of the support are, in turn, dependent on the different constellations of technology and market requirements, across and within sectors. Stronger and probably longer periods of support are necessary where both technology and marketing gaps are wider, and the reverse is true. The levels of technology diffusion and dependency on largely undiversified export market in particular points to the need for stronger and longer periods of industrial policy to drive industrialization process in Tanzania.

Active state engagement through industrial policy, however, requires strong institutions to mediate it, meaning to inform decisions on the kind of policy to be pursued, priority sectors and activities, duration, and implementation framework. Both Ndulu *et al* (2007) and Rodrik (2007) shows how most successful growth performers from South East Asia and Latin America engendered positive growth results by pursuing unorthodox policies led state institutions, actively supporting new economic activities. Chang (1993) and Mkandawire (2001) similarly cite

strong state institutions behind successful growth in the tigers of East Asia. Rweyemamu (1973), while inclined towards socialist planning for industrialization, emphasized entailed the necessity of Tanzania to select desired path and to put in place appropriate institutional approach of development policy:

> ".specification of desirable pattern of industry to be established, and delineation of the institutional structure and *premium mobile* required to reshape the requisite pattern of industry." (Rweyemamu 1973, pp 78)[3]

Rodrik succinctly points to the indispensability of non-market institutions that enhances market performance, when he concludes,

> "…institutions are needed because markets are not self-creating, self-regulating, self-stabilizing, or self-legitimizing" (Rodrik 2007, pp 154)

He maintains that institutions and policy are needed to support productive dynamism, including continuous diversification into new areas of tradables, which cannot be generated by market forces alone.

Institutions are defined more broadly to embody a set of humanly devised behavioral and established social rules that govern and shape interactions of human being, which are both formal and informal in nature (Hodgson, 1988, 2006; Rodrik 2007). Drawing from this definition, one can argue that, in developing economies such as Tanzania and many in SSA, the complexity of historical transformations through policy trajectories combined with the general unsuccessful outcomes, widespread economic insecurity, and weaknesses in institutional structure suggests that the institutional building process *must precede* or i implemented side by side *but much faster* than the attempt to implement active industrial policy. This argument would seem to disagree with the views that some policy actions can suffice to induce economic agents to act in line with economic principles. Indeed, this is the case, because the historical condition in SSA, combined with the aggressive nature of the globalization process demands speed and coordination within small economies.

Often, formal and informal institutions co-exist and reinforce each other. While the state has a more direct role to play in creating formal institutions, their shape of the informal institutions depends to a greater extent on the environment created by the former ones. For example, the long presence of strong regulations

[3] Primum mobile is a Latin word meaning "first moved". No doubt, Rweyemamu considered strong institutional foundation as primary enabler for desirable pattern of industrialization

and stable legal regime creates an environment where members of the society trust each other, bringing with it a broader informal institutional context and social capital needed for interaction among economic agents, which is an essential ingredient for innovation and growth. Social capital and trust are essential in developing countries, where incidences of rent seeking behaviors and widespread presence of moral hazards have self-vilified the roles of state in economic policy; in addition to unclear systems of property rights are not clear; and rare or unsustainable political-institutions for benevolent and democratic governance. But such institutions are needed to ignite social capital formation where it lacks, and to sustain it where it already exists.

Obviously, the success of active industrial policy in promoting pro-poor growth depends, therefore, on the dynamism of formal and informal institutions at work, both in context and in time. It is the transformative nature of policy and governance institutions that will make growth-inducing policies truly work. The development of formal institutions, or strengthening of those that exists, is also idiosyncratic in principle, because the institutional needs must be determined by the nature of targeted market failures to be corrected; the character of informal social context; the target sectors, activities in question; political and administrative constraints; and the nature of industrial policy themselves. Wuyts sums up this nexus of growth and institutions, thus:

> ".what matters, therefore, is not just the analysis of the arithmetic of growth, but also of the structural features and changes in institutional arrangements that accompany and/or make possible the process of growth. All too often, economic policy makers tend to focus solely on the growth rate, thus eagerly awaiting the publication of last year's growth rate to see whether the economy is still 'on target', without paying much attention to the nature of structural transformations and institutional (re-) arrangements that foster, hinder or result from the process of growth.." (Wuyts 2008, pp 20)

The implementation of sound industrial policy therefore requires the presence of strong non-market institutions, because markets cannot efficiently create, regulate, stabilize, and legitimize themselves. Because of low productivity, and structural and technological barriers in Tanzania, high growth is unlikely to occur unless economic agents are provided with enlarged space for innovating, taking risks, and focused on activities that give them competitive advantages in the long run.

3.0 THE PURSUIT OF AN ACTIVE INDUSTRIAL POLICY IS NOT A SIN

While the mainstream notion of free markets and allocation of resources dictated by choices of a “rational man” has dominated the domain of economic growth accounting and development policy around the world, the use of non-conventional development strategies is not uncommon even in the countries believed to strong proponents of the conventional neoclassical economics. Different tools and approaches of industrial policy have been applied in different countries. When applied in the developed world, they are often been cited as temporary measures to correct market failures caused by sudden changes in the trade patterns and anarchy.

