# A REVIEW OF RECURRENT THEMES OF THE ASIAN MIRACLE: ANY LESSONS FOR SUB-SAHARAN AFRICA?

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**ABSTRACT**

*There are three recurrent themes in the East Asian catch-up industrialization model that could to serve as policy lessons for Sub-Saharan Africa. Agricultural productivity growth cum industrial booms were complementary factors in East Asian's industrial revolutions; Labour-intensive - low-skill manufacturing provided the viable dynamic 'entry route' to export-based industrialization; and Industrial policy served as an elixir for rapid capital accumulation. Central to all these, is the emergence of a development-oriented social class structure that motivated entrepreneurs in the region to reinvest government-provided rents in capital accumulation processes. The policy lesson, therefore, is that for any programme of industrialization in Sub-Saharan Africa to be successful, it should have as its counterpart measures to guarantee adequate supply of agricultural goods. It is the rate at which the domestic agricultural sector can supply the industrial labourforce with low-cost wage goods which sets the limit to the internal expansion of the industrial sector. Nonetheless, the critical question is: are lessons (recurrent themes) from East Asia transferable to Africa? The answer is somewhat complex because the regions differ on several fronts. Thus a direct replication of the East Asian model is unlikely to succeed, but a careful and sequenced approach similar to the East Asians could propel the dynamics of growth for the region.*

## 1. Introduction

During the last half century, the economic growth of the third world countries (developing world) has been far from uniform. These countries were polarized into those that made great progress in catching up and those that were mired in stagnation. The majority of the East Asian countries belong to the first group. Howbeit, economic development in East Asia has followed a remarkable pattern, unlike any other developing regions in the world. Nevertheless, the path trodden by East Asia has not always been smooth. Also, some of the countries in this group failed to achieve high growth, and the region was hit by occasional setbacks. East Asia has had its share of hardships in its history, with hot and cold wars, social instabilities and economic crises. At the moment,

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East Asia faces problems of poverty and political strife and also new challenges posed by recent economic realities[1]. Despite all these challenges, the region in focus, has maintained a stable growth pattern and Sub-Saharan African countries have a lot to learn and adapt from the Asian Convergence Model.

The empirical literature on industrialization in developing countries show that, with the possible exception of Mauritius, no Sub-Saharan African country has undergone an industrial revolution in the style of the East Asian newly industrializing countries (NICs). In stark contrast to Sub-Saharan Africa, East Asia has, starting far back in the 1950s and 1960s, produced 'tiers' of NICs: South Korea Taiwan, Singapore and Hong Kong began their industrial catch-up in the 1950s through the 1970s; Malaysia, Thailand and Indonesia followed later in the 1970s through the 1980s; and, currently, China, Vietnam and India (in South Asia) are cruising at high attitude, as it were, in the industrialization catching-up game leaving their contemporaries in Sub-Saharan Africa behind.

There are three recurrent questions in the literature are:

(i)Why has Sub-Saharan Africa failed to experience industrial revolutions in the style of East Asia?

(ii)What is there in the East Asian economies that qualifies them to be described as 'catching-up' economies, whereas Sub-Saharan African economic growth performance has attracted negative descriptions: 'falling behind' 'growth tragedy', etc. (Easterly and Ross 1997; Collier and Gunning 1999; Pritchett 2000).

(iii)Are there lessons for African Countries from South East Asia

Few Sub-Saharan African countries entered the 21st century with a significant GDP growth rate[2].

The period 1975-2001, Sub-Sahara Africa recorded a negative (-0.87%) growth rate in GDP per capita, a stark contrast to roughly 6% recorded for East Asia (UNDP 2003, Statistical Appendix). Furthermore, in the mid-1970s, South East began to overtake Sub-Saharan Africa in GDP per capita, and by end of the 1990s the income gap separating Sub-Saharan Africa from South East Asia became very apparent and continuously increasing (Harold, Jayawickrama and Bhattasali 1996).

Furthermore, a striking feature of the global export trade in palm produce is that its regional centre of production has moved from Sub-Saharan Africa to Asia as a result of dramatic growth in Malaysian output (Schumacher 1983). On average Sub-Saharan Africa produced almost six times more palm oil than Asia in the postwar II period

[1] Furthermore, the countries in the region are under pressure to enhance domestic capabilities in order to avoid crises associated with globalization and to sustain growth into the next stages of development.

[2] A reflection of the absence of endogenous technological change in Sub-Saharan Africa as a whole

(averaging 946,000 tons annually as opposed to Asia's 165,000). By 1970, Asian palm produce output had caught up with the Africa's output 1977-81, about a decade later, Asia produced approximately 3 million tons of palm oil which was more than two times the African output. During this period Malaysia had emerged the Saudi Arabia of the global palm oil trade with an annual output of approxmiately 2.2million tons or 49.7 per cent of world output, now surpassing Nigeria hitherto the global leader. For the period 1977-1981, the following countries were the world's leading palm-oil exporters: Malaysia, 2.2million tons; Nigeria, 0.665 million tons; Indonesia 0.604 million tons; China, 0.185 million tons; Zaire (now Congo Democratic Republic), 0.70 million tons; and Cote d' Ivoire, 0.160 million tons. Asia, in this very instance Malaysia, has been able to move so rapidly up the global ladder in the palm oil trade because of its plantation culture. Malysian farms are stocked with the high-yielding tenera breed in contrast with the dura breed which dominates Nigerian and Sub-Saharan African farms. The East Asian experience thus highlights the obvious fact that primary capital accumulation in industry for developing countries with limited capacity to finance consumer goods imports is quite likely to be unfeasible if the domestic agricultural supply potential is weak.. This is relevant for developing countries that lack the export capacity to generate the foreign exchange to finance food imports.

