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Abstract

After long suffering from benign neglect if not outright contempt, industrial policy is almost fashionable again. The global financial and economic crisis known as the Great Recession has forced researchers and policy makers to confront the reality that market forces alone generally do not lead to (constrained) Pareto-efficient outcomes. Many important national and global policy objectives (equality of opportunity for all citizens, financial stability and inclusion, environmental protection and pollution control, etc.) are simply often not reflected in market prices and not achieved by markets on their own. In addition to traditional justification for industrial policies—dealing with externalities and coordination issues—economists and policy makers now acknowledge the need to foster learning at the level of each economic agent and throughout society and the ultimate responsibility that the state must bear in that crucial process. But converting the now widely accepted theoretical principles of industrial policy into practical frameworks for concrete government action is indeed a daunting task everywhere and perhaps more so in the African context where the institutional underpinnings of effective government are often not as strong as one might have hoped. This essay highlights the intellectual foundations and broad principles of good industrial policy, outlines the contours of the policy agenda, and fleshes out the lessons learned. It argues that there has been substantial progress on the understanding and acceptance of industrial policy and that Africa could benefit enormously from it and from the unprecedented new opportunities brought to light by a multipolar world.

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Introduction

In his celebrated memoirs, Nelson Mandela recounts the story of having to battle his political adversaries and friends alike to convince them of the necessity of launching an armed movement in their fight against the unbearable brutalities of apartheid. Even his closest allies and supporters resented the idea of resorting to such a controversial strategy, one that raised deep moral questions and required complex implementation capabilities. They opposed his views until he was able to explain that the battle for freedom and prosperity is never an elegant linear path, and that sometimes one has to take unexpected detours and rely on trial-and-error tactics. He finally got his way. And yet, the most difficult challenge occurred after his recommendations were eventually validated by his peers, who then asked him to actually implement them. Mandela had no choice but to accept that responsibility. He quickly realized how testing it can be to move from impeccable theoretical reasoning to concrete action on the ground. He writes: "I, who had never been a soldier, who had never fought in battle, who had never fired a gun at an enemy, had been given the task of starting an army. It would be a daunting task for a veteran general, much less a military novice." (Mandela, 1994: 325)

Many economists who have long argued in favor of industrial policy—defined as a policy by which governments attempt to shape the sectoral allocation of the economy—now find themselves in a similar situation. After long suffering from benign neglect if not outright contempt by some of their self-proclaimed "mainstream" colleagues who long dismissed it disdainfully, industrial policy is almost fashionable again. The global financial and economic crisis known as the Great Recession has forced researchers and policy makers to confront the reality that market forces alone generally do not lead to (constrained) Pareto-efficient outcomes.[1] Many important national and global policy objectives (equality of opportunity for all citizens, financial stability and inclusion, environmental protection and pollution control, etc.) are simply often not reflected in market prices and not achieved by markets on their own. In addition to traditional justification for industrial policies—dealing with externalities and coordination issues—economists and policy makers now acknowledge the need to foster learning at the level

[1] The case for rethinking and rehabilitating industrial policy in made in Stiglitz and Lin (2013).

of each economic agent and throughout society, and the ultimate responsibility that the state must bear in that crucial process.

But converting the now widely accepted theoretical principles of industrial policy into practical frameworks for concrete government action is indeed a daunting task everywhere, and perhaps more so in the African context where the institutional underpinnings of effective government are often not as strong as one might have hoped. Just like Mandela, who found himself in the unviable position of having his controversial ideas recognized and being designated to make them work, proponents of industrial policy now have the responsibility of fleshing out an implementation framework that will deliver results for policy makers in developing countries. In undertaking that overwhelming assignment, they could learn from Mandela's basic insights when he faced a comparable task: "I began in the only way I knew how, by reading and talking to experts, he writes. What I wanted to find out were the fundamental principles for starting a revolution. I discovered that there was a great deal of writing on this very subject, and I made my way through the available literature…" (op. cit.)

There is indeed a rich literature on industrial policy and several advanced and developing countries have successfully implemented industrial policies (though not always calling it by that name). Our understanding of industrial policy has been enriched through practice and constant learning. This essay, the outcome of a conference held in Pretoria,[2] highlights the intellectual foundations and broad principles of good industrial policy, outlines the contours of the policy agenda, and fleshes out the lessons learned. Its focus is on Africa, still the home to most of the "bottom billion" poor people in the world, but a continent on the move—the fastest-growing in the world.[3] It argues that there has been substantial progress on the understanding and acceptance of industrial policy, and that Africa could benefit enormously from it, and from the unprecedented new opportunities brought to light by a multipolar world.

[2] The International Economic Association roundtable conference on "New Thinking on Industrial Policy: Implications for Africa" was held in Pretoria, July 3-4, 2012, and co-sponsored by the World Bank, UNIDO, and the South African Economic Development Department. The proceedings are being published in Stiglitz, Lin, and Patel (2013), forthcoming.

[3] Over the past decade real income per person in Africa has increased by more than 30 percent, whereas in the previous 20 years it shrank by nearly 10 percent. Over the next decade its gross domestic product is expected to rise by an average of 6 percent a year.

The Acknowledgment of Some Self-Evident Truths

"To truth only a brief celebration of victory is allowed between the two long periods during which it is condemned as paradoxical, or disparaged as trivial." (Schopenhauer 1958 [1818], p. xxv) The idea of industrial policy has gone through these various stages. Once considered anathema among mainstream economists and in the public discourse, it has become a matter of almost common sense. Conservative and liberal leaders throughout the world are now promoting it as a vehicle for creating high-skill jobs, building more equitable societies, and protecting the environment, and development institutions appear more inclined to acknowledge it as an essential tool to foster structural change in advanced and low-income nations.

There is now wide recognition among researchers and policymakers of the many reasons countries should design and implement industrial policy: to correct market failures, situations where markets by themselves do not lead to efficient, or desirable, resource allocations, and in some cases, even to correct other government failures, where other, harder to alter, government policies “distort” resource allocations.

Such truths have been known and part of economic theory since at least Adam Smith, and the legitimacy of government intervention was well described by List et al. (1856). Following Marshall (1920), who pointed out the important role of externalities, and the work of Arrow and Debreu that laid out the highly restrictive conditions under which markets resulted in (Pareto) efficient outcomes, neoclassical theorists eventually acknowledged that markets often do not work as they are supposed to. But conservative economists continue to argue for a limited role for government intervention.