The United States, a strong proponent of neoclassical of free markets and free trade environment has a long history of implementing taxes, tariffs, and trade laws that protected its domestic economy from dumping and supported domestic firms. These selective policy regimes influence the forms of domestic consumption and production, and sometimes within a bloc through negotiated trade and technology transfer deals. While debates continue about bloc trade deals such as the Northern Atlantic Free Trade (NAFTA), it is likely that there exports trade between United States to Mexico, for example, will be unbalanced due to the differences in technological advancement, differences in consumer preference, and also due to the existence of various forms of non-tariff barriers.

In addition to the tariffs and trade regimes, Federal, State and Local authorities sometimes provide large grants to support aging industries and to encourage new ones. The Defense department spends billions of US dollars to help firms to invest in new high tech ventures and innovation. Although these investments are intended for military technologies, massive economic benefits have occurred because such technological innovations tend to spill over to improve technological breakthrough for firms in the civilian market place. According to Pianta (1988), for example, in 1986, the United States Strategic Defense Initiative’s contracts to private firms were worth $5.4 billion, which represented 73% of total contracts. These firms included General Electric and Boeing, one of the largest automobile and aircraft makers, respectively.

The Economic Stimulus Act of 2008 in the United States, though viewed as the Keynesian framework for dealing with recessions by stimulating aggregate demand, provided selective incentives for business investments akin to some form of industrial policy. Under the new legislation, firms were allowed to buy new

equipment during the year and deduct additional 50% of their cost of investment from taxable income. Small businesses were also able to immediately deduct $250,000 from their taxable incomes. The various constructs of government interventions applied in the United States therefore, by definition, reflected some form of industrial policy at work alongside the markets. At best, one can refer them as “silent” industrial policy.

Schmitz and Musyck (1994), studied industrial districts in Italy, Germany, Denmark, and Belgium and documented a phenomenon success in the small firm industrial districts’ international competitiveness and high employment standards. Industrial districts were defined in line with these attributes:

> “.geographical proximity, sectoral specialization, pre-dominance of small-medium sized firms, close interfirm collaboration, interfirm competition based on innovation rather than lowering wages, a socio-cultural identity which facilitates trust relations between firms and between employers and skilled workers, active self-help organizations, and active regional and municipal government which strengthens the innovative capacity of local industry.” (Schmitz and Musyck 1994, pp 890)

The last three of these attributes are important elements of industrial policy and institutional support required for innovation and transformation discussed in the preceding section.

Important distinctive features of industrial districts pointed in Schmitz and Musyck study were a combination of clusters of indigenous firms; operating mainly in the traditional sectors; and successful competition in international markets. Various forms of industrial policy assisted firms in these industrial districts to adapt new technologies, develop new or better products, and to react speedily to market changes. One of the important tools included innovative credit arrangements, including locally developed systems of guarantees, which aided small firms to access long term- loans for investment and for working capital. Another important tool was active development of human resources in line with the technical and market requirements. They write:

> “ …proactive measures in investing in human resources are a general feature of the successful industrial districts. Key features of the training programs are that they are very practically oriented and codetermined by the private sector.” (Ibid, pp 894)

Thus, training and human resource development by public and private institutions was geared towards the needs of local industry and innovative needs in particular. They noted that, active policy of training was pursued for both workers and entrepreneurs, with the private sector playing an important role in influencing and monitoring the contents of the training schemes, ensuring that what was offered was consistent to the needs of the local enterprise needs. However, it is important to note that these achievements were made possible through clustering, in terms of geographical and sectoral concentration. Provision of "real services" is also another support, which according to the Schmitz and Musyck, was some kind of innovation policy. Real services involved supplying of crucial services such as information on standards enforced by law in various countries for products produced in industrial districts, facilities for testing quality of raw materials, and related critical information that is difficult to source by each producer individually. They drew important lesson for application of such a policy intervention:

> "It seems that the successful interventions were carried out by the private sector institutions or were joint private/public sector initiatives. Public bodies in themselves can become the catalyst in support programs for small-scale industry or can make important financial and infrastructural contributions." (Ibid, pp 900)

An often celebrated economic success mediated by active industrial policy is South Korea. Although South Korea undertook a series of policy reforms in the mid-1960s, it did apply extensive state intervention and strategic decisions, which Chang (1993) referred to as "market-preserving state intervention". For example, while trade was liberalized, the state emphasized on imports that would stimulate local industrialization. According to Chang, the state heavily controlled the importation of machinery to promote domestic machinery industry, seen to be vital for a well-integrated economy. Korea's pursuit for investment in heavy and chemical industries, at times included coercive inducements to the private sector to take more risks. One example of successful payoffs was the emergence of shipbuilding industry among those largest in the world. It resulted from the Hyundai's response from state requirements to invest in ship building.

In addition to exhortation of top leaders to the private sector to undertake risky investments, South Korean government undertook strategic investment management, by implementing a macroeconomic policy that aimed at stimulating investment expenditure as opposed to consumption expenditure. While this approach was considered necessary, it was also seen to be insufficient to bring

in the desired industrial structure fast enough, and therefore supplementary measures were undertaken as Chang cites:

> "it was explicitly stated that the market mechanism cannot be entirely trusted to increase competitive advantage of industries, and therefore sectors with high productivity growth potential had to be identified by the state and designated as promised strategic industries, or priority sectors, and given custom-designed financial, technical, and administrative support." (Chang 1993, pp 139)

The economies of scale are necessary for efficient production when capital requirements are large, as with the case in many heavy industries. The government of South Korea encouraged and sometime instructed firms to build plants of efficient scales, with export targets given to minimize low capacity utilization. Such firms were closely monitored by the government, and according to Chang, the state tended to initiate or subsidize mergers for those firms whose sizes were deemed to be smaller than the minimum efficient scale.