The fundamental role of the government in East Asia during the industrial growth can be classified two dimensions. In the first dimension, the government set up the institutional and policy foundations required for the growth of agriculture and the spread of primary education to allow a take–off from a poor agrarian economy and traditional society into a path of sustainable development and modernization. The transfer of the agricultural surplus and the building up of a pool of educated workers provided the resources needed outside of agriculture to enter the second phase, characterized by a continuous and careful shepherding of the economy to acquire technology, upgrade and modernize the economy and ultimately catch up with the Western World. The specific role of the government varied from country to country. Yet it can be claimed that the State acted neither as a central planner (excluding China during the Cultural Revolution), nor as a backseat driver, but as an astute umpire, for two reasons: to set the stage for taking off into the trading world, and to continue the structural upgrading. The first coincided largely and overlapped with the first phase above and required prudent macroeconomic management, pragmatic education for the labor force, and financing the infrastructure investment out of the agricultural surplus.

The second task, in the post–take-off phase, consisted of overcoming the coordination failure that can stop a market economy from flourishing. In terms of the degree of government intervention, the spectrum ranged from Hong Kong (during the British reign) that relied on laissez faire to South Korea, which saw its industrialization process being micro-managed by the manipulation of the business groups through the directed credit policy. In the second dimension, East Asia recognized that the world economy evolves mainly through an interdependent development process rather than

through independent growth. The economic history after World War II reflects that, while interaction among agents and firms can lead to external economies, interaction among countries – through trade, investment and technology transfer - can create strong positive spill-over effects.

This paper seeks to analyze what are considered three (3) recurrent themes in the East Asian catch-up industrialization model as a bench mark for sub-Saharan Africa countries seeking to undergo industrial revolution. We admit that the themes identified in this article have been dealt with one way or another in the vast and expanding literature on the East-Asian 'miracle'. This review presents an integrated analysis of the East-Asian industralization experiences drawing on growth and development theories as well as history, geography and political science issues to and enriches our understanding.

## 2. Theoretical Perspectives

Over the period 1965-2000, poorer countries did not, on average, narrow the income gap with the richer economies. The cross-country growth framework therefore builds in a crucial assumption, that countries have *distinctive* long-term levels of per capita income to which each is converging. Crucially, the long-term levels depend on two main kinds of variables: economic policies and economic structure. Countries with favourable economic policies tend to have a higher steady-state level of income, and therefore faster growth at any given initial level of income. Similarly, countries with a favourable economic structure tend to experience faster growth, on a path of convergence to a higher long-term level of income.

There is no singular framework for understanding the causes of underdevelopment in Sub-Saharan Africa. Nevertheless, the available literature on the subject often makes at least two relevant general distinctions. The first distinction is between countries that fail because of a lack of relevant capacities and those that fail to promote the interests of all their inhabitants through political choice, often with the intention of benefiting the incumbent regime and its supporters at the expense of another group within the state. A second distinction points to the differences between structural and contingent causes of failure.

The East Asian Catch-up industrialization Model and the 'Miracle' it produces have been interpreted in two contrasting perspectives: the neoclassical and neo-Keynesian[3]. On the other hand, African's development problems,and its inability to undergo industrial take off, are blamed on a lack of openness to global trade and investments. World Bank (1981) had blamed Sub-Saharan Africa's development crisis on price distortions[4]. World Bank (1981) provided a point of departure for the neoliberal structural

[3] Specifically, the neoliberal perspective has argued that reliance on unregulated market forces and the adoption of open-economy strategies[1] led to efficient exploitation of the comparative advantage of the East Asian NICs in surplus, not too cheap labour ( Ranis,and Fei 1975, Balassa 1982

[4] Over-valued exchange rates, subsidized interest rates, etc., underpinned by heavy government interventions.

adjustment programmes (SAPs) formulated for Sub-Saharan Africa and the developing world by the Bretton Woods institutions[5] in the 1980s and 1990s. Furthermore, poor initial conditions low per capita GDP and weak initial human capital stock did compound the region's problems in the 70s through the 80s. Also, natural resources and geography, including natural resource intensity, land lockedness, location in the tropics, and the ratio of coastline distance to land area; inconsistent policy variables and demographic variables were not maximised.

The same neoliberal perspective informed the neoliberal policy recommendations contained in the socalled Washington consensus (Williamson 1990; Williamson 2003). The neoclassical literature considers 'opennes' the elixir for rapid economic growth. However, the neoclassical interpretation of 'openness' as an explanation for East Asia's rapid economic growth has been a subject of debate. Sachs and Warner (1995) conceive openness rather restrictively using five criteria to classify countries as 'open: (1) the average tariff rate was less than 40 per cent, (2) its non-tariff barriers (e.g quotas) covered less than 40 per cent of imports; (3) the premium on the unofficial (parallel) market exchange rate did not exceed 20 per cent; (4) there were no state monopolies on the major exports; and (5) it was not a socialist economy. David Dollar (1992) constructs a different index of trade openness to explain rapid economic growth.