First, they argued that these market failures were limited in scope. In the wake of the environmental destruction and the financial collapses associated with unfettered markets, such views have little support today. But even when conservatives grant that there are extensive market failures, they have little confidence that government intervention would succeed in improving matters. They cite examples of government interventions to correct market failures that led to economic distortions. Against market failures they set what they argue were pervasive government failures, especially in developing countries. Some argue that these problems were especially severe in industrial policies. Confronted with the implementation challenges associated with the task, many economists choose to dismiss entirely the notion of industrial policy.

Yet such claims have been supported neither by theoretical nor empirical/historical analyses. The latter have made clear that there were many instances of successful government intervention. Around the world, there is a broad consensus that efforts to control environmental externalities have, by and large, worked, and have improved our well-being—by an amount that far exceeds any costs that may have been imposed. Cities where the air was not breathable have become livable again; water that was badly polluted has become drinkable and suitable for swimming.

Even in the area of industrial policy there have been notable successes. Indeed, the United States, for more than 150 years, has benefited from such policies, from the development of the agricultural sector (the dominant sector in the economy in the mid-nineteenth century), to the development of telecommunications (from the development of the first telegraph line in the first half of the nineteenth century), to the development of the internet (one of the central areas of growth in the twenty first century).

Arguably, the East Asia Miracle—one of the most remarkable episodes of growth in history—was based largely on government interventions into the market economy, including extensive use of industrial policies.[4] These examples should make it clear that the "political economy" problems posed by critics of government intervention are neither inevitable nor universal. (Conservative critics of industrial policy provide no general theory that the political economy problems are severe, inevitable, and universal.)

This has led to a marked shift in the policy debate, to the circumstances under which industrial policies will work, and the forms of industrial policy that are appropriate for countries in different stages of development and with different political and economic institutions. For instance, some have made a distinction between economywide ("horizontal") policies, defined as

[4] See World Bank (1993) and Stiglitz (1996).

consisting of general business environment policies that have only indirect impact on any given sector or industry, and sector- or industry-specific types of industrial policy (often labeled as "vertical").

Thus, in the 1990s, it became the conventional wisdom that the former should be the foundation for policymaking—as they ensure a level playing field for market forces to determine successful industries—and the latter opposed—because governments could not be trusted to "pick winners". Even then, though, many, even in the international economic institutions, questioned this wisdom, questioning, for instance, whether the intellectual foundation for such a distinction was flawed (Hoff and Stiglitz 2001).

But it took the 2008 Great Recession to bring about a wider understanding of the deficiencies in the conventional wisdom and in the standard models upon which they rested. Those models failed, by all the most important tests of scientific theory. They did not predict that the financial crisis would happen; and when it did, they understated its effects. Monetary authorities allowed bubbles to grow and focused on keeping inflation low, partly because the standard models suggested that low inflation was necessary and almost sufficient for efficiency, growth, and prosperity (Stiglitz 2011). After the crisis broke, policymakers relying on the models floundered. In the wake of the crisis, macroeconomists from various ideological backgrounds are now reexamining some of the discipline's dogmas, questioning what were thought to be infallible certainties, and stressing the importance of new knowledge.

Summing up the intellectual changes that are needed, the IMF Chief Economist writes: "We've entered a brave new world, a very different world in terms of macroeconomic policymaking. In the age-old discussion of the relative roles of markets and the state, the pendulum has swung – at least a bit – toward the state. There are many distortions relevant for macroeconomics, many more than we thought was the case earlier. We had largely ignored them, thinking they were the province of the microeconomist. As we integrate finance into macroeconomics, we're discovering that distortions within finance are macro-relevant. Agency theory – about incentives and behaviour of entities or 'agents' – is needed to explain how financial institutions work or do not work and how decisions are taken. Regulation and agency theory applied to regulators themselves is important. Behavioural economics and its cousin, behavioural finance, are central as well." (Blanchard 2011). Such candor and humility from a place known for its staunch defense of orthodoxy can only be welcome.

The crisis has made clear that these market failures are of first-order importance—they affected the overall performance of the economy. Macro-economists have focused on how they affect economic volatility and what public policies might stabilize the economy. Here we focus on *industrial policies*, policies directed at affecting the shape of the economy (including the sectoral allocation of resources and the choices of technology within any given sector). While discussions have traditionally focused on how such policies can affect the long-run rate of growth, other social objectives to which such policies may be directed include improving the distribution of income, increasing employment, protecting the environment, and ensuring sustainability.

The global financial and economic crisis has also brought to light the fact that market forces do not exist in a vacuum, and that they are all shaped by laws, rules, and regulations, each of which is never truly "neutral," as it explicitly or implicitly favors or discourages particular industries, sectors, firms, and social players. All governments really do have an industrial policy. The only difference is between those who construct their industrial policy consciously and those who let it be shaped by others, typically by special interests, who vie with each other for hidden and open subsidies, for rules and regulations that favor them, usually at the expense of others.

In recent years, there has been increasing understanding of the long list of "market" failures that government intervention should and could address. For instance, it is now widely accepted that the government should try to do something about negative externalities (from pollution or from excessive risk taking in the financial sector). It has also become increasingly clear that government interventions are needed to ensure proper coordination of risky investment decisions that no single firm or private agent alone can pursue efficiently. So too, the government has played a constructive role in promoting industries and activities that give rise to *positive* externalities—most notably those associated with learning and research.

Thus, there is now an acceptance that governments should not limit themselves to engaging in just "horizontal" interventions. Those who reject industry-specific interventions must also confront the law of scarcity, especially in the context of developing countries. Identification of new industries and prioritization of government's limited resources (and more broadly, society's limited resources) to facilitate the development of those industries are both essential for successful growth strategies in Africa. Why? Because the infrastructure improvements required are often industry specific. And markets cannot be relied upon to provide this infrastructure.

One simply has to look at the list of recent success stories in African countries to understand the role that industrial policies have already been playing: textiles in Mauritius, apparel in Lesotho, cotton in Burkina Faso, cut flowers in Ethiopia, mango in Mali, and gorilla tourism in Rwanda all required that governments provide *different* types of infrastructure. The refrigeration facilities needed at the airport and regular flights to ship Ethiopia's cut flowers to the auctions in Europe are obviously quite different from the improvements required at the port facilities for textile exports in Mauritius. Similarly, the type of infrastructure needed for the garment industry in Lesotho is distinct from the one needed for mango production and export in Mali or for attracting gorilla tourism in Rwanda. Because fiscal resources and implementation capacity are limited, the government in each of those countries had to prioritize and decide which particular infrastructure they should improve or where to optimally locate the public services to make those success stories happen.