Another critical feature of industrial policy in South Korea was its ability to utilize Foreign Direct Investment (FDI) for effective upgrading of domestic industries and to expand local ownership. The government imposed restrictions on priority industries, infant industries, industries with high contents of imported raw materials, consumer goods industries, and selected others; and in addition, foreign majority ownerships were rarely allowed. The industrial policy of South Korea was also used to spur innovation by ensuring that firms willing to undertake risks were able to appropriate profits sufficient to cover high costs of technology importation, adoption, and development, and approach akin to Schumpeter (1961) notion of entrepreneurial profits, or "innovation rents", a term that has come to be widely used by renowned economists (See for example, Kaplinky 2005; Rodrik 2007). Thus, the state had to provide guarantee of some forms to innovators, through some forms of tariff protection, subsidies, and preferential loans.

While industrial policy has been criticized for its potential to create inefficient firms, either because of negative incentives generated from excessive protection or from subsidies, South Korea applied a combination of support with strong monitoring, which Hausman and Rodrik (2003) referred to "carrot-and stick" strategy. Korea demonstrated its institutional ability to apply this strategy, because when firms lagged behind performance targets, support was withdrawn This was not always an easy process, and involved continuous bargaining and

conflict between the state and the private sector, sometimes involving forceful measures (Chang,1993). The cynics of active industrial policy tends to argue that rents created through government support creates powerful forces, who in the end, lobby to keep these rents away from the discipline of the market. But in South Korea, even the politically powerful conglomerates, *chaebols,* were not really immune to state disciplines, and were subjected to state initiated re-organizations such as mergers and liquidations sought to enhance efficiency.

There are numerous other success stories of innovation and economic growth that resulted from industrial policy in a variety of forms. Kaplinky (2000) cites the United Kingdom's Enterprise Initiative Programme during the 1980s that used various policy instruments to support the repositioning of the corporate sector within value chain to derive a greater share of gains; and the government's support for the enhancement of design skills in the clothing and footwear industry in Spain, and in the footwear industry in Brazil. China attracted FDI selectively, mainly in technology intensive and the global market dependent sectors, such as the high tech industries in semiconductors, computers, and electronics. Heavy presence of Multi-National Corporations (MNCs) in the hi-tech sector such as Toshiba, Sony, and major PC makers points to the success of these strategies. Mediated by active role of state that encouraged combinations of licensing arrangements, direct support, and guarantees to domestic investments to create technological capability, countries in South East Asia, namely Malaysia, Taiwan, and Singapore substantially increased their share of manufactured exports.

These examples have attempted to show that, despite its criticism, industrial policy is pervasive across countries at various stages of development and not a sin after all. When wisely and ably applied, industrial policy engenders positive results much faster than over-reliance on markets alone.

4.0 WHY TANZANIA NEEDS AN ACTIVE INDUSTRIAL POLICY

The application of active industrial policy in Tanzania is not new. As Wuyts (2008) points out:

> "..in fact, in the Tanzanian context the idea of industrial policy goes back a long way: at least as far back as the seminal work by Justinian Rweyemamu (1973) on 'underdevelopment and industrialization' in Tanzania, which raised the question of the nature of industrialization in Tanzania and thus fuelled the debates on industrial policies for economic

> growth in the 1970s. These debates and the policies that sprang from them subsequently gave rise to the (extremely) short-lived phase of the basic industrialization strategy, which was implemented from the mid-1970s onwards and came to an abrupt halt in the crisis of the early 1980s." (Wuyts 2008, pp 16)

This point signifies important distinction between industrial policy implemented in Tanzania then, with industrial policy applied in successful economies, as indicated in the examples cited earlier. The practice in Tanzania reflected the combination of *support* with little or no *challenges* such as strict performance targets in outputs and exports. Even where such challenges existed, monitoring was poor, linkages to strategic markets were weak, and provided low incentives for innovation. Reviews of the state led import substitution industrialization and accumulation during the 1970s and the 1980s reveals some policy implementation bias and snags that led to severe capacity underutilization and inefficiency in the manufacturing sector. Wangwe (1983), for example, shows that the influence of both foreign aid and incentives within internal institutions biased the allocation of foreign exchange in favour of manufacturing capacity expansion at the expense of capacity utilization. Wuyts (1994) argued that the state-led and aid-driven import industrialization strategy changed the balance between food and cash crops in favour of the former, leading to the fall in output of export that constrained the supply of foreign exchange needed for imports of consumer goods and intermediate goods for the manufacturing industries.