The World Bank and, the International Monetary Fund (IMF), adopted the neoliberal stance, 'get prices right' as a first-best development strategy for 'late industrializers'. Their positions can be summarized thus: if markets are freed so that prices reflect 'opportunity cost' and not political preferences and biases economies will have more capital and external savings at their disposal to boost investment and growth. The neoclassical-World Bank- IMF 'market friendliness', at least in the way these bodies conceive it, has great difficulty reconciling with the patently dirigistic policies within which Asian countries rose to global recognition.

The structuralist (neo-Keynesian) interpretation, of course, rejects the neoclassical argument, insisting, instead, that economic policies in the East Asian economies were dirigiste[6]. The structuralist (neo-Keynesian) view traces genesis to early development economics, which insisted that there was no more viable option for developing countries than the interventionist option (Dike 2003). Myrdal Gunnar (1961, 1957), for instance, drew attention to the fact that economic development in developing countries is not self-sustaining given pervasive institutional gaps, which invariably lead to 'vicious circles'[7].

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[5] The International Monetary Fund (IMF) and World Bank

[6] The state employed selective policy interventions to 'govern the market' (Wade 1990) in order to overcome 'market failures' and enhance capital accumulation, technological change and penetration of export markets.

[7] To break this'vicious circle' and escape the trap of low-level equilibrium, we advocate a development strategy is needed in which the state plays the dominant role.

In place of free market strategies advocated in neoclassical economics, early development economics posit a 'mixed' route, invoking a complementary package of market mechanisms and state interventions to take care of what was perceived to be pervasive market failures[8]. In that framework, the state was expected to promote economic growth and development by creating incentives or inducements for entrepreneurs, providing coordination via development planning, etc. Most economists have argued that at early stages of development, the investments of industrializing firms in one sector may increase the profitability of others throughout the economy[9].The socio-political side of the economic strategy of 'big push' in which the state plays the strategic role is the thesis of the 'development state' or 'strong state' (Mason 1984; Makandawire 2001). In the literature, the 'development state' has two components (Mkandawire, op cit., pp 290-91): ideological and structural. A development state is one whose essential ideological underpinning is 'developmentalist' conceiving its mission in ensuring high rates of capital accumulation usually oriented on industrialization leading to structural change in the economy's domestic and international relations (Castells 1992)[10]. The success of a policy to innitiate and sustain the investment and growth booms that lead to catch-up depends essentially on these four elements:

•Establishment of a state-owned enterprises (SOEs) with capacity to supply the crtical 'public goods' and externatlities which would direct the private sector towards productive entrepreneurship.

•The model model should include elements to expand domestic demand[11].

•Diversification with clear controls on the import of goods, inflow of foreign direct investment (FDI) and foreign capital.

•Managerial Capability of the state to develop without ignoring private-sector initiatives[12].

Openness to world trade and foreign direct investment (FDI) financed by the multinational corporations (MNCs) has been identified in new growth economics literature as the mechanism that provides developing countries opportunities for technology transfer and, hence, undergoing the type of technological learning that facilitates catch-up growth – that is, moving up the global technology ladder. Gerschenkron (1962) hypothesizes that dividends accruing from late-comer status could exploit opportunities offered by access to world technology markets and move straight to the global technology frontier,

[8] This is arising from weak institutions, including malfunctioning or even non-existent markets, associated with underdevelopment.
[9] By creating externalities or spillovers
[10] Such a state must contain institutional prerequisites for industrial transition whose most important element is emergence of a development social class.
[11] 'Redistribution with growth') and selective ISI which supports competitiveness on the world market.
[12] State (public-sector) and private-sector entrepreneurial capibilities become complements rather than substitues.

conditional, however, on making the requisite investments in absorptive capability. Abramovitz (1986) further employs a similar concept; that in social capability, there is a focus on the capability of the economy to acquire, adapt and diffuse imported technologies and/or invent new ones.

## 3. Recurrent Themes In East Asian Catch-Up Industrialization.

As discussed above, there are at least three recurrent themes in the East Asian catch-up industrialization experiences: That could offer basic insights for countries in Sub – Saharan Africa.

### 3.1 Agrarian reform as prerequisite for sustainable industrial revolution

The experiences of the East-Asian NICs without exception indicate that sustainable industrial revolution take-off becomes feasible only if industrial accumulation is complemented by the development of a productive domestic agricultural base to guarantee supplies of low-cost wage goods to the industrializing economy. In East Asian context, this was achieved through the Green Revolution. The first is the role of agricultural development as a counterpart to any programme of primary industrial capital accumulation.

The East-Asian NICs removed constraints on economic development naturally imposed by underdevelopment in agriculture in Sub-Saharan Africa. This allowed the agricultural sector to play a complementary role in industrial growth. Agrarian reform in the individual NICs complemented with the Green Revolution, boosted agricultural productivity and, hence, guaranteeing agricultural food self-sufficiency. The Green Revolution began about the 1960s, which initially brought high-yielding wheat and rice varieties to vast areas of Asia and other regions of the developing world that had access to irrigation or reliable rainfall. This was later extended to include the adoption of modern varieties of numerous other grain, root and protein crops. Also, the adaptation of modern varieties to local conditions by farmers was monumental to the diffusion stages of the Green Revolution technologies.