Deng Xiaoping explained that pragmatic wisdom at the beginning of China's transition to a market economy when he advocated allowing a few regions and people to get rich first so as to achieve common prosperity for all people in the nation. The dynamic growth in those regions and industries would increase fiscal revenues, giving the government more resources to improve infrastructure (or education or technology) for other regions in the nation later.

Identification of new sectors or lines of business and prioritization of infrastructure investment are also necessary because economies of scale may enhance the ability of a country (and the firms within the country) to be competitive in the globalized world. Without government coordination, firms may enter into too many different industries (all of which may be consistent with the country's long-term or dynamic comparative advantage). As a result, most industries may not form clusters that are sufficiently large and will not be competitive in the domestic and international markets. A few clusters may emerge eventually after many failures. Such a "trial and error" process is likely to be long and costly, slowing down the country's economic development. It is therefore imperative for a "facilitating" state (or what is sometimes called a "developmental state"[5]) in a developing country to identify and select new industries that are consistent with comparative advantage, use its limited resources to improve infrastructure for a limited number of carefully selected industries, provide adequate incentives for first movers, and coordinate private firms' related investments in those industries so that clusters can be formed successfully and quickly.[6] The extent to which governments perform the roles just described—how well they perform these roles—may be among the most important determinants of long-term economic success.

There is also wide acceptance of a new rationale for industrial policy. Economic development is the process of technological diffusion and industrial upgrading. It involves making knowledge available to the largest number possible of economic agents and fostering constant learning. Yet knowledge is different from conventional goods. It is, in a sense, a *public good* (i.e., the marginal cost for another person or firm enjoying the benefits of knowledge—beyond the cost of transmission—is zero). Moreover, usage is non-rivalrous. Markets (anywhere, whether in developed or developing countries) are not efficient in the production and distribution of public goods.

If economic development is essentially about the diffusion of knowledge among the broadest segments of society, then it is inevitable that there be, or there ought to be, a role for government intervention. It follows that industrial policy should also be about facilitating the generation and acquisition of new knowledge that empowers households and firms. In fact, formerly poor countries—those in East Asia—that have been able to converge toward the income levels of advanced economies have generally done so through learning. The mantra that governments should not be involved in "picking winners" is therefore beside the point: the objective of any

[5] For a discussion, see Noman and Stiglitz (2012b).
[6] Note that it may be more important to select *some* industry on which to focus attention than to select the *best* industry on which to focus.

government should be not only to correct negative externalities but also to promote positive externalities that arise from learning and sharing knowledge.

African Opportunities and Challenges[7]

Today, Africa is a continent facing unprecedented opportunities for and challenges to economic growth and development. The widely shared optimism was expressed in *The Economist*: "Never in the half-century since it won independence from the colonial powers has Africa been in such good shape. Its economy is flourishing. Most countries are at peace. Ever fewer children bear arms and record numbers go to school. Mobile phones are as ubiquitous as they are in India and, in the worst-affected countries, HIV infections have fallen by up to three-quarters. Life expectancy rose by a tenth in the past decade and foreign direct investment has tripled. Consumer spending will almost double in the next ten years; the number of countries with average incomes above $1,000 per person a year will grow from less than half of Africa's 55 states to three-quarters." (*The Economist* 2013)

But each statistic showing unprecedented success and new opportunities is matched by some highlighting the difficulties the region faces going forward. Sub-Saharan Africa has averaged 5 percent growth or more over the past decade. There are also countries that have an average growth rate of over 7 percent. Many of the countries have demonstrated high levels of competency in macro-management and even resolve in fighting corruption. However, the average gross national income (GNI) per capita of about $1,200 in 2012 was less than Bolivia's ($1,810).[8] Moreover, the Region's "most successful" economies are actually much poorer than the poorest countries in other regions of the world: Mozambique and Tanzania, which have been among the top-ten fastest-growing countries in the world in the past two decades, still have GNI per capita in the range of $400-500. Liberia and Sierra Leone, two countries often hailed as "turnaround successes," still rank very low at $160 and $340, respectively. The Democratic Republic of Congo, Africa's third largest country, comparable in size to Western Europe, and a

[7] For further discussions of these issues, see Stiglitz (2013) and Noman and Stiglitz (2012a and 2012b).
[8] Source: World Development Indicators, World Bank.

place where wars have claimed roughly 4 million victims in the last five years alone (according to the United Nations), had a GNI of less than $200—similar to Burundi's.

A static analysis using simply the mathematical rule of 72 indicates that at its current growth rate of 5 percent a year, it would take about a quarter century for Sub-Saharan Africa to double its income per capita—and reach today's still low GNI per capita of Paraguay ($2,250). Even if one assumes a very optimistic elasticity of poverty with respect to income of 1.5, Sub-Saharan Africa's current rate of growth would translate into a reduction of only 3.3 percent per year of the region's high extreme poverty headcount index (1.7 points each year from the current 50 percent).[9] Other developing regions of the world have been able to do much better in recent decades.

Widespread poverty is not the only worry: there are concerns about sustainability of economic growth, unemployment, and inequality. About a third of the continent's good growth performance is attributable to commodities and many African countries are still discovering new oilfields and mineral deposits. But history shows that excessive reliance on raw natural resources is never a prudent development strategy. While today's prices are near record highs, commodity markets are often known to collapse abruptly. In addition, recent gains in agriculture may be undermined by climate change and environmental concerns. Already, savannahs are drying out, water tables are dropping and rains are either failing or becoming more irregular.

The dynamics of demographic growth makes things even more challenging: with population growth projected to be 2.2 percent in the next 25 years, the African private sector faces the challenge of creating employment opportunities to absorb the youth bulge: about two-thirds of the region's population is under the age of 24 and is underemployed—including those with college and university degrees. Most workers are trapped in very low productivity activities in subsistence agriculture and the informal sector. Sub-Saharan Africa will have to generate 7-10

[9] A back-of-the envelop calculation is as follows: 5 percent GDP growth a year with a projected 2.2 percent population growth for the next 25 years (according to United Nations projections) equals a GDP per capita of 2.2 percent a year. Multiplying that rate by a (generous) elasticity of poverty with respect to income of 1.5 gives a reduction of poverty of 3.3 percent a year, which applied to the current headcount index of 50 percent is about 1.7 points.

million jobs annually in order to accommodate the high rate of population growth (World Bank 2013).