Tanzania implemented a number of structural and macro-economic reforms during the 1990s and 2000s, which focused mainly on related correcting "sins of commission", or failures of public policy (Ndulu *et al*.2007); also dubbed the "Washington consensus" (Rodrik , 2007). These policy reforms were essential but not sufficient, in their own, to ignite and sustain the much needed high rates of economic growth and desired socioeconomic transformation. Additional policy actions are necessary. There are recent efforts that may seem to point towards this recognition, such as the Government's establishment of the Export Processing Zones Authority, the Five year Development Plan aiming at unleashing growth potentials, the SAGCOT initiative aiming at transforming agriculture, and other sector-based initiatives. These policy initiatives notwithstanding, a number of factors suggest that much more selective policy and interventions in the framework of an active industrial policy are needed to ensure that the objectives of the second Five Year Development Plan and the aspirations of the vision 2025 are achieved. These are:

First, the persistence of market failures fueled by considerable imperfections in factor, products, and financial markets. The neoclassical notion of allocative efficiency through price and related market forces is hard to see in practice, and much more difficult in developing economies such as Tanzania, where information is much more asymmetric. John Burton, although disagrees with application of industrial policy for variety of reasons, he points to symmetric information as important element of successful markets. Its absence vindicates why industrial policy is necessary as he observes:

> " the market is visualized as a method of allocating scarce means among diverse ends when all relevant data are known by all market participants, markets in real life are to be understood as a means of coping with our ignorance in a world of pervasive uncertainty." (Burton 1993, pp 15)

It is clear that, markets alone are insufficient to ensure that economic agents are well informed, and that they act in the best interest of achieving allocative efficiency. In essence, as Burton also acknowledges, the government could implement "accelerative" industrial policy to stimulate the private sector to invest in new ventures:

> "for development to occur, new enterprises must come into being and tested in the market-place; new technology must be tried out and if successful, permeate the economy; new industries must spring up to replace those in decline. The use of Government subsidies to promote enterprise birth and business mutation is based on the premise that government can act as the institutional equivalent of an incubator-that certain "seedling" enterprises or industries be selected out and given especially favourable environmental conditions." (Ibid, pp 33)

The present condition under which Tanzanian firms operates, including the high costs of doing business and barriers of market imperfections, therefore, calls for a more active role of government to stimulate new and particularly high value activities. The costs associated with its absence, errors of omission are likely to be higher in terms of delayed investments and economic growth.

Second, rapid economic growth in the 21st century is associated with major advancements in technology. This creates significant challenge for Tanzania, because innovation, considered critical in spurring economic growth would need impetus from both policy actions and financial resources. National Innovation Systems in most developing countries has failed to produce sufficient momentum

for innovation to occur. The assumption of linear movement of knowledge from research, development, and extension, through rather static and exogenous social and economic institutions have proved to be wrong. Innovation and change is embedded in the institutional dynamism in research and knowledge transmission systems that reach actors in the innovative value chains more quickly and efficiently. In Tanzania, skill intensity among producers and workers must be stepped up vigorously. Kaplinky's view of human resource strategy to support upgrading of production and integration into global value chains is very telling:

> " … this increasingly requires not just a basic level of numeracy and literacy, but often also a depth of education. In most firms producing for global markets, therefore, even in low income countries such as China and India, new recruits to the labour forces are required to have some years of secondary education as a minimum requirement." (Kaplinsky, 2005, pp 94)

The implication for Tanzania is not only to raise its secondary school enrollment ratios and literacy, but also to actively engage in medium and long term strategy for human resource development that is consistent with the long term growth and transformation strategy. This includes efforts to develop technical skills required locally for adoption of technology and organizational skills to utilize in the strategic sectors of growth. Industrial policy has an important role to play in stimulating innovation in Tanzania. Even though the private sector's role is crucial, there is need for policy response not only in skill formation, but also to deal with other barriers to innovation, such as information and coordination externalities. Tools such as strong incentives to the private sector for skill creation, effective subsidy, and cluster approach in coordinating investment and production decisions for the nascent private sector are crucial for reducing effects of such externalities. A call for the government's support to stimulate innovation for industrialization was also made in early 1970s when Rweyemamu wrote:

> "..the government must institute incentive reward schemes for inventions, as well as patent protection for local adaptations of foreign designs…there must be a campaign to stimulate people to write down their innovations, inventions, etc, which will be distributed throughout the country." (Rweyemamu 1973, pp187)

