# **Rethinking Industrial Policy for Low Income Countries**

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*Abstract*: The governments of low income countries should be giving more attention to 'industrial policy' than they and the aid donors have given in the past quarter century. ('Industrial policy' means any sectorally or activitytargeted interventions, including in agriculture and services.) The first step is to discard the common assumption that industrial policy is about 'picking' winners'. The second step is to realize that industrial policy can be done 'big' or 'small', and by 'leading the market' or by 'following the market'. It can be tailored to the available resources and state capacity. The third step is to see that the key issues of industrial policy are less to do with 'what activities should be encouraged?', or 'what sorts of policy instruments are best?', and more to do with, 'how do we organize a process of discovery of sensible objectives and policies?', and 'how do we organize a constant nudging of producers to upgrade, diversify, link up with foreign firms?' (where the nudging effort has to be targeted at some activities and sectors more than others). The paper illustrates with East Asian examples. One of the good effects of the current global crisis is that it has shaken confidence in the virtues of lightly regulated markets and free capital movements, and opened the way to a less ideologically charged debate about the role of the state in development—in which thinking is not precluded by easy jeers like 'governments can't pick winners' or 'maybe the East Asians can do it but you can't, so you have nothing to learn about industrial policy from them'.

# 1. Introduction

I came to Addis in the summer of 2004 with Joe Stiglitz, to participate in what is called a Policy Dialogue. We talked to several groups. At the meeting with aid representatives working in Ethiopia—about 20 of them—we

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invited each to identify the priorities of their agencies in Ethiopia. They identified more or less the same ones, virtually all in 'governance' or the 'social sectors' like primary health and primary education. They made virtually no reference to investment in the 'hardware' of productive capacities. The closest any of them got was 'rural roads', mentioned by just one representative. No-one mentioned aid for agriculture or irrigation or manufacturing or services. When they talked of 'improving governance' they were not referring to improving the governance of the processes through which capital accumulation, technological progress, and diversification of production can be directly accelerated, but governance in broader terms related to 'rule of law', 'property rights', 'anti-corruption' and the like. They talked, implicitly, of 'market-enhancing governance', not 'growth-enhancing governance', as though the former equated to the latter.

I have done a lot of research on East Asia's economic development. The agendas of the aid donors Joe Stiglitz and I talked to in Addis in 2004 could scarcely be more different from the agenda of America's largescale aid for Japan, South Korea and Taiwan in the postwar decades. The comparison is important because the Americans were very serious about accelerating economic development in Northeast Asia. They saw the region as the front-line in the battle against global communism and they wanted economically prospering, militarily strong, and politically stable capitalist allies on the front line. So what did the Americans direct their aid to, when they were deadly serious about accelerating development (as distinct from opening up the economies and claiming that opening was the best route to development)? US aid was targeted explicitly at the development of productive capacities, including lots of assistance for new basic industries (in metals, chemicals, petrochemicals), infrastructure like roads, electricity and water supply, technology institutes, and agriculture (irrigation, improved crop varieties, crop research institutes). US aid even supported large-scale, semi-expropriative land reforms in all three countries, in order to make the rural sector politically stable as well as to raise the productivity of the land.

Yet for the past 25 years the consensus in the donor community has been, implicitly, that the development of productive capacities will result from free markets, provided free market policies are complemented with the development of 'market-enhancing governance' capabilities, like those noted above, as well as by investment in primary education, primary health care and the like. The comparison makes one wonder whether the donor community has a collective interest in accelerating development as distinct from reducing poverty and opening up developing economies—which is not the same thing.

In this paper I shall argue that the governments of low income countries should be giving more attention to 'industrial policy' than they and the aid donors have given in the past quarter century. (I use the phrase 'industrial policy' to mean any sectorally or activity-targeted interventions, including in agriculture and services.) Second, I shall argue that discussion about industrial policy should be less on 'what activities should be encouraged?' and 'what sorts of policy instruments are best?', and more on 'how do we organize a process of discovery of sensible objectives and policies?', and 'how do we organize a constant nudging of producers to upgrade, diversify, link up with foreign firms?' (where the nudging effort has to be targeted at some activities and sectors more than others).