For a region facing such opportunities and challenges, industrial policy is not a speculative intellectual exercise for academic debates, but a necessary economic tool to address the pervasive discrepancies between private gains and social returns and to correct major sectoral or other misallocations. In the particular context of Africa, among the priorities are: (a) ensuring that resources (labor, capital, knowledge) are transferred from low- to high-productivity sectors and areas, including the migration of Africa's abundant unskilled rural labor to unskilled labor-intensive industries and (b) increasing productivity through learning and education.

Neither of these will occur on its own. Proactive action must be taken by policy makers It is necessary, for instance, for the government to facilitate the growth of existing and emerging unskilled labor-intensive industries. Without such action, there is a risk that urban unemployment will increase even beyond the current high levels. On the supply side of the labor market, African governments must also provide basic education and training to enhance the rural out-migrants' ability to adapt to the new working environment and requirements in the industrial sector.

African political leaders generally understand these responsibilities and should be—and often are—using all the tools at their disposal to meet their goals. In earlier periods, some in the international community discouraged them from using one important set of tools—industrial policies. We argue for "correcting" this misguided advice—advice which arguably contributed to the deindustrialization of Sub-Saharan Africa (to the point where today, the industrial sector has a smaller share of GDP than it had in 1970[10]). (Deindustrialization is *one* of the factors that may have contributed to the decline in GDP per capita in Sub-Saharan Africa between 1976 and 1994.[11]) The question today is not whether African governments—like all governments in the

[10] The value added of industry as a proportion of GDP in Sub-Saharan Africa was 31.2 percent in 1970, increased to 37.8 percent in 1980, and is 30.4 percent today, after a 1998 low of 28.4 percent (World Bank World Development Indicators database.)

[11] GDP per capita in Sub-Saharan Africa increased fairly steadily from $416 in 1960 to $577 in 1977. At that point, it began an uneven decline (some intervening years marked increases) to $482 in 1994. It regained its 1977 level in 2006, and is now $640. (World Bank World Development Indicators database.)

world—*should* be engaged in industrial policy, but whether they *are* doing it well and how they can do it better.

Realities and Myths about Africa's Capabilities

There has been persistent skepticism about the applicability of industrial policy to the particular context of Africa. Various factors –pathological politics and pervasive corruption– are said to make industrial policy ineffective or even counterproductive for African countries. Skeptics also provide an impressive list of knowledge requirements about targeted industries that government officials would need to know in order to design a successful industrial policy. They question the capacity of governments in poor countries to meet those requirements.

Some of these arguments are deserve serious attention. First, all countries at the low-income level tend to lack high bureaucratic capacity by definition. But market failures also tend to be more pervasive and there is often a shortage of private sector entrepreneurship. Hence, in many cases, state-led development (often employing market mechanisms) has been shown to be the most effective development strategy. The point, as we have previously noted, is that these concerns should affect the form of industrial policy, not whether the government should undertake industrial policy.

On the other hand, the argument that the knowledge requirements for the effective design of industrial policies are beyond the capacities of developing countries is not persuasive. Some of the so-called knowledge requirements identified for industrial policy are likely to be more relevant for more-advanced industries in high-income countries. For industries with low technical content, the knowledge requirements are markedly more limited. Moreover, instead of analyzing the technical nature of various industries, government officials can rely on the advantage of backwardness and observe what the dynamically growing countries with similar endowment structures are already doing or have done in the past.

By the same token, broad based measures, e.g. encouraging the industrial sector broadly, do not necessitate the government making fine tuned judgments. As Greenwald and Stiglitz (2013) argue, such policies are desirable so long as learning elasticities and knowledge spillovers are greater in those sectors. Industrial policies can "tilt" the playing field toward sectors or technologies with positive spillovers/externalities and away from those with negative spillovers/externalities.

Central to creating a modern economy is creating a *learning economy and society* and government intervention can play an important role in doing this. The difficulties of implementing *any* type of public policy anywhere in the world are well known. Critics point to the scope for rent seeking. Avoiding rent seeking is but one of the challenges facing the effective implementation of industrial policy. In some cases, governments have been tempted to ignore economic "rationality" and have pursued more sophisticated sectors in their zeal to emulate advanced countries; sometimes they have extended even successful policies well beyond their effective time span.

These concerns are legitimate but apply not only to whatever is labeled "industrial policy." The potential for abuse exists for any public policy: many governments around the world have misused monetary and financial regulatory policy, infrastructure policy, or education policy. But few would argue that as a result, governments should eschew the use of monetary and financial regulatory policy, infrastructure policy, or education policy. The contrast between attitudes toward monetary and industrial policies is especially striking: While the fact that so many governments (including that of the United States) have mismanaged monetary policy is generally not viewed as grounds for abandoning monetary policy; the fact that industrial policies have *sometimes* been mismanaged has often been used as an argument against such policies. And there is ample evidence of "capture" of the U.S. Federal Reserve by the financial market in the years before the crisis (and some critics say even after). Moreover, what some thought were mistaken industrial policies—such as those undertaken by Korea in the late 1960s and 1970s—proved enormously successful, propelling that country forward, to enable it to join the OECD, the club of the advanced industrial countries.

Pervasive governance issues are often offered as reasons not to engage in industrial policy. But the countries that successfully engaged in industrial policies in recent decades had, at the time they embarked on their development strategies, typically had far from perfect governance structures (and as the crisis illustrated, even the advanced countries have governance structures that are far from ideal).

While political economy problems need to be taken seriously, one should not let the best be the enemy of the good. To wait for the perfect African state to emerge before industrial policy can be implemented would imply never getting anything done. In the real world, successful countries are the ones that have managed to find “good enough” solutions to their political economy problems and implemented these sound policies. Deficiencies in governance should affect the type of industrial policies and the manner in which they are implemented, not the use of industrial policies themselves.

Moreover, the decades of successes and failures in industrial policies have provided multiple lessons on how to design effective industrial policies. For instance, Lin and Monga (2013) argue forcefully that the traditional type of industrial development strategies pursued by developing countries in the 1950s and 1960s often encouraged firms to enter industries that were inconsistent with their comparative advantage (even broadly defined to include “dynamic” comparative advantage). Firms in these industries were not viable in an open, competitive market. Their survival depended on heavy government protection, large subsidies, and direct resource allocations through measures such as monopoly rent, high tariffs, quota restrictions, and subsidized credits. The large rents embedded in those measures created many distortions and easily became the targets of political capture (Lin 2012).