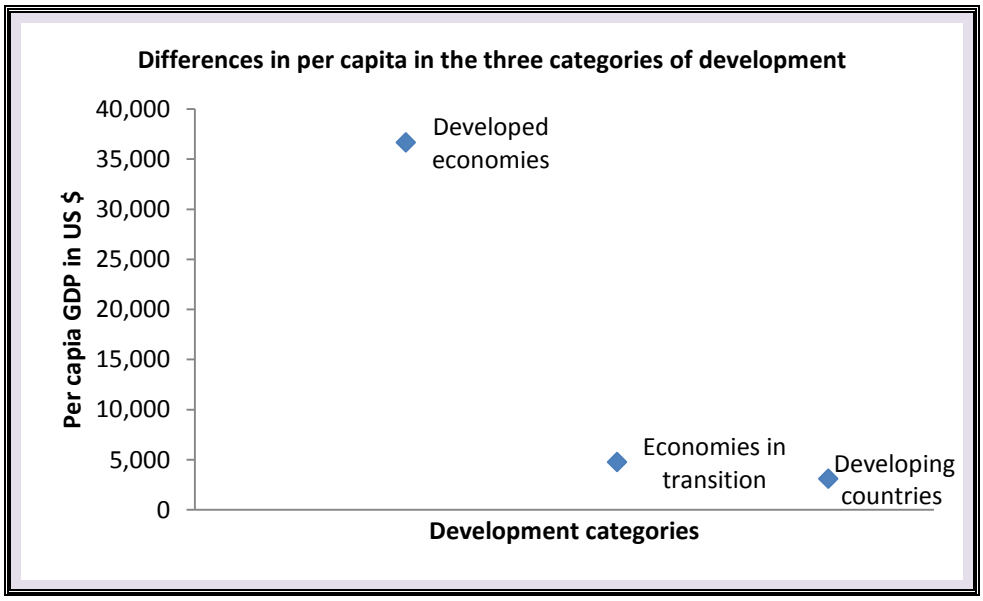
Although it could have been inefficient to distribute scripts of innovation in a supply driven approach throughout the country, the key point is the role of state

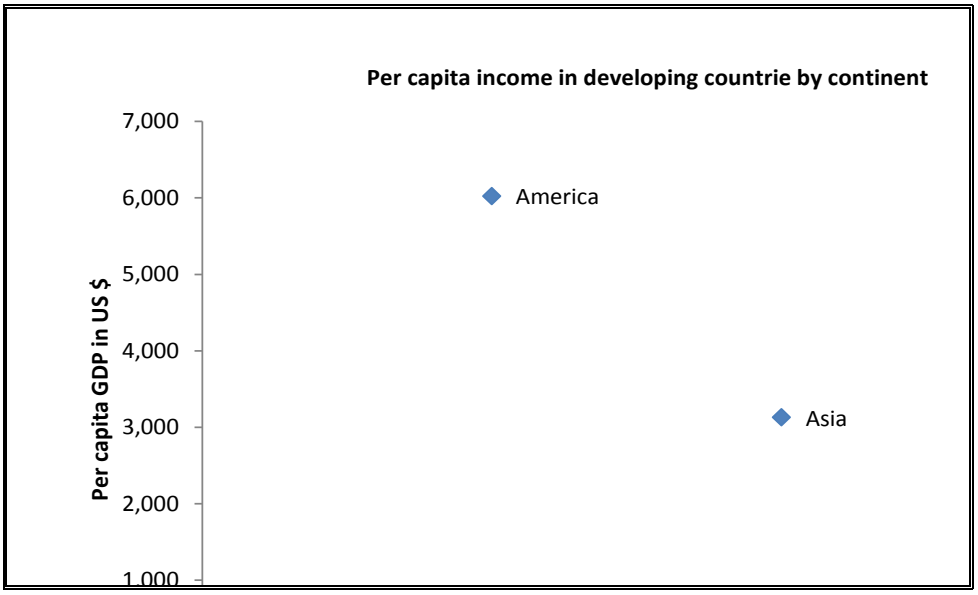
in promoting innovation. Its outcome depended on the existence of favourable conditions for fostering demand for new products, processes, and services.

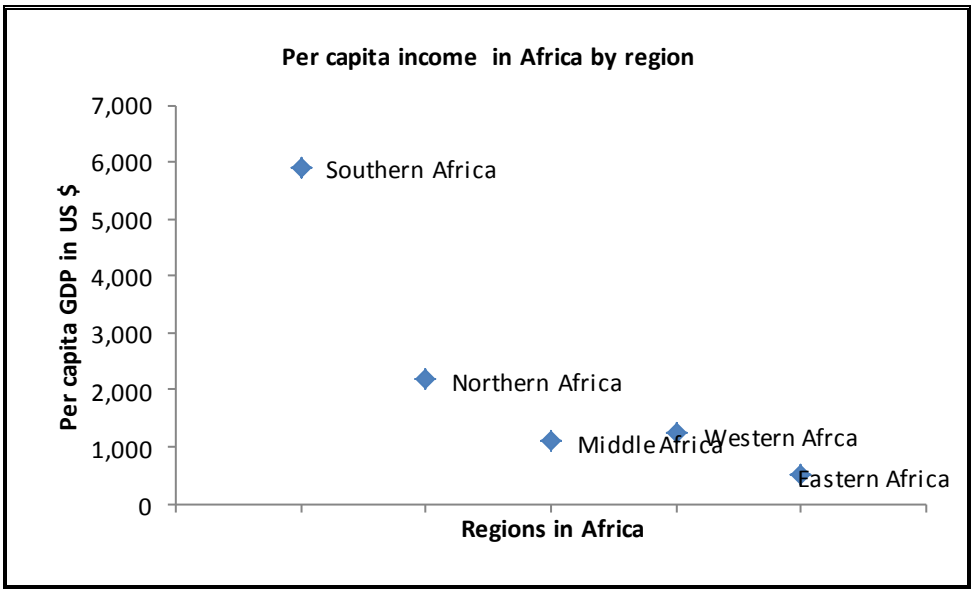
Third, domestic market in Tanzania is relatively small, both by its size and by the purchasing power of the population. Estimates from the 2012 Population and Housing Census showed that Tanzania-population stood at 44.9 million people. Its per capita income was estimated to be $955[4]. This is rather low compared to the highest per capital income of over $116,000 in Luxemburg, or average of developed countries of US $36,663. Figure 1 below presents a panel of three dot plots showing differences in per capita incomes by regions for year 2014 at constant prices and exchange rate.