The literature on how to organize industrial policy-in particular, how to organize the relationship between the public sector and the private sector in the process of formulating and implementing industrial policyis remarkably thin, which reflects the fact that economists have tended automatically to reject the very idea. I shall draw on my research in East Asia to illustrate feasible ideas about how to design an industrial policy process. It is often said that East Asian industrial policy was all about 'picking winners', and it depended on the overarching existence of a whole 'developmental state'. The conclusion is drawn that nothing much can be learned from the East Asian experience for countries where a developmental state is out of the question and there are no obvious 'winners' to pick. Or as one scholar asserts, 'Below a certain level of development the type of state leadership seen in East Asia fails to work because rent-seeking and corruption are strategies of survival. Poor people are not altruistic as in the rich ones and further, they care little about the general interest. Local firms do not have the appetite to produce manufactured goods and they are not backed by their government simply because the control of an import segment is a more profitable business'.<sup>1</sup> Of course, no industrial policy is likely to work in Congo or Somalia-nor will free market 'policy' work there. However, most of the sub-Saharan states function more effectively than Congo and Somalia, and for them, our scholar's argument is a counsel of despair. While it does highlight real dangers, it is basically wrong. 'Rent-seeking and corruption' were probably at least as prevalent in Taiwan and South Korea in the first decades of their postwar industrialization as in sub-Saharan Africa today. They are not the overwhelming obstacle to industrialization that our scholar supposes.

#### 2. The Case for Industrial Policy

There is a theoretical case for deliberate state efforts to accelerate certain activities ahead of others, which takes off from the empirical proposition that certain kinds of market failures are rampant in the conditions of low income countries, which prevent or hinder private, uncoordinated entrepreneurs from discovering new investment opportunities.<sup>2</sup>

But rather than go through the theoretical argument about market failures, I shall refer to research which suggests that manufacturing and some segments of services are 'engines of growth', including in the conditions of low income countries. For example, Heather Wells and Anthony Thirlwall, writing in the *African Development Review*, 2003, find that in a set of 45 African countries for 1980–96 the rate of GDP growth is *strongly and positively* related to the degree to which manufacturing grew faster than agriculture or services (see also Thirlwall, 2006, p. 118). On the other hand, the rate of GDP growth is *strongly and negatively* related to the degree to which agriculture.

Two other scholars, Sukti Dasgupta and Ajit Singh, reach much the same conclusion for a sample of 48 developing countries for 1990–2000. However, they find that the main distinction is not so much between manufacturing and non-manufacturing, as between manufacturing plus some segments of services, on the one hand, and agriculture on the other. Overall, they find that the services sector has become more like manufacturing, in the sense that it too—since ICTs—has become an engine of growth, unlike agriculture (Dasgupta and Singh, 2006).

Dasgupta and Singh go on to report that most African and Latin American countries have experienced what they call 'pathological' deindustrialization since the 1980s, meaning a falling share of manufacturing in both GDP and total employment—even in countries with relatively low GDP per head where one would certainly expect manufacturing's share to be rising rather than falling. They link this pathological deindustrialization to a movement towards production specialization in line with static comparative advantage, which favors agriculture and natural resources. Growing specialization in agriculture and natural resources may yield short-term gains in GDP growth at times of commodity price booms, as in 2004–2007; but renders the economy very vulnerable to a crash in commodity prices, as in 2008.

These two studies—by Wells and Thirlwall, and Dasguta and Singh provide support for the proposition that manufacturing (and perhaps some of 'services') is an engine of growth, with 'social benefits' that far exceed 'private benefits'. On the face of it, this special role of manufacturing supports the case for industrial policy.

The same broad conclusion comes from research by Ricardo Hausmann and colleagues at the Kennedy School, Harvard University (Hausmann *et al.*, 2007; Rodrik, 2007). Their research on production diversification finds that the export bundles of African economies consist of products which, around the world, are associated with very low wages. They construct an index of the 'sophistication' of each export product according to the GDP per head of each country which exports the product, weighted by the share of the product in each country's exports. Not surprisingly, rich countries export goods associated with high wages, poor countries export goods associated with low wages.