The agricultural revolution made it feasible for the East Asian NICs to continue to produce a net agricultural surplus while permitting industry to generate profits to finance its own growth in the long run. The strategy of 'primitive accumulation' based on exploitation of agriculture to finance industrial accumulation was by the 1960 and 1970s in the East Asian NICs being converted into one based on "balanced growth" – what Keith Griffin (1979:125) metaphorically described as "walking on two legs"[13]. The agricultural surplus in East Asia has been reflected in the East Asian NICs increasing their shares of world agricultural export markets (see Box I). During the period 1965-1980, for instance, annual agricultural growth rates for East Asia as a whole averaged

[13] This is interpreted to mean that by the 1970s economic development in the East Asian NICs was being supported by a rapidly growing export-based industrial sector and a productive agricultural sector capable of producing a continuously rising net surplus (savings).

3.2%, which was well above the population growth rate put at 1.1% - thus indicating a comfortable agricultural surplus for the region. However, the earlier phases of industrial accumulation, it was feasible for the East Asian NICs to draw on low-cost labour from the agricultural sector into a rapidly expanding industrial export sector without undermining the former's output potential.

### 3.2 Labour-Intensive Manufacturing

Labour-intensive, low-skill manufacturing provides a dynamic 'entry route' into export-based industrialization. This provided a feasible framework for technological learning. Along with rising agricultural productivity, labour-intensive manufacturing provided the source of 'residual' growth'[14] at the initial phase. The technological learning initiated in the labour-intensive industries provided the East Asian NICs the much needed threshold to make a quick transition to the skill-intensive, high-tech industries later in the 1980s and 1990s.

The long-term industrial objective of the East Asian NICs may be described as using low-skill,labour-intensive export-oriented manufacturing as a 'learning process' which permitted these countries to move up on the global industrial ladder. This is captured as the ('Flying Geese' Model: Climbing the Global industrial ladder in East Asia) Thus, the East Asian NICs gradually shifted industrial capacities from low-skill, labour-intensive products to more sophisticated products, which in turn generated higher wages, higher profits and higher per capita income. The dominant low-skill, labour-intensive products were textiles, apparels, shoes, etc. Over time, as saving and education deepened, the pool of capital and skilled labour expanded and new technologies were adopted and diffused, the East Asian NICs were able to graduate into production of the more capital-intensive and skill-intensive high-technology products in electronics and electrical goods, heavy consumer products (automobiles and television), steel, financial and information services. It is thus observed that by the end of the 1980s the most important export products of the East Asian NICs are not based on the traditional comparative advantage in rice exports, textiles and garments but, rather, in electronics, electricals, machine tools, etc.

The technological learning initiated in the labour-intensive phase permitted the 'first tier' East Asian NICs to make a quick conversion to the skill-intensive and high-technology industries later in the 1980s onwards. In South Korea, for instance, initial industrialization was led by the socalled 'three white industries': flour milling, sugar, and cotton textiles[15]. The East Asian experience exemplifies the proposition that countries would move up the technology ladder by following countries fast ahead of them, a model developed by the Japanese economist Kaname Akamatsu in the 1930s using the metaphor of 'flying geese'[7].

[14] Productivity growth recomposed through Growth Accounting Techniques.
[15] These 3 agro-based industrial activities provided the 'entry point' in Korea's first phase in opening up to international trade.

South Korea, Taiwan and Hong Kong took over leadership in textiles and apparel in the late 1960s through the early 1970s from Japan as the latter moved up into high-technology exports. A decade later in the 1980s South Korea and Taiwan moved up into the high-technology export trade, while the textiles and apparel exports moved to Thailand, Indonesia, China, Viet Nam and Mauritius in Africa. Nonetheless, by the end of the 1990s, Malaysia, and the Philippines and Thailand began to shift into high-technology exports.

The progressive shifts[16] up on the global industrial ladder observed for the East Asian NICs reflect, also, positive shifts in real wages in their manufacturing sectors, which indicates income convergence with the OECD countries or the industrialized world. In the one and half decades between 1980 and 1996, manufacturing wages more than tripled in real terms in South Korea and nearly so in Singapore, while they more than doubled in China, Hong Kong and Thailand. The rapid growth in real wages has been underpinned by equally rapid growth in manufactured exports. For South Korea, for instance, manufactured exports expanded at an annual rate of about 5.4%, which led to a cumulative increase in real wages of 23%. Ironically, the 1980s through the 1990s were 'lost decades' for sub-Saharan Africa: per capita GDP grew at a negative rate for the region as whole averaging -0.5%.

Table **1** provides comparative data on GDP per capita for East Asia, the OECD and Sub-Saharan Africa between 1975 and 2011. An important point to note here is that for the East Asian NICs, GDP per capita grew positively at annual rates superior to the rates recorded for the OECD as a whole and the USA, which steadily pushed their per capita incomes towards the OECD level. Again, South Korea has had the most rapid growth rate in GDP per capita among the East Asian NICs. In 1996, just about two decades after its industrial take-off began (1973), South Korea became designated a high-income country by the World Bank and joined the OECD as an industrialized economy and provider of development aid.