[4] World Bank data. UNCTAD data at 2005 constant prices and exchange rate estimates it at $652 in 2014

Figure 1: Differences in per capita GDP by regions in 2014 at 2005 prices and exchange rates







Data source: UNCTAD (2016)

This panel of plots indicates that, in deed, per capita income of Tanzania is significantly low in comparison with not only developed countries, but also when compared with developing country groups and within Africa. These differences provide important pointers towards selective export-market push for domestic growth. Export markets ones are inexorable for significant domestic investments and large production capacity. Markets with high potentials for supporting growth in Tanzania includes those in the high income countries in North America, Western and Eastern Europe, selected countries in Asia and within Africa. The intra-regional trade within Africa has some potential for diversified and sustained manufacturing growth in Tanzania if major trade barriers are addressed. The government has to support the nascent private sector in identifying these markets, understanding their needs, and in breaking through various entry barriers to benefit from various regional economic cooperation's (RECs).

Considering Schmitz (2007) approach to selecting policy options, the case of Tanzania presents challenges of technological and market gaps, and thus FDI would seem to be the best policy option. The problem with this type of approach, however, resides in its inability to control the nature and character of FDI in such a way that both gaps are adequately addressed given the local social and economic setting. No doubt, Westphal correctly argues:

> "those who assume that "the multinationals can do it all" in accomplishing industrialization fail to take proper account of many conditions required to be present in the economy if DFI is to be efficacious instrument of

> meaningful industrialization. It is not difficult to argue that the establishment of those conditions requires various modes of selective intervention." (Westphal 2005, pp5)

In some sectors, such as mining, and in particular for minerals that Tanzania has unique advantage that creates natural barriers of differentiation, technology is the only gap, but not markets, and particularly not in export markets. Therefore joint ventures or licensing arrangements would have worked better to transfer skills, and to retain significant value at home. This regime has had its successes and challenges, which warrants a detailed study in its own right.

Fourth, related to markets is the emergence of international commodity chains in agriculture. It is become evident that, domestic producers cannot grow and sustain competitiveness when operating in isolation outside producer-user loops. Production is also becoming more knowledge intensive, and with the private sector actors in Tanzania being late comers with respect to these complex integrated global markets, it makes it unlikely for them to break entry barriers and to ignite innovation loop in their own. Kaplinky (2000) observed that, as this complexity increase, arm's-length trade is being confined to commodities with low returns, whereas high return activities are undertaken within global value chains. The African Development Bank President was recently quoted as saying that, Cote-d'Ivore, Ghana, Nigeria and Cameroon produce 75% of global supply of cocoa, yet Africa accounts for only 2% of the $100 billion chocolate market (Guardian, 23rd February, 2016, pp 15). A similar story can be said of coffee, cotton, sisal, and cashew. Active policy actions are needed to support integration into supply chains and help producers undertake parts of high return activities, and support initiatives to identify and penetrate new markets. Fixed costs associated with such initiatives are quite high and prohibitive for the private sector.

Diversification to non-traditional agricultural products, particularly those produced by smallholders may not be possible without active policy support in the process of developing well-coordinated and balanced supply chains. While non-traditional exports such as fruits and vegetables from Africa is reported to have increased, smallholder producers have find it difficult to survive in their own outside the chain, but they are also confronted with asymmetric power relations that affect distribution of costs and benefits (Trienekens, 2011).

This observation is important for countries like Tanzania, because agricultural production is denominated by fragmented smallholder farming, working in

underdeveloped non-traditional sector. Its volume of exports, especially fruits and vegetables is still very small. Large investments required for post-harvest facilities for fresh fruits and vegetables, and in skill development necessary for carrying out value adding activities such as cooling, sorting, grading, and packaging cannot be provided by the private sector in the absence of reduced risk, uncertainty and entry barriers into markets insulated through coordinated value chains. In addition, smallholders are inherently credit constrained, and their dispersed locations may give incentives to "free ride" when temporary market windows appear outside the chain, further limiting the ability and willingness of large private investors to invest and integrate smallholders. These are some of the major weaknesses that prevent producers in developing countries from reaping superior earnings and limit their growth potentials.

Fifth, Tanzania is a large county, with diverse sectors and multiple priorities on one hand, and limited resources on the other. This brings in complex policy dilemma that is limiting by itself. Ndulu, *et al* (2007); Semboja (2007): and Rodrik (2007) offers useful suggestions for diagnosing constraints to growth, and then focusing efforts at addressing the "most binding constraints". What this implies is that a deliberate policy of selective deployment of available national resources is necessary, and because of the large size of the country and the diversity of sectors, painful tradeoffs cannot be avoided. This selective policy must be well informed, so that appropriate actions are directed towards appropriate drivers of growth and transformation with minimum waste.