The more interesting point is that there is some variation in the relationship between the sophistication of exports and GDP per head. Some countries have managed to get into the export of products which are *more* sophisticated than normal for their per capita income. These economies—this is the key point—subsequently experience faster growth.

This finding, too, boosts the case for proactive industrial policy to shift the bundle of exports in the direction of more sophisticated products. But there is a trade-off. It is relatively easy for a producer to diversify from, say, shirts to overcoats-because just about all the inputs needed for making overcoats are already available in the economy (because they are almost the same as needed for shirts). Hausmann et al. call this a 'nearby' diversification, with reference to a product map where products are placed relative to each other according to the similarity and difference of their inputs. So 'nearby' diversifications may be easy because most of the inputs needed to produce the new products are already available; but the gain in terms of returns to capital and labor of diversifying to nearby products-from shirts to overcoats-may be small. On the other hand, the gain of diversifying to 'distant' productsfrom clothing into the steel system-may be large; but the difficulties will also be large, because steel and chemicals require substantially different inputs from clothing, including public sector inputs, many of which do not already exist in the national economy.

Against this background, let me turn to industrial policy in East Asia, and in particular, Taiwan.

#### 3. East Asian Industrial Policy

Earlier I said that most economists reflexively say no to the question of 'whether' a government should undertake industrial policy. Their emphasis upon the 'no' has obscured the question of 'how' to do industrial policy well rather than badly.

To draw lessons from East Asia about the 'how' question, it helps to forget about 'the developmental state' and 'picking winners' (the standard starting point for critics who intend to trash the idea). Begin, rather, with Taiwan's industrial extension service. At the start of Taiwan's postwar development the government created not only an agricultural extension service but also an industrial extension service. Its job, in part, was to do much the same for industrial firms as the agricultural extension service did for farmers.

Called the Industrial Development Bureau (IDB), it comprised in the early 1980s (when Taiwan had about 20 million people) a professional cadre of some 130 industrial engineers, plus another 50 experts in corporate

accounting, marketing, and the like. (The 180 staff included only three economists, reluctantly acquired and corralled in a separate room.) As of 1983 it was divided into four vertical or sectoral divisions—the steel system (including steel, machinery, vehicles, etc.), electronics and information, petrochemicals and chemical, and consumer goods; together with four horizontal, cross-cutting divisions—one for land use (including export processing zones), another for industrial organization, industrial law, and environmental pollution, a third for coordination with banks, customs, and taxation, and a tiny fourth one for research where the economists were placed (Wade, 2004, pp. 201–208, 256–96).

One of the IDB's core functions was to maintain a close watch on the productive capabilities of Taiwan's firms and to seek out ways of enhancing those capabilities. It was especially alert to developments in the private sector that were already beginning to look successful, which the IDB could help to grow faster than otherwise ('betting on success'). Hence most IDB staff were *required* to spend several days a month, minimum, as part of their job description, visiting firms in their sector up and down the country. They would be looking for ways to improve factory layout, to upgrade machine tools, to diversify the product range, to effect supply relationships between domestic firms and subsidiaries of multinational corporations operating in Taiwan. Hence they had an important role in screening applications for loans from the various concessional credit funds made available by the state, such as the Strategic Industry Fund and the Small and Medium Business Guarantee Fund. (The IDB did not have substantial funds under its direct control.)

Here is an example of how it went about accelerating the development of supply linkages between domestic firms and the big multinational companies operating in the country, as a way to upgrade the technological capacity of domestic firms. In the early 1980s Phillips was making TVs in Taiwan, and importing a certain kind of specialized glass from its factory in Japan. The IDB team covering the glass industry identified two or three Taiwan glass makers which in their view had the productive capability to make the jump in product quality needed to produce the specialized glass at a price close to the import price. They discussed the possibilities with the firms. The firms said they would invest in the necessary equipment provided they got a longterm supply agreement with Phillips. The IDB officials went to Phillips. The Phillips procurement manager said the company was happy with its present arrangement of importing the glass from its factory in Japan, and declined to change suppliers. Soon Phillips found that its applications to import the glass, previously automatically approved, began to be delayed. Phillips contacted the Minister of Foreign Trade, who apologized profusely, and explained that even he was not always able to get the inefficient trade bureaucracy to work quickly. He promised to investigate. The delays lengthened, and

lengthened again. The Minister apologized and said he had done all he could. Eventually Phillips got the message, and entered into discussions with one of the Taiwanese glass makers. The upshot was that Phillips offered a longterm supply contract, and the domestic glass maker invested in upgraded equipment. Before long the Taiwanese glass maker was exporting some of the specialized glass.