Table 2 carries data on sustained high growth area in the East Asian economies starting in the 1960s to the beginning of the 2000s[17]. Table 3 shows Savings, Gross Domestic Investment and Exports in Selected East Asian NICs.

For the East Asian NICs, however, moving up to the more skill-intensive products was never an easy process. More skill-intensive production demanded better facilities in physical and economic infrastructure, trained industrial workforce and entrepreneurial capability. To a certain extent, market forces can, and do indeed, facilitate these processes;

[16] Income Convergence

[17] For most of these countries per capita income increased manifold within the three to four decades involved; for Korea it was a 12-fold increase.

as changes in the relative scarcities of the production inputsland, natural resources energy, labour, capital lead to changes in comparative advantages. But the East Asia NICs show that more than market forces are required.[18]

**Table 1: GDP per capita and Growth Rates for East Asia, the OECD & Sub-Saharan Africa**

| Country/Region | GDPPer Capita | GDP Per capita Growth Rate(%) | | |
|---|---|---|---|---|
| | | 1975-2001 | 1990-2001 | 2002-2011 |
| **OECD** | 22,149 | 2.0 | 1.7 | n/a |
| USA | 35,277 | 2.1 | 2.1 | 1.0 |
| EAST ASIA | 1,267 | 6.0 | 5.8 | 6.0 |
| South Korea | 9,817 | 6.2 | 4.7 | 3.8 |
| Singapore | 21,233 | 5.1 | 3.9 | 3.3 |
| Malaysia | 3,690 | 4.1 | 3.9 | 2.6 |
| Indonesia | 743 | 4.3 | 2.3 | 4.0 |
| Thailand | 1874 | 5.4 | 3.0 | 3.4 |
| **Sub-Saharan Africa** | **521** | **-0.9** | **-0.45** | **3.5** |
| South Africa | n/a | -0.35* | -0.41* | 2.2 |
| Nigeria | 319 | -0.7 | -0.3 | 3.8 |
| Cote d'Ivoire | 634 | -2.0 | 0.1 | -0.6 |
| Ghana | n/a | 0.17* | 1.64** | 3.3 |
| Cameroun | n/a | 0.56* | -1.08** | 1.0 |
| Kenya | 371 | 0.3 | -0.6 | 1.4 |

Source: Author's computation from various sources

Note: * 1976-2000 **1991-2000

**Table 2: Sustained High Growth in the East Asian Economies**

| Economy | Period of High Growth | Per Capita income at start of growth period | 2005 (in constant 2000 US$) |
|---|---|---|---|
| China | 1961-2005 | 105 | 1400 |
| Hong Kong | 1960-1997 | 3,100 | 29,900 |
| Indonesia | 1966-1997 | 200 | 900 |
| Japan | 1950-1983 | 3,500 | 39,600 |
| Rep. Of Korea | 1960-2001 | 1,100 | 12,200 |
| Malaysia | 1967-1997 | 790 | 4,400 |
| Singapore | 1967-2002 | 2,200 | 25,400 |
| Taiwan | 1965-2002 | 1,500 | 16,400 |
| Thailand | 1960-1997 | 330 | 2,400 |

Source: Finance and Development 2008, p.32

[18] Specifically, policy interventions supporting (labour-intensive) exports are required, to which we return below.

**Table 3: Savings, Gross Domestic Investment and Exports in Selected East Asian NICs: South Korea, Taiwan and Malaysia.**

| Country | Period | Savings | Investments |
|---|---|---|---|
| Republic of Korea | 1961-70 | 9.9 | 20.0 |
| | 1971-80 | 23.1 | 28.8 |
| | 1981-90 | 32.4 | 30.7 |
| | 1991-1997 | 35.4 | 36.7 |
| Taiwan | 1961-70 | 19.7 | 21.9 |
| | 1971-80 | 31.9 | 30.5 |
| | 1981-90 | 32.9 | 21.9 |
| | 1991-1997 | 27.4 | 23.2 |
| Malaysia | 1961-70 | 23.8 | 19.9 |
| | 1971-80 | 30.4 | 26.3 |
| | 1981-90 | 33.4 | 30.8 |
| | 1991-97 | 38.8 | 39.6 |

Note: Savings are defined as gross domestic fixed investment plus exports minus imports.
Source: Akyuz and Gore [2006 p. 268].

### 3.3 Industrial Policy as Elixir for Rapid Industrial Accumulation

Central to the East Asian 'success story' is the role of the 'interventionist state' or 'developmental state' in generating rents for private industry to increase industrial capital accumulation. The economic policies in the NICs were highly dirigiste[19]. Central to the East Asia 'miracle' is the interventionist policies of 'developmental states' to generate rents to provide incentives for private industry to increase industrial capital accumulation. This was done by the implementation of fiscal incentives[20]; and adoption of trade, financial and competition policies, otherwise called industrial policy (Akyuz & Gore 1994; Stiglitz 1996). Trade, financial and competition policies were, however, more vital in generating rents and promoting investment. Rents were created through a mix of selective protection, controls over interest rates and credit allocation, and managed competition, including encouragement of mergers, the coordination of capacity expansion, screening of technology acquisition etc[21]. Furthermore, strategic sectors were targeted in terms of credit allocation, subsidies, tariff protection and export incentives.