The reasons pointed here to advocate for active industrial policy in Tanzania are by no means exhaustive but are important. Cumulative effects of experiments of strategic policy actions to eliminate binding constraints and enhance competitiveness, and focus of efforts can produce remarkable results for igniting growth and sustaining it. However, this is not without implications and challenges in the Tanzanian policy making and implementation process.

5.0 IMPLICATIONS FOR POLICY AND PLANNING IN TANZANIA

It is clear from the disposition of this paper that active industrial policy is not the same as central planning that, to a greater extent, displaces the roles of the private sector in the allocation of resources and provision of goods and services. It is rather based on selective interventions that seek to support and complement initiatives of the private sector to produce efficiently, to innovate, and to become competitive in global markets. The key point is that, active industrial policy will

produce superior positive results for growth in Tanzania as opposed to complete reliance on markets in the pretext of the rhetoric of minimum government interference as “best practice”.

However, effective application of active industrial policy for igniting and sustaining growth brings with it a number of implications in the policy formulation and implementation process, many of which translates into major challenges that must to be surmounted if industrial policy is to achieve the intended results..

The first, and probably key is that application of industrial policy requires existence of, or consecutive development of strong institutions. A key institutional pillar in the transformation process is the political will and accountable administration of state. Rodrik (2007) calls this kind of institution as a “meta institution”, referring to democratic government. For the purpose of this paper, the term democracy is applied to imply whatever form of governance and electoral system as long as it embrace a working system of accountability, transparency, justice, and vision for economic and social development. Westphal also observes:

> “the practice of effective industrial policy requires the demonstrated political will to make the achievement of economic development the central, if not the overriding objective of government policy.” (Westphal 2005 pp 7)

The government’s ability to make bold strategic decisions and to stick to the vision of attaining long term dynamic efficiency in South Korea, and in other tiger economies in South East Asia rested on the political will and bold leaderships.

Second, implementation of active industrial policy pre-supposes existence of high institutional capacity for information gathering, analysis, targeting, and monitoring on the part of the government and its related agencies. The government and its agencies are expected to understand what constitutes new activities, new production activities, criteria for success and failure, and the nature, character, and duration of support required for enterprises to succeed. They have to understand where global markets are, for which products, and how to break entry barriers and create production competitiveness. As Rodrik (2007) suggests the authority for carrying out industrial policy must be vested in agencies with demonstrated competence, rather than attempt to establish new ones from the scratch. He emphasized that “it is better to employ second–best instruments effectively than to use the first-best instruments badly”, ibid pp 116.

This, however, is a major challenge for the government, and especially on human resources. This human resource capacity constraint is not only caused by competition from private sector that provides better incentive packages for well-trained people, but also by the reforms in the civil service aimed at "streamlining" the public sector in the provision of its services. Downsizing of civil servants and capacity enhancement programmes for the public sector may seem to conflict each other when it comes to the implementation of industrial policy.

Third, growth policies need to be complemented by strategic choices in social policy. For example, an integrated human resource development strategy is vital as economic activities become more knowledge intensive. Cost sharing and declining subsidy in tertiary training may be counter-productive in the long run, because of weak economic position of the majority of households in Tanzania at present, the situation also shared by most underdeveloped economies. Under such situation, private costs of high education outweigh private returns, so that markets will tend to underprovide it, although social benefits would be enormous.

Fourth, implementation of industrial policy will require the government to put much attention to international trade regimes. It is well understood that, even when policy and tariff barriers to international trade are removed, for example, through World Trade Organization (WTO) conventions, European Economic Partnership Agreements (EPA), African Trade and Opportunity Act (AGOA), and many other conventions and bloc agreements, significant and wide array of non-tariff and policy barriers remain. These include disadvantages of geography, which affects competitiveness through transport costs, and "institutional remoteness", meaning the underdeveloped institutional structures that constrain effective integration in global markets (Morrissey and Filatotchev,2001). Strategic policy actions will minimize these effects, and could even turn disadvantages of geography into unique advantages and create some entry barriers. A major challenge is the potentials for distortionary replication and retaliation from major trading partners. A stronger capacity and resilience to negotiate for selective industrial policy to deal with non-policy barriers, albeit in a fixed time frames cannot be avoided.

Fifth, application of active industrial policy may have significant budgetary implication, because some interventions may involve credits, guarantees, or investment in certain infrastructure that needs heavy upfront expenditure by government. Under the fiscal condition of Tanzania, development partners have to concur with Tanzania's pursuit for the desperately needed high and

sustainable economic growth through active industrial policy. In addition, the government has to enhance its revenue management so as to increase both tax and non-tax revenues in order to minimize dependency on foreign aid, which may potentially present a stumbling block for the implementation of the desired industrial policy.

Sixth, the policy making process need to be cautious of the potential for rent-seeking behavior transcending into continuous spiral of policy-lobbying in favour of certain incentives or support to particular industries, activities, or firms, even though their long run benefits to overall economic growth are minimal. This is one of the major challenges of industrial policy that Burton (1983) referred to as the "political market", in which the interaction of vote-seeking governments and rent-seeking producer groups encourages selective government interventions in manners that inhibit economic evolution and divert away resources from more productive use.

6.0 CONCLUSION

The main thrust of this paper is to induce policy discussion on the notion of industrial policy in the context of Tanzanian development trajectory and planning. The position taken in this paper is one of such answers for reasons and examples cited makes it compelling. This, however, does not shield it from criticisms. In fact, the paper itself raises many challenges.