This story illustrates the 'nudging' that was going on in Taiwan all the time, week after week, year after year, decade after decade as Taiwan moved up the world technology ladder into the high-tech sectors. IDB engineers nudged Taiwan-based firms to keep improving, keep diversifying, telling them about new possibilities, pointing them to sources of concessional finance, and sometimes using their influence over import licenses to get multinationals operating in Taiwan to switch from imported inputs to domestically produced inputs. The nudging was done with a close eye on (a) what was being imported in each sector, and by whom, and (b) the price and quality of the imports.

IDB officials were well aware that their nudging of importing firms to switch suppliers to domestic firms had to be constrained by the need to keep the price differential between domestic substitutes and imports fairly small. They were able to arrange trade protection for a new domestic import substitute for a time—but only for a time, during which the domestic supplier had to get the price down and the quality up close to international standards.

This mechanism for indirectly applying international competitive pressure is worth elaborating, because it illustrates the falseness of the standard view that import substitution with trade protection removes competitive pressure and allows domestic firms to grow lazy. Here is a case of videocassette recorders (VCRs), which the IDB was keen to promote as a strategic product in the early 1980s. It identified two Taiwanese firms with the capacity to make VCRs. IDB agreed to give them a ban on imports from Japan (the only competitive source of supply) for a period of 18 months, and then to review the position. However, it turned out that towards the end of the 18 months the price of the domestic VCRs was still well above the price from Japan. The IDB began to inform the firms and the business press that

'if domestic manufacturers do not achieve international standards for technology and price within the period of guidance ... then the government might consider bringing in foreign companies for joint investment ventures .... Foreign companies that invest in VCR production in Taiwan must promise to expand their exports in ratio to the percentage of shares they hold in the companies. The goal in this is to promote the development of VCR production technology in Taiwan and to establish an independent local industry' (*Economic News*, 9 May 1983).

Next, the government decided to allow Sony to invest on condition that 50 percent of the joint venture company's production be exported and that

local content initially reach 35 percent. Despite the objection of the two local companies which had already invested in VCR production the government stuck to its position and lifted the import ban. The two local companies then sought out rival Japanese joint venture partners to compete against the new one led by Sony (Wade, 2004, pp. 207–208). Note the important points that the government removed its protection from the local firms when it became clear they were not making the grade, and that it placed performance requirements on Sony.

All this is about accelerating an *incremental* process of upgrading and diversification. It is a long way from 'picking winners', a long way from the government taking big gambles on investments which private firms would not take. It is based on dense interaction between IDB officials and private firms, in an informal and bilateral way.

On the back of this core industrial extension work the IDB also did a lot of sectoral planning, including drawing up lists of products to be given fiscal investment incentives and lists of tariffs and import controls. One American manager described the IDB as 'the spear throwers, the shock troops, the main point of contact between foreign companies and the bureaucracy'.

In this sectoral planning work the IDB worked quietly with Taiwan's industrial associations. The Taiwan state being, in the early 1980s, still very authoritarian, the government *required* any market segment with more than five firms to form an industrial association. The administrator of the more important associations was appointed not by the firms, but by the state. His job was to mediate between the preferences or demands of the firms and the preferences or instructions from the state. Taiwan's dense array of industrial associations was first and foremost an instrument of government political influence and intelligence; but it also functioned as a means of getting information to the IDB about productive capabilities through a different and higher-level channel than the bilateral dealings between sectoral teams of IDB engineers and particular firms.