Catch-up growth was, therefore, maintained by a synergy of government, corporate industry and academia in respect of development of R&D capability. In the 1940s and 1950s, the East Asian NICs starting with Japan did not consider the unregulated market

[19] Whereby the state employed selective policy instruments to 'govern the market' in order to overcome 'market failures' and, thereby, enhancing industrial capital accumulation, technological change and penetration of foreign markets.

[20] Fiscal incentives included specific instruments targeting directly corporate profits and investments; these encompassed various tax breaks and special depreciation allowances to encourage enterprises to retain and invest profits.

[21] The state established development banks and other specialized financial institutions to provide concessionary investment finance to develop preferred industrial sectors.

a suitable, socially optimal framework to provide incentives for mobilizing resources for national industrialization. The effectiveness of NICs industrial policy is reflected in the rents generated by state policy interventions that were and reinvested in the preferred sectors. This leads to growth booms, which in turn made higher saving sustainable. Capital deepening requires that saving be sufficiently high to provide both for depreciation and furnishing both old and new workers with higher amounts of capital stock. The situation where saving is just enough to simply provide the same amount and quality of capital stock to workers and provide for depreciation is described as capital widening and hardly makes for long-run productivity growth. Capital deepening occurs when the workforce has access to more equipment, which leads to a deeper capital base, which in turn leads to higher output per capita. The East Asian NICs deepened their capital base, rapidly expanding the amount of improved capital per worker, thus providing the basis for long-run economic growth. Indeed, by end of the 1970s the East Asian NICs had exceeded the saving transition from 5-6 to 13-16% saving rate. Lewis answers that this requires 'changes in attitudes, in institutions and techniques' (Lewis 1955, p.155). Lewis is, essentially, arguing that converting to a 12-15% saver for an economy requires two complementary prerequisites:

a. There must emerge a new social class structure, which Lewis conceives in emergence of a strong capitalist class or existence of a profit making entrepreneurial elite. Embedded in Lewis's theory, therefore, is that the prevailing pattern of income and wealth distribution has implications for the saving rate.

b. Lewis's reference to changes in techniques as a prerequisite in saving transition alludes to new production structure capable of generating a continuously growing economic surplus to be built which would achieve a saving transition.

## 4. Lessons for Sub-Saharan Africa

Most people interested in East Asia are tempted to ask the question: are these lessons transferable to other regions, particularly Sub Saharan Africa? The answer to this question must take a somewhat complex form, instead of a simple Yes-or-No. This is because situations in the regions are different, and differ in degrees of social stability, human resources, knowledge, and regional economic dynamism. Thus a direct replication of the East Asian model is unlikely to succeed. However, the methodology of industrial research and policy formulation could be transferable and offers suggestions for Sub-Saharan African countries. The following policy lessons are pertinent for sub-Saharan African countries.

### 4.1 Complementarities between Industrial and Agrarian Revolutions:

Among the key factors that undermined the capacity of Import Substitution Industrialization (ISI) in Sub-Saharan Africa was the weakness of the domestic agricultural base. Because sub-Saharan Africa as a whole failed to experience a Green Revolution

in the style of the Asian NICs, labour transfers from the latter into the nascent ISI sector and expanding urban economy had occurred at the cost of a falling aggregate supply capacity in agriculture[22].

Sub-Saharan African region had recorded significant gains in agriculture exports and, to a less extent, also ISI in the 1950s through 1960s [Helleiner 1966]. During these decades, it was feasible to draw on low-cost labour from the food-crop sector into the export-crop economy and ISI. Nonetheless, the urban economy expanded from the 1970s, and it was no longer feasible to draw on labour from agriculture without undermining the supplies from the latter, leading to an absence of productivity growth in agriculture. On the other hand, the 1970s was a period of Green Revolution in Asia. Whereas sub-Sahara African agriculture grew at a dismally slow rate of 1.9% annually during 1965-1980[23]. More recent studies, borrowing insights from new institutional development economics, attempt to provide explanation as to why sub-Saharan Africa failed to initiate sustainable industrialization using agriculture as an 'entry point' in the style of East Asia. The new institutional economics makes references to missing and non-functioning markets; there is, also, reference to an absence of property rights and credit and insurance markets; and the low level of technical change in agriculture[24]. Broad based economic policy for industrial transitions should incorporate strategies for a technological transformation of the agricultural sector to guarantee productivity growth.

### 4.2 Trade Openness Complemented With Strategies on Human Capital:

In Sub-Saharan Africa, openness to global trade and investment has resulted in little technology transfer due to gross deficits in human capital, among other structural constraints. Human capital facilitates international technology absorption. Thus, Sub-Saharan Africans inability to undergo catch-up cannot be explained by a lack of access to the centers of world technology alone; nor even by a lack of human capital alone. The two factors complement each other.