The success of East Asian economies in designing and implementing smart government interventions proves that it is possible to promote the development of industries that are consistent with the economy’s latent comparative advantage. Firms are viable once the constraints to their entry and operation are removed. The incentives provided by the government to the first movers are to be temporary and small, solely for the purpose of compensating for their information externality. In that context, they have shown that the issues of pervasive rent-seeking and the persistence of government intervention beyond its initial timetable can be mitigated; indeed, their experiences provide insights into how this can be done. The likelihood of governance problems arising is much reduced when the government facilitates the development of new industries that are consistent with the country's changing comparative advantage determined by the change in its endowment structure.

Other skeptical arguments against industrial policy in Africa are flawed and reminiscent to those made throughout history to dismiss industrialization attempts in other regions of the world.[12] Today's 'structural' theories of 'Afro-pessimism' are usually *ex post* justifications of the status quo, confusing the causes and the symptoms of underdevelopment. The notion of a capacity deficit in countries such as South Africa, Nigeria, Kenya, or Cameroon is simply a myth. In fact, it could be argued that these countries now have more capacity and potential access to financial resources from foreign savings with which to implement such policies than China had when it started its structural transformation process in the late 1970s. And in a world where labor has become a very mobile factor of production, even countries with much weaker human capital stocks and administrative capacity could easily attract foreign expertise to help design and implement these policies.

While the challenges of implementing industrial policy in *any* country need to be taken seriously, not only is this is a moment in which such policies are especially needed, this is a moment of real opportunity. They are needed in part because Africa is going through a major structural transformation and markets by themselves manage such transformations poorly, for a variety of reasons that have been set forth elsewhere.[13] But there is, in addition, a major structural transformation going on globally: rising real wages and current appreciation in China will result in at least significant parts of its manufacturing base moving elsewhere. There is an opportunity for some of it, perhaps a substantial part, to move to Africa. If that were to happen, it would provide a significant boost to growth and employment. It would reverse the pattern of deindustrialization that began with the structural adjustment programs foisted on Africa in earlier

[12] Chang (2008) reminds us that, not so long ago, it was not unusual to refer to 'Lazy Japanese and Thieving Germans'. People do differ in their tastes, norms, cultures, and behaviors (Basu 2011). But social norms and customs are not hardwired into genetic structure. There are fascinating studies which show how Japan, as recently as hundred years ago, was a very unpunctual society. There are studies showing that Koreans, barely, fifty or sixty years ago, lacked industry and drive. Given that Japan is today one of the world's most punctual countries and Koreans one of the most industrious people, this shows that norms which look ingrained are actually malleable. There is need for research to understand how good norms are formed and dysfunctional norms can be rooted out.
[13] See Lin (2012).

decades. It would enhance the chances of creating the kind of learning society and economy that is often associated with the transition away from agriculture to manufacturing. But if this is to happen, active government policies will almost surely be needed. Many African countries have gotten the fundamentals right—they have achieved macro stability and reduced corruption. But the inflow of foreign direct investment, apart from the natural resource sector, has been disappointing. There is at least some hope that, when combined with these other policies, there will be the kind of acceleration of growth that will be necessary if the region is to make the inroads into poverty for which it has so long strived.

A New Contribution to the Debate

The papers presented in a forthcoming volume by Stiglitz, Lin, and Patel (2013) cover theoretical and policy issues of industrial policy, with a particular focus on the challenges and possibilities in the African context (see Annex). The book begins with a discussion of broad conceptual issues of industrial policy and the respective roles of the state and the market in fostering inclusive economic growth and building equitable societies. Each subsequent section then takes up a particular aspect of Africa's industrialization challenge and debates what the scope should be and which policy instrument may be used to achieve sustained and inclusive growth. As we noted earlier, virtually every aspect of economic policy affects the structure of an economy—and can be viewed through the lens of industrial policy. Thus, we look not only at traditional "industrial policy" topics (trade, how to build industrial policies based on natural resource endowments), but non-traditional ones, such as macroeconomics and industrial structure, exchange rate policies, competition, entrepreneurship, financial markets, land outsourcing, and governance. Our discussions are grounded on country experiences, which are described extensively in several of the chapters.

The first section deals with new theoretical thinking on industrial policy and its transformational potential for Africa. In "Learning and Industrial Policy: Implications for Africa," Greenwald and Stiglitz open the section by arguing that pervasive market failures (and other distortions that result in private rewards being misaligned with social returns) provide a rationale for industrial policies. The chapter focuses on one particular set of market failures, those that arise in the process of learning: Learning is especially important for developing countries as they strive to close the gap between their incomes and those of the more developed countries. Disparities in incomes are as much related to gaps in knowledge as they are to gaps in resources. The authors argue that accordingly, a central focus of development policy should be how to promote learning, how to create a "learning economy and society." Greenwald and Stiglitz note that much of the advice of the past, based on neo-classical models, not only gave short shrift to these concerns, but may actually have led to counterproductive policy prescriptions that were adverse to learning, and hence to long-term increases in standards of living. For Africa, as it attempts to reindustrialize, to restructure its economies to become more integrated into the global economy and move away from excessive dependence on commodity exports, to raise standards of income, increase employment, reduce poverty and inequality, and protect a fragile environment, industrial policies are especially important.

Lin, in "From Flying Geese to Leading Dragons: New Opportunities and Strategies for Structural Transformation in Developing Countries," notes that economic development is a process of continuous industrial and technological upgrading in which any country, regardless of its level of development, can succeed if it develops industries that are consistent with its comparative advantage, determined by its endowment structure. The successful strategy for developing countries is to exploit the latecomer advantage by building up industries that are growing dynamically in more advanced, fast growing countries that have endowment structures similar to theirs. By following carefully selected lead countries, latecomers can emulate the leader-follower, flying-geese pattern that has well served catching-up economies since the eighteenth century. Lin suggests that the successful large middle-income countries such as China, India, and Brazil will be new growth poles in the world; and their dynamic growth, their climbing of the industrial ladder, offers an unprecedented opportunity to all developing economies with income levels currently below theirs—including those in Sub-Saharan Africa.