In addition to this kind of *incremental* industrial policy, the Taiwan government also undertook another, much bigger kind of industrial policy, closer to 'picking winners'. It was heavily involved in creating basic industries like steel, ethylene, and semi-conductors. The IDB was complemented by a much higher level Council for Planning and Development, where large-scale planning about the economy's future evolution took place. The Council for Planning and Development was chaired by the deputy prime minister or the governor of the central bank, and was directly responsible to the cabinet collectively. Among other things, it functioned as a think tank for economic questions dealt with by the cabinet.

Operating in parallel and to some extent in competition with the Council for Planning and Development was the Science and Technology Advisory

Group (STAG). This was a group of 7 to 10 experts in science and technology, some of whom were Taiwanese, some of whom were non-Taiwanese, all of whom were based outside of Taiwan. For example, in the early 1980s a former French minister of science and technology was a member, and a former chief scientist of IBM. The group met twice a year for two or three days at a time, once in Taiwan, once outside Taiwan. It did two things. One, it scanned the world technology frontier for developments that might be relevant to Taiwan, and directed Taiwanese officials' attention to them. Two, it scrutinized some high-tech projects being proposed for Taiwan-the production of robots, for example—in the light of its knowledge of relevant developments happening in the rest of the world. It was served by a small secretariat. Taiwan officials connected to the STAG say that its requirement that STAG members be based outside Taiwan was critical to its success; not only were they likely to be better informed about developments outside Taiwan but they were also outside the factions and client-patron relationships which permeated a small technology community like Taiwan's.

I should also mention that Taiwan had a special agency devoted to *attracting* FDI to Taiwan; and a separate agency, called the Investment Commission, which *scrutinized* FDI proposals from the point of view of making sure they benefited Taiwan.

However, I won't say more about big-scale and high-tech industrial policy in Taiwan here, because most of the existing literature on East Asian industrial policy has focused at this end of the spectrum. Here I have stressed the small-scale industrial policy and industrial extension end of the spectrum, which is more relevant for low income countries.

### 4. Government Leadership and Followership

The distinction I have just made can be made more explicit. Think of a simple  $2 \times 2$  matrix. On the vertical axis is the distinction between government 'leadership' of the market (or private firms), and government 'followership' of the market. Government leadership of the market is intended to lead decentralized private producers to do something they would otherwise not want to do in the absence of public support—to enter new sectors or make big jumps in production technology, for example. Government followership, on the other hand, is intended to bet on some of what the private sector is already doing or about to do, in order to accelerate movement in that direction ('bet on success').

On the horizontal axis is the scale of public assistance: big or small. It may refer to public funding, or the degree of credit subsidy, or the size of tax incentives, or the magnitude of protection.

The standard picture of industrial policy, as painted by the critics, presents only one of the resulting four cells as constituting 'industrial policy': namely, government 'leadership' of the market on a 'large' scale.

However, much East Asian industrial policy was in a followership mode, and each intervention was on a small, incremental scale. This cell, I argue, is more relevant as a model for industrial policy in low income states today.

## 5. Features of the Industrial Policy Process

Taiwan industrial policy shows several design features which make good sense, and might be adopted elsewhere.

First, the industrial policy support measures were designed so that they were kept targeted at new products or new processes, and as more producers came to be able to produce the products or use the processes, the criteria of eligibility were raised so as to keep the incentives targeted at the frontiers.

For example, Taiwan used a set of fiscal investment incentives whereby producers of targeted products or processes received one or more reductions in tax or accelerated depreciation allowances. One product in the list of electrical equipment products eligible for fiscal investment incentives in 1982 was 'high-efficiency fluorescent tubes, limited to those with an intensity of illumination of 80 lumens or more (Wade, 2004, Appendix 1). As more producers became able to produce tubes with an illumination of 80 lumens or more, the threshold would either be raised or fluorescent tubes would be dropped from the list. This was a kind of sunset clause; other exit devices were an explicitly announced time period beyond which the support would expire, and a regular review of the items eligible for incentives.

Second, the IDB officials in a position to help secure financial assistance to firms (but only help to secure assistance—recall that the IDB had few resources under its own control) were well aware that they had constantly to look at the size of the gap between the prices and quality of imports and domestic substitutes. They knew that they could not impose too much of a handicap on firms when forcing or encouraging them to switch to domestically made substitutes—and especially not when the firm was a multinational company and when it was a big exporter. In this way they tried to 'square the circle', by giving domestic producers of import substitutes some protection (whether trade protection or other financial help) while also keeping them under international competitive pressure. In short, they had benchmarks for success, which were derived from international comparators.