To sum it up, Tanzania is confronted by a wide array of constraints that have prevented it from achieving the desired economic and social outcomes. Various policies and development regimes have been experimented since independence in 1961, each with varied results. However, cumulative economic growth has not delivered the desired transformation, and the majority of Tanzanians have remained poor, with a national per capita income remaining much below global and regional averages. In order to accelerate high and sustainable growth in accordance with the national aspirations contained in the National Development Vision 2025 and beyond, active industrial policy is inevitable. What matters is the type of the industrial policy to be implemented, and the institutional platform under which it is implemented. The implementation of active industrial policy will require political will and development of strong institutions capable of dealing with many challenges of implementing industrial policy.

REFERENCES

Burton, J. (1983). Picking Losers...? The political economy of industrial policy. London, The Institute of Economic Affairs.

Chang, J. (1993). "The political economy of industrial policy in Korea." Cambridge Journal of Economics Vol 17: pp 131-157.

Foster, N. (2006). "Exports, Growth and Threshold Effects in Africa." Journal of Development Studies Vol 42(No 4).

Hausman, R., and Rodrik, D. (2003). "Economic Development as Self Discovery." Journal of Development Economics Vol 72(2): pp 603-633.

Hausman, R., Rodrik, D., and Velasco, A (2005). Growth Diagnostics. Cambridge, John F. Kennedy School of Government, Harvard University College.

International Monetary Fund (2016). http://www.imf.org/external/pubs/ft/weo/2015/02/weodata/weorept.aspx? DOI 25/02/2016

Hodgson, G. (1988). Economics and institutions: A manifesto for a modern institutional economics. Cambridge: Polity Press.

Hodgson, G. (2006). What are institutions? Journal of Economic Issues, 40(1), 1–25.

Kaplinky, R. (2000). "Globalization and Unequalization: What Can Be Learned from Value Chain Analysis." Journal of Development Studies Vol 37(2): pp 117-146.

Kaplinky, R. (2005). Globalization, Poverty, and Inequality: Between a Rock and a Hard Place. Cambridge, Polity Press.

Mkandawire, T. (2001). "Thinking about development states in Africa." Cambridge Journal of Economics Vol 25: pp 289-313.

Morrissey, O., and Filatotchev, I. (2000). "Globalization and Trade: The Implications for Exports from Marginalized Economies." Journal of Development Studies Vol 37(2): pp 1-12.

Ndulu, B., with Chakraborti, L., Lijane, L., Ramachandran, V., and Wolgin,J. (2007). Challenges for African Growth: Opportunities, Constraints, and Strategic Directions. Washington DC, The World Bank.

Page, J. (2006). "Strategies for Pro-Poor Growth: Pro-poor, Pro-Growth, or Both?" Journal of African Economies 15: 510-542.

Pianta, M. (1988) New Technologies Across the Atlantic: US Leadership or European Autonomy? Volume, DOI:

Rodrik, D. (2006). "Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform." Journal of Economic Literature Vol XLIV: pp 973-987.

Rodrik, D. (2007). One Economics. Many Recipes: Globalization, Institutions, and Economic Growth. New Jersey, Princeton University Press.

Rweyemamu, J. (1973). Underdevelopment and Industrialization in Tanzania: A Study of Perverse Capitalist Industrial Development. Nairobi, Oxford University Press.

Schmitz (2007). "Reducing Complexity in the Industrial Policy Debate." Development Policy Review Vol 25(No 4): pp 417-428.

Schmitz, H., and Musyck, B. (1994). "Industrial Districts in Europe: Policy Lessons for Developing Countries?" World Development Vol 22(6): pp 889-1994.

Schumpeter, J. A. (1961). The Theory of Economic Development: an inquiry into profits, capital, credit, interest, and the business cycle. New York, Oxford University Press.

Semboja, J. (2007). A Framework for Designing a Strategic Direction for Growth and Development in Tanzania. mimeo, Research on Poverty Alleviation (REPOA).

Trienekens, J. H (2001). “Agricultural Value Chains in Developing Countries: A Framework for Analysis. ”International Food and Agribusiness Management Review Vol 14, (Issue 2) pp 51-82.

The United States of America (2008). Economic Stimulus Act 2008. C. o. t. U. S. O. America. H.R. 5140.

UNCTAD, (2014). http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx, DOI 25/02/2016

Wesphal, L. (2005). Reflections on Obstacles to Meaningful Industrial Policy in Developing Countries. Queen Elizabeth House 50th Anniversary

Conference on "New Development Threats and Promises". Queen Elizabeth Hall, University of Oxford.

Wangwe, S. 1983. Industrialization and Resource Allocation in a Developing Country: The case of Recent Experience in Tanzania. World Development 11(6): 483-492.

Wuyts, M. 1994. Accumulation, Industrialisation and the Peasantry: A Reinterpretation of the Tanzanian Experience. Journal of Peasant Studies 21(2): 159-193.

Wuyts, M. (2008). The Growth -Poverty Nexus in Tanzania From a Developmental Perspective, REPOA Special paper No. 08.27. Dar es Salaam