The second section surveys lessons in structural transformation from economic history. In "Accumulation of Capabilities, Structural Change and Macro Prices: An Evolutionary and Structuralist Roadmap," Cimoli and Porcile present a brief theoretical background on learning, capabilities, and innovation, with the aim of building bridges between evolutionary microeconomics and structuralist theories of economic development. They discuss the role that industrial policies play in reducing the technology gap and transforming the production structure within a developing context, giving special attention to the case of external shocks that affect the consolidation of technological capabilities. Chang, in “Industrial Policy: Can Africa Do It?” challenges the persistent skepticism about the applicability of industrial policy to Africa. He assesses the thesis that conditions in the region are so special that the continent can never use industrial policy productively. He critically reviews old arguments of ‘Afro-pessimism’ on the bases of climate, geography, history, and culture as well as new arguments on natural resource abundance, political economy, bureaucratic capabilities, and the changes in global economic rules. He suggests how constraints to the effective implementation of industrial policy may be overcome through an appropriate mix of realism, reform, and investments.

The third section examines the new global order and its opportunities for African reindustrialization. Monga, in “Winning the Jackpot: Jobs Dividends in a Multi-polar World,” surveys of some of the main strands of the theoretical literature on unemployment and employment and stresses the fact that findings based on the experience of richer countries may not be transferable to low-income countries whose endowment and production structures are profoundly different from that of high-income economies. He then sheds light on the new economic opportunities that African countries may derive from the dynamics of globalization—especially the economic success of large emerging economies such as China and Brazil—and offers a simple analytical framework for identifying opportunities for labor arbitrage in the global economy, with a practical policy framework for exploiting them.

In the next chapter, “Walking (Stumbling?) on Two Legs: Meeting Sub-Saharan Africa's Industrialization Challenge,” Kaplinsky argues that industrial development is currently framed by three major dynamics: the increase in the number of people living in absolute poverty despite high rates of growth; the emergence of China, India, and other southern economies as sources of efficient appropriate technologies; and the commodity price boom, which may not last. He suggests that these dynamics present both threat and opportunity to future industrial development, and justify government policy intervention.

Having laid down the rationale for industrial policy in Africa, the potential new benefits of globalization, and the potential role of industrial policies in helping African countries take advantage of these new opportunities, the book offers an operational agenda for the implementation of industrial policies. The fourth section is devoted to "enabling environment" for the vision to materialize, focusing on the macroeconomic and governance requirements. In "How Macroeconomic Policy Can Support Economic Development in Sub-Saharan African Countries," Heinz starts with the observation that because of institutional, ideological, and structural constraints, the scope for conducting macroeconomic policy to support industrial development in Africa has traditionally been rather limited. He recommends broadening macroeconomic policy to enable it to better serve as an "instrument" of industrial policy. To illustrate how this can be done, he focuses on management of the real exchange rate, monetary policy, and the mobilization of domestic fiscal resources.

Creating a good environment for industrial development also requires putting in place a level playing field that encourages growth, risk-taking, and innovation and that provides scope for new entry. In "Competition Policy, Industrial Policy and Corporate Conduct," Roberts examines the role of competition law in industrial development and the relationship between the work of competition authorities and industrial policy in South Africa. He notes that the South African competition authorities have been successful in uncovering cartel conduct and blocking anti-competitive mergers, but they have had little success in addressing the power of entrenched dominant firms whose decisions largely determine the development path of the economy. He suggests that altering the trajectory of industrial development will require a competition regime that reinforces industrial policy and curbs the power of dominant firms so that they can compete on the sole basis of dynamic capabilities.

The next chapter, "Political Settlements and the Design of Technology Policy" by Khan, sets the governance conditions for effective industrial policy. Khan observes that policies designed to address specific problems of technology adoption also create rents that the beneficiaries of these policies can try to capture without necessarily delivering results. If the organizations benefiting from rents are powerful and can use rent-seeking strategies to block the implementation of necessary conditions for success, technology policies can have poor results. Defining the distribution of power across economic, political, and bureaucratic organizations in a society as the prevailing 'political settlement,' Khan notes that the successful implementation of ambitious technology policies in East Asian developmental states happened in political settlements that enabled the imposition of difficult conditions on powerful organizations. While political settlements in most developing countries preclude many of these types of technology policy, there are usually several possible policy responses to any particular technology acquisition problem, with different conditions required for successful outcomes. Indeed, technology policies have worked in countries that did not have developmental states of the East Asian type when the required enforcement conditions were credible in their political settlements.

This raises the burning question: Can the "development state" work for Africa's industrialization? Noman, in "Infant Capitalists, Infant Industries, and Infant Economies: Trade and Industrial Policies for Early Stages of Development in Africa and Elsewhere," points to the neglect of the institution of "capitalists/entrepreneurs"—of particular salience for countries at early stages of development. He suggests that there is an "infant capitalist" argument for protection and lessons from successes and failures in trade and industrialization policies, including in institution building, can be used to establish well-designed systems of protection that help to divert rents to productive activities and learning.

Taking stock of intellectual progress and integrating some of the viewpoints expressed in this book, Joseph's chapter, "Industrial Policies and Contemporary Africa: Frontiers of Political Economy and Social Science," concludes this section by providing a framework for multidisciplinary work on governance. He recommends that arguments, hypotheses, and models advanced by economists be more closely juxtaposed with the work of researchers in other social science disciplines.

Complementing the discussion of horizontal, cross-cutting problems of macroeconomics and governance, the fifth section tackles trade, finance, and sectoral issues. In "Does Financial Market Liberalization Promote Financial Development?" Rashid investigates whether the liberalization of financial markets indeed promoted financial development. His empirical analysis covers 13 Sub-Saharan economies and shows that financial market liberalization did not lead to financial development in these economies. He finds strong negative correlation between the level of financial market liberalization and the domestic savings rate and credit to the private sector and a strong positive correlation between financial liberalization and the real interest rate and interest rate spread in these countries. While his results are robust across different model specifications and estimation methods, he also points to the need for further research to determine how various aspects of financial market liberalization – abolition of credit targets and credit controls, de-regulation of interest rates, removal of entry barriers, privatization of the banking sector etc. – affect various dimensions of financial development.

Chandrasekhar's chapter, "Financialization as an Obstacle to Industrialization," complements and reinforces Rashid's analysis. Chandrasekhar notes that there is no monotonic, positive relationship between financial development and growth. Indeed, in certain circumstances, through a number of routes, excessive financialization constrains industrial growth. Moreover, it is not just the size of finance that matters, but also the structure of the financial system. Experience shows that late-industrializing countries need to shape the markets, institutions, and instruments that constitute their financial structures and regulate the financial system to use finance as an instrument for industrial development. However, financial liberalization undermines such specially constructed systems and constrains industrial development, besides increasing financial fragility and precipitating crises.