Available indicators reveal that sub-Saharan Africa is more educated today than it was in the early post-colonial decades of the 1960s and 1970s. Indeed, primary enrollment now exceeds 90% and secondary enrollment has improved significantly also. Similarly literacy rates have improved to over 50% for adults and 60% for youths [World Bank 1994]. So, the pertinent question is where has all the education gone? Our answer is that sub-Saharan African educational system lacks the requisite capacity to inculcate the type of skills to absorb foreign technology; the universities also lack the capacity to produce the scientific and technological manpower that drive industrial revolutions. With

[22]This drove up urban food prices, which in turn, forced sub-Saharan African farmers to abandon or, at best, cut back on export-crop production.

[23] East Asia and Latin America achieved 3.2% growth annually within the period.

[24]As explained by the absence of any development of human capital to facilitate adoption and diffusion of available agricultural technologies in the rural sector.

the shift in policies in the 1980s onwards Sub-Saharan Africa was expected to begin to catch up[25]. This growth requires technological accumulation – taking advantage of existing stocks of world technology via technology transfer.

### 4.3 The Immigrant Communities and Industrialization

Fafchamps [1994] provides circumstantial evidence to show that contact among expatriate communities across international boundaries may play a crucial role in the international location of industries. Specifically, the relocation of textile and garment industries from Taiwan to Mauritius has, for instance, been attributed to networks established by local Chinese immigrants in Mauritius. In several Southeast Asian countries, the local Chinese immigrant communities provided similar international networks. Outside Mauritius located off the East African Indian Ocean Coast, immigrant communities in sub-Saharan Africa have failed to provide the same international networks.

The obvious questions are:

- Why did the Asian and Levantine immigrant-entrepreneurs' networks in Africa fail to evolve easily into the more complex organizations necessary for industrial transformation?
- Why did the all-important leap from the mercantile to the industrial economy fail to take place?
- Why did sub-Saharan African's immigrant [expatriate] communities fail to provide the type of leadership in industrial entrepreneurship which the Chinese and Indian immigrant communities provided in Southeast Asia?

It has been suggested that, unlike Taiwan and Hong Kong; the part of the world where sub-Saharan Africa's expatriate communities primarily came from are regions not faring much better than sub-Saharan African itself[26]. The Arab 'trading diasporas' in West Africa and Asian traders in East Africa, while they thrived in the network of multilateral reputation and enforcement mechanism, they were often inadequate for supporting the larger risks of longer-horizon industrial investment; they had limited capacity to pool risks and mobilize the capital in longer-term industrial investments. In East and Southern Africa, foreign control of the industrial sector was much more pronounced and this has had an adverse impact on the evolution of indigenous entrepreneurship even up to the present. These entrepreneur-communities preferred to deal with individuals from within their own respective communities, rather than expending extra resources to screen individuals from the African community – thus restricting market entry (Fafchamps 1994)[27].

[25] Has this happened? Growth theory predicts that developing countries will grow faster than developed ones, because they can borrow technologies from the rest of the world and increase their productivity much more rapidly than the developed countries.

[26] This 'simple fact' may explain, if partially, why sub-Saharan Africa has so far remained sidetracked by the industrialization process.

[27] Studies on Zimbabwe, for instance, report continued domination of manufacturing by entrepreneurs of European extraction, who appear reluctant to deal with indigenous African entrepreneurs.

### 4.4 Disadvantageous History and Geography

Another explanation to sub-Saharan Africa's failed industrial takeoff has evolved, which argues that the region's industrial underdevelopment is not simply a result of "policy failures', but, also, reflects the effects of disadvantageous history and geography (Brautigam 1998). This phenomenon did not permit sub-Saharan Africa to integrate into world trade and develop the maritime networks easily enough[28]. This perspective further argues that Sub-Saharan Africa's landlocked geography made transport more difficult than other regions, impeding intra-continental movements. Collier and Gunning [1999] and drawing on data in Sachs and Warner [1995] note that sub-Saharan Africa is more than seven times as landlocked as "other LDCs". The literature posits that transport costs are relatively high, and trade flows are lower than would be predicted by standard gravity modeling both for intra-African and external trade. Furthermore, the impact of geographical factors impact lies in the way they influence human settlements and vested interests of settlers.

## 5.Conclusions

Quantitatively, however, it seems clear that economic institutions and policies have been the most important factors differentiating the performance of fast-growing and slow growing nations. Sub-Saharan Africa could have followed the same basic strategy as East Asia in the early 1960s, but instead they chose to turn away from international trade, protect domestic industries from international competition, and followed more profligate fiscal policies.The results were little or no growth, stagnant wages, and continued widespread poverty. The adoption of an outward orientation allowed the Asian Tigers' to jump in a discrete fashion to a higher growth regime represented by the top parabola and reduced greatly the cost of technology acquisition. Once their growth rates surpassed that of the U. S. leader, the catching up process was underway. By now there is overwhelming evidence that countries which persisted with an import-substitution trade regime fared poorly and tended to retrogress in terms of relative income vis-à-vis the U.S.

However, no country has developed on the basis of unregulated openness to the world market; this is true both for the 'early industrializers' (Britain, Western Europe and the United States) and the 'Late industrializers' (the NICs) (Reinert 2007). Among the many challenges confronting Sub-Saharan African countries, is whether they should open up completely to the forces of the global market place (in the hope of maximizing its well-known benefits), or to take a more regulated approach so as to minimize or avoid its potential destabilizing forces.