Third, the staff of the IDB were for the most part meritocratically selected, including by formal examinations. But sometimes it happened that the government decided to make a big push into a certain sector—such as automobile components—and found that the IDB staff were not up to the

job, not up to date. In such cases it created special 'task forces' comprised of experts in the sector who did not have to pass through normal civil service recruitment channels and who could be paid more than main-line IDB staff; and gave each task force responsibility for driving through change in its area. Sometimes the resulting competition had the beneficial effect of stimulating the by-passed team in the IDB to upgrade its quality in order to get some of the action.

The fourth point is that the IDB staff were 'embedded' with the private sector, first at the level of the sectoral teams and their regular visits to factories up and down the country, and second, at the level of their contacts with industrial associations, especially the administrators of the industrial associations.

The fifth point is that Taiwan's industrial policy was the responsibility of not one but two high ranking cabinet ministers—the Minister of Economic Affairs and also one of the 'Ministers Without Portfolio' who supervised the work of the Science and Technology Advisory Group. And as mentioned, the overarching Council for Economic Planning and Development was chaired for many years by either by the deputy prime minister or the governor of the central bank (who was always a member of the cabinet, and generally its most senior non-military official).

#### 6. Conclusions

The core elements of industrial policy in East Asia included:

- an apex coordination forum, which included the cabinet, the economic planning council, the heads of major industrial associations and private and public firms. In this focal point repeated interaction over years helped to forge a sense of a long-term national interest, specific national targets, best ways to reach those targets, and helped to curb negative sum games among the players;
- (2) incentive schemes both big and small targeted at selected activities and sectors, some of which 'led' the market, others of which 'followed' some of what firms on the frontier wanted to do (bet on their success);
- (3) exit mechanisms, meaning commitment to and means of withdrawing support when no longer needed or when clearly not being effective;
- (4) an industrial extension service, analogous to an agricultural extension service, which every day nudged firms up and down the country to upgrade, diversify, replace imports, get into export markets.

I present this model in the hope of countering a pervasive negativism about the possibilities of low income countries diversifying their production structures into manufacturing and higher value-added services, as in the remark of the scholar quoted earlier. The negativism is fed by Washington Consensus ideas, expressed in World Bank policies and conditionalities, such as the Poverty Reduction Strategy Program (PRSP). These ideas reflect the premise that productive capacities will develop 'by themselves' provided the government (a) sticks to near-free market policies and (b) carries through programs to upgrade 'market-enhancing' institutions, such as rule of law, private property rights, lighter regulatory burden on firms, sanctions against corruption, and the like, all designed to produce a 'good investment climate'.

The negativism is fed, second, by the conviction that the tasks of industrial policy are beyond the capability of agents in low income countries to carry out; that if a government tries, the result will be corruption and rent-seeking, and therefore unproductive use of resources. The conviction ignores the way that the sort of model described above can ensure that corruption and rent-seeking—of which there was plenty in East Asia until quite a high level of development had been achieved—led to *productive* use of resources. In the routine denunciations of 'corruption', it is generally forgotten that the effects also depend on how the corruptly obtained resources are used.

The negativism is fed, thirdly, by the 'China price', the ability of Chinese producers to land manufactured goods in most parts of the world and sell them profitably at prices substantially below the prices that domestic or regional producers have to charge to make a profit.

I have no magic bullet to solve the real problems of low state capacity and the China price. What I have done here is to sketch the outlines of an approach to industrial policy—illustrated by the concrete realities of Taiwan—which looks to be more viable than the many critics of industrial policy say, and which cannot be dismissed with the jeer that 'bureaucrats can't pick winners'. It is of first importance that the governments of low income countries go beyond the objectives of the Millennium Development Goals and seek to diversify the production structure.