The next chapter shifts the focus from the financial sector to natural resources—a subject of immense relevance to Africa, given the current dependence of so many of the countries in the region on resources. Jourdan, in "Towards a Resource-based African Industrialization Policy," takes a broad view of Africa's natural resource endowments, not only the hydrocarbons and minerals, but also its land and water, which support a wide range of industries, including agriculture, forestry, fisheries, and tourism. He shows how Africa's unique natural resource base could provide its peoples with an important lever to achieve industrialization and development objectives. But this will require moving away from the "free mining" mineral regimes inherited from colonialism and taking advantage of and developing linkages—forward, backward, and horizontal. Jourdan shows in detail how industrial policies can play a pivotal role in ensuring that the resource rich countries move beyond simply a dependence on resources. He warns that the current polices risks leaving Africa with little more than ghost towns or with exhausted soils and depleted fisheries, forests, and other natural endowments.

A closely related and difficult issue is that of land tenure and land reform, which Deininger takes up in "The Global 'Rush' for Land: Does It Provide Opportunities for African Countries?" For countries dependent on agriculture, the recent wave of investor interest in farmland could, in principle, help set in motion a virtuous cycle for economic growth and poverty reduction. However, historical evidence suggests that these opportunities are often squandered, with negative long-term impacts. Deininger reviews past experience, quantifies country-level potential for area expansion *vs.* intensification, and identifies the determinants of countries' attractiveness for investors in the initial stages of the 'land rush.' Noting that weak land governance seems to increase, rather than reduce, land demand, he argues that improving land and natural resource governance and enhancing the transparency and accountability of the process of land sales will be needed if the benefits of these important assets are to be fully realized.

Njinkeu, Lohi, and Djiofack conclude the section with their chapter on "Trade Facilitation and African Industrialization: An Agenda for the Textile and Apparel Industry." As formal trade barriers have come down, in many instances, the increases in trade have proved disappointing. This has shifted attention to other barriers to trade, which include the absence of infrastructure, supply side constraints (including the absence of finance),[14] and procedures and processes associated with the movement of goods across borders. The latter are referred to as trade facilitation. The authors show that even small improvements in trade facilitation could lead to substantial increases in exports and enhanced regional integration. Moreover, trade facilitation could offset the negative impacts of tariffs on African trade.

The last section of the book is devoted to analyses of cross-country experiences and case studies. In "Industrial Structural Change, Growth Patterns and Industrial Policy," Alcorta, Haraguchi, and Rezonja analyze industrial change through the examination of the relationship between

[14] These impediments to trade have given rise to the Aid for Trade movement. For a broader discussion of these issues, see Charlton and Stiglitz [2006, 2008, 2013]

growth patterns in value added, labor productivity, and employment in a sample of relatively large countries. A key problem in the implementation of industrial policies noted earlier is the identification of sectors with potential for growth that should receive support. The authors provide an empirical analysis and develop a methodology that may be helpful in doing so. They provide empirical evidence that while any industry can expand on the basis of rapid increases of labor resources, only those industries that improve productivity substantially survive in the long run. A threshold of about US$10,000 GDP per capita (2005 US$ PPP adjusted) is observed as a major turning point before labor-intensive industries start losing labor cost advantage and begin shedding labor. By contrast, structural change beyond US$23,000 GDP per capita (2005 US$ PPP adjusted) involves the consolidation of industries that have continuously pursued technological upgrading, innovation, and scale and capital intensity advantages.

Ansu, in “Industrial Policy and Economic Transformation in Africa: Strategies for Development and a Research Agenda,” provides an overview of the evolution of economic development policy in Sub-Saharan African over the 40-year period from 1970 to 2010. He notes that whether the focus is on the state-led import-substitution sub-period (1970 to early 1980s) or the sub-period of structural adjustment programs (mid-1980s to early 2000s), there has been little progress on economic transformation. Drawing from the experiences in African and East Asian countries that have been successful in transforming their economies, Ansu argues that successful transformations will be based on policies that will involve both the state and the private sector and proposes a framework to track and assess the emerging industrial policy regimes designed to bring about the necessary economic transformation.

In “The Premature De-Industrialization of South Africa,” Imbs looks closer at the patterns of structural transformation in a country that represents about one-third of Sub-Saharan Africa’s gross domestic product. He shows the South African economy has not only moved away from manufacturing, but displayed a sudden increased specialization of sectoral activity in the late 2000s, at a level of per capita GDP much lower than is customary in comparable economies. South Africa specialized in services, rather than extractive activities, whose share in the aggregate economy has trended downward. The analysis of census data reveals that the country’s specialization in services is homogeneous geographically. Regions that used to produce different goods now increasingly resemble each other, because services are increasingly produced everywhere. This is especially true of financial services, which were geographically concentrated prior to 2000, but subsequently developed across all South African regions. Imbs argues this transition reflects the increasing international trade openness of South Africa.

Chandra studies industrial policy in Ethiopia where the government wants to jumpstart structural transformation by fostering a light manufacturing sector. Ethiopia has the potential to compete with China and Vietnam, she argues, but its firms face too many constraints that its resource- and capacity-constrained government cannot resolve at once. A targeted industrial policy that selectively removes the most critical constraints in each industry to scale-up production and exports can help, but government needs first to redress some market- and policy-induced failures and increase competition. Sector-specific solutions include lowering input costs by liberalizing agricultural input, output, and land markets; improving trade logistics; developing plug-and-play industrial parks; and fostering foreign direct investment to bring in managerial capital.

The book ends with two short case studies of successful industrial development. In “Industrialization: The Mauritian Model,” Narrainen tells the story of the island country by weaving together the main elements, decisions, and policies that have underpinned economic growth. The model highlights the middle-of-the-road approach, sometimes combining a heterodox mix of policies, and the importance of timely shifting of industrialization paradigms to adapt to changing global circumstances. In some ways, that strategy based on pragmatism is reminiscent of the one that Thia describes in “Sharing of Singapore’s Industrial Policy Insights.” Singapore’s experience of industrial policy that is accompanied by a strong educational sector, free trade, and good institutions corroborates many of the elements of the new thinking presented in the conceptual chapters of the book—most notably the importance of learning and knowledge.

The collection of papers in Stiglitz, Lin, and Patel (2013) reflect the revolution in thinking about industrial policy. They present the new understandings that see industrial policy as not just tinkering at the edges of correcting minor market failures, but as part of a country’s core strategy for promoting development—for structural transformation and for creating the kind of “learning societies and economies” that have been the hallmark of those countries that have succeeded.