[28] Consequently, the sub-Saharan African region was not exposed enough to the 'stimulus and learning opportunities ' which contrasts with the experiences of Southeast Asia.

The challenge to national economic policy in Sub-Saharan Africa lies in ability to devise strategies that optimize the advantages of engaging effectively with the world market and its key agents. For Sub-Saharan African countries to achieve catch-up with other regions, they must incorporate the following elements:

i.Evolution of a public sector with capacity to supply public goods that would act as a leverage on the private sector for productive entrepreneurship;

ii.Expansion of domestic demand based on competitiveness and selective Import Substitution Industrialization ;

iii.Diversify exports with clear controls on the imports of good and inflows of FDI and foreign capital; and

iv.Increase entrepreneurial capability of the state to support individual or private-sector enterprise or initiatives.

In conclusion, we draw out the ingredients of successful industrial transitions (as born out by the East Asian experiences) in the form of what Sub-Saharan African countries aspiring to undergo such transitions ought to do.

a) The operational level, which is the budgeting and aid modality discussions over pro-poor policies are quite active in Sub-Saharan Africa, while the formulation and implementation of growth strategies which are concrete, feasible and specific to individual poor countries have hardly begun. This imbalance should be the take-off point for concretizing the growth strategy in Africa. In order to solve the imbalance between growth and poverty reduction.

b) The criteria for good governance must be redefined in the Region. Emphasis must shift away from economic cooperation involving improvements in health, education and environment to initiating growth under international integration. For Sub-Saharan Africa to start, political stability and social integration are absolutely necessary[29]. What is interesting to note, however, is the fact that at a cultural and community level, compliance with the principles and derivatives of good governance in Sub-Saharan Africa is almost total. Failure of governance in the Region becomes pronounced at the intersection of culture and contemporary politics. The lesson here is that a combination of a well-structured mandatory domestic savings strategy, leadership and national vision would over time turn a democracy deficit into a powerful positive.

c) Most countries in the Region do not have strong and committed literate leadership. This is needed to support mechanisms for economic policies and popular support for growth-oriented development strategy. Strong national ownership of the

[29] The Region ranks very low on the benchmarks of all the variables and derivatives of governance, from democracy to corruption.

growth policy is a particularly important condition for economic growth as was done by East Asia which led to the implementation of the most suitable strategies.

d) Sub-Saharan African countries need to deepen engagement with the global market place for a technology transfer[30]. A critical factor in technological learning is engagement with the global economy that enables developing countries to absorb international knowledge, to access markets, and to develop strong export industries, which are especially important in the initial phases of industrial transition (Finance and development 2008, pp. 32-33).

e) Human capital is, arguably, the weakest link in the chain of factors that determine catch-up growth in Sub-Saharan Africa. Thus, Sub-Saharan countries need to complement engagement with the global market place with accumulation of human capital. The right type and mix of education investments facilitate technological accumulation and impacts positively on long-run growth and catch-up. It is impossible to benefit from current global trends in expansion of new technologies without an adequate stock of S&T manpower – a product of university postgraduate education[31].

A major focus on agriculture (agrarian revolution) would help the Region as a starting point. This sector, apart from providing food for an expanding population and, hence, guaranteeing socio-political stability, constitutes a backward-linkage sector for a processing industry that could form the initial starting joint for developing viable agro-based export industries. These linkages in agriculture are a qualitative step beyond the production and export of unprocessed goods. Such a transition would in itself entail a process of growth and diversification.

Growth in Sub-Saharan Africa could be sustained with key demographic developments, favourable trends in literacy and education, public health policies which would raise life expectancy, high levels of budgetary saving, and the protection of private property right amongst others. For sub-Saharan African countries to climb the ladder and join the world economy, promotion of labour-intensive manufactured exports should not be comprised. African countries should promote exports through a combination of policies — relatively free trade, convertible currencies, and macroeconomic stability — and through a set of innovative institutions — such as export processing zones, duty exemption schemes, and incentive packages for foreign direct investment.

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[30] Growth theory and development experience tell us that economies can learn faster than can invent.

[31] The fact is that the forces of globalization and technological change continuously reconfigure demand for skilled labour conveying competitive advantage to countries who are responsive to this stimulus.

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|---|---|---|

CONTENTS

ARTICLES

Economic Impact of Institutions on the Consumption of Forest Products in India — *Kiran Kumar R. Patil, G.R. Manjunatha* and *M.G. Chandrakanth*

Diversification of Cropping Pattern: Its Determinants and Role in Flood Affected Agriculture of Assam Plains — *Raju Mandal* and *M.P. Bezbaruah*

Future of Smallholders in the Indian Dairy Sector – Some Anecdotal Evidence — *Shiv Raj Singh* and *K.K. Datta*

Food Subsidy in India: Its Components, Trends, Causes and Reforms for Public Policy — *Vijay Paul Sharma* and *Munish Alagh*

RESEARCH NOTES

Impact of Fish Farming on Land Relations: Evidence from a Village Study in West Bengal — *Shantanu De Roy*

Policy and Governance for Sustaining Livelihoods and Natural Resources in Small Farms - A Case Study in Karnataka — *Seema Purushothaman, Sheetal Patil, Iswar Patil, Ierene Francis* and *Ingrid Nesheim*

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