Despite many areas of broad consensus on the objectives and principles, there are still disagreements on the use of some specific economic tools. This is reflected in the comments by discussants, which follow some of the papers. But we believe that the large corpus of knowledge and experiences presented in the book provide a convincing case that governments of Africa ought to make industrial policies an important pole of their development strategy and that they ought to think carefully about the impact of all their other policies—macro-economic policies like exchange rate management, micro-economic policies like competition policy—on the structure of their economy. There is not a single policy that will work in all countries: one of the key messages of these chapters is that successful industrial policies have to be tailored to the circumstances of the country (including the "quality" of its governance and the capacities of both the public and the private sector). We believe that this book shows the wide range of objectives that industrial policies in Africa should pursue and the wide range of instruments by which those objectives can be achieved. Hopefully, this will enable the revolution in the theory of industrial policies to be translated into a revolution in the practice, a change which holds out the promise that the remarkable growth experienced in Africa over the past decade will be sustained and that the development strategies will be even more successful in promoting inclusive growth, poverty reduction, and broad-based increases in living standards.

REFERENCES

Basu, K., 2011. Beyond the Invisible Hand: Groundwork for a New Economics, Princeton, N.J., Princeton University Press.

Blanchard, Olivier, 2011. "The Future of Macroeconomic Policy: Nine Tentative Conclusions," IMF Direct, March 13.
http://blog-imfdirect.imf.org/2011/03/13/future-of-macroeconomic-policy/

Chang, H.-J. 2008. *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism.* New York, Bloomsbury Press.

Charlton, A., and J. E. Stiglitz, 2006, “Aid for Trade,” with Andrew Charlton, *International Journal of Development Issues*, 5(2), pp. 1-41 (Reprint of paper prepared for Commonwealth Secretariat).

——, 2008 “Aid for Trade,” Keynote Address, with Andrew Charlton, *Annual World Bank Conference on Development Economics 2007, Rethinking Infrastructure for Development*, F. Bourguignon and B. Pleskovic, eds., World Bank: Washington, DC, pp. 29-46.

——, 2013“The Right to Trade,” with Andrew Charlton, a Report for the Commonwealth Secretariat on Aid for Trade.

D. Delli Gatti, M. Gallegati, B.C. Greenwald, A. Russo, and J. E. Stiglitz, 2012a “Mobility Constraints, Productivity Trends, and Extended Crises,” *Journal of Economic Behavior & Organization*, 83(3): 375– 393

——, 2012b, "Sectoral Imbalances and Long Run Crises," with D. Delli Gatti, M. Gallegati, B.C. Greenwald and A. Russo, in *The Global Macro Economy and Finance*, F. Allen, M. Aoki, J.-P. Fitoussi, N. Kiyotaki, R. Gordon, and J.E. Stiglitz, eds., IEA Converenec Volume No. 150-III, Houndmills, UK and New York: Palgrave, pp. 61-97.

Economist, 2013. “Aspiring Africa,” [Editorial], March 2nd.

Greenwald, B. and J. E. Stiglitz, 2013. “Industrial Policies, the Creation of a Learning Society, and Economic Development,” in J. E. Stiglitz and J. Y. Lin (eds), *The Industrial Policy Revolution I: The Role of Government Beyond Ideology*, New York, Palgrave Macmillan, forthcoming.

Hoff, K. and J. E. Stiglitz, 2001. “Modern Economic Theory and Development” in Meier, G. and Stiglitz, J. (eds) *Frontiers of Development Economics* (Oxford University Press, New York), pp. 389-459.

Lin, J. Y., 2012. *The Quest for Prosperity: How Developing Economies Can Take Off*, Princeton, N.J., Princeton University Press.

Lin, J.Y. and Stiglitz, J.E. (eds), 2013. [*Volume from the Washington IEA-World Bank Roundtable*]

—— and C. Monga, 2013, "Comparative Advantage: The Silver Bullet of Industrial Policy," [*Volume from the Washington IEA-World Bank Roundtable*].

List, Friedrich, G.-A Matile, Henri Richelot, and Stephen Colwell. 1856. *National system of political economy*, Philadelphia: J.B. Lippincott & Co.

Mandela, N., 1994. *Long Walk to Freedom*, London, Abacus.

Marshall, A., 1920. *Principles of Economics*, MacMillan, London.

Noman, Akbar and J. E. Stiglitz, , 2012a "African Development Prospects and Possibilities,, in E. Aryeetey et al., eds., *The Oxford Companion to the Economics of Africa*, Oxford: Oxford University Press, pp. 33-40.

______2012b, "Strategies for African Development,", *Good Growth and Governance for Africa: Rethinking Development Strategies*, A. Noman, K. Botchwey, H. Stein, and J.E. Stiglitz, eds., Oxford, New York: Oxford University Press, pp. 3-47.

Schopenhauer, A., 1958 [published in 1818]. The World as Will and Representation, Volume 1, English translation by E. F. J. Payne, Indian Hills, Colorado, Falcon's Wing Press.

Stiglitz, J. E. and J. Y. Lin (eds.), 2013. *The Industrial Policy Revolution I: The Role of Government Beyond Ideology*, New York, Palgrave Macmillan, forthcoming.

Stiglitz, J. E., J. Y. Lin, and E. Patel (eds.), 2013. *The Industrial Policy Revolution II: Africa in the 21st Century*, New York, Palgrave Macmillan, forthcoming.

Stiglitz, J. E., 1996, "Some Lessons from the East Asian Miracle," World Bank Research Observer, 11(2): 151-177. Reprinted as "Algunas ensenanzas del milagro del Este Asiatico (with English summary)," *Desarrollo Economico*, 37(147), Oct.-Dec. 1997, pages 323-349.

——, 2011. "Rethinking Macroeconomics: What Failed and How to Repair It," *Journal of the European Economic Association*, vol. 9, no. 4, pp. 591-645.

——, 2013, *Remarks at the African Symposium*, Tokyo International Conference on African Development, Yokohama, Japan, June 3. [.]

World Bank, 1993, *The East Asian Miracle: A World Bank Policy Research Report*, Washington, D.C.: The World Bank.

——, 2013. *Youth Employment in Africa*, Washington D.C., forthcoming.

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Part V: Trade, Finance, and Sectoral Policies

Part VI: Country Experiences and Perspectives