Expanded trade—particularly expanded exports of manufactured goods has a key role to play in this process. But regional or bilateral trade deals between a rich country or region and low income countries, which require the poor countries to move quickly to free trade and free capital movement, will make it more difficult for producers and foreign firms based in low income countries to expand manufactured exports and develop the domestic or regional market for locally produced manufactures. The dominant partner may say that 'there is no alternative'—either you sign or your exports to us will face significantly higher tariffs. The low income countries should insist that more options be put on the negotiating table.

The elephant in the room is 'protectionism'. There is no way that sub-Saharan African economies can diversify on a significant scale out of commodities without giving producers some protection—whether through trade protection or subsidies or other forms of assistance. The above arguments suggest why diversification and upgrading is critical, and why it will not happen 'by itself', that is, by 'economics divorced from politics'. China is too efficient in the kinds of products that sub-Saharan industrialists might produce. Yet the whole weight of the G7, the EU, the US, the WTO, the World Bank is deployed against 'protectionism'. On the other hand, standing back, it is clear that the present global allocation of cheap-labor production is far too concentrated in China, as a result of firms being free to arbitrage labor costs and capital costs and locate wherever profits are highest, regardless of the effects on the non-development of productive capacity elsewhere, including sub-Saharan Africa.

To see the absurdity, consider the argument that China's rise in laborintensive manufacturing has had a net positive effect on Latin America. According to one analyst, 'the China connection could even pave the way for Latin America to *capitalize on its strengths as a low-cost producer of raw materials*. If that happened it could open the way to the *re-emergence of a development model based on the classical economic concept of comparative advantage rather than on more recent ideas such as import substitution.*' The analyst went on to say, '*China gives a new hope to Latin America to be a viable part of the world*'.<sup>3</sup> As though Latin Americans—beyond the richest 1 percent—will become more prosperous by specializing more in minerals, soya and coffee. How can people think and then think like that? They are clearly not thinking of the real world. Compare, for example, the research of Wells, Thirlwall, Dasgupta, and Singh, cited above.

Yet the current global economic crisis is shaking the deep slumber of the Washington Consensus. Even free marketeers have called on governments to 'intervene' to save the system from collapse. The same people, however, also denounce moves towards 'protectionism' (the 'ism' implying, quite wrongly, that those who think trade protection can be a useful instrument believe in it as a valued end in itself); they still want to preserve free trade and free capital movements, and expect to resume their commitment to free market ideology just as soon as the crisis is over. Unfortunately, there is a real tension between domestic government intervention to save the system and free trade and free capital movements. As the current crisis mutates from a liquidity crisis into a much worse solvency crisis, political leaders, out of desperation, are likely to push for a coordinated global reflation accompanied by rule-bound trade protection (especially for low income countries), as a way to restart economic growth and restart international trade. A strategy of coordinated demand expansion coupled with coordinated protection and restricted movements of speculative capital can promote trade and promote development. Only mainstream economics sees this as a paradox.

# Notes

- 1. From a reviewer's comment on this paper.
- 2. The economics mainstream tends to reject industrial policy with an argument that goes as follows. First, in a market economy there may be cases where natural (that is, non-governmental) market failures and distortions prevent market prices from signaling marginal social costs and benefits. In principle a government can design taxes and subsidies to correct the distortions so that market prices, as corrected, do signal efficient resource allocation. Second, in practice these natural market failures are generally rare, so if the government limits itself to the correction of natural market failures it would give only small-scale support to industrial growth. Third, in practice, once a government feels legitimized in undertaking a small amount of industrial policy, it is likely to be overwhelmed by 'rent-seekers' and 'cronies' who hijack the policy and use it for corrupt, self-servicing and non-productive ends. So even if the natural market failures turn out not to be rare, the cost of the distortions may well be less than the cost of 'intervention' to reduce them.

One answer to this argument stresses the pervasiveness of market failures of a kind which do not feature much in the mainstream view. (a) Market failures in discovery: learning what new products can be produced profitably in an economy, and how, is an activity whose social value greatly exceeds its private value. (b) Market failures in coordination: new economic activities often require simultaneous and lumpy investments upstream, downstream, and in parallel, which decentralized markets are not good at coordinating. (c) Market failures in providing missing public inputs: Private production typically requires specific public inputs—legislation, accreditation, R&D, transport and other infrastructure specific to an industry—of which the government has little *ex-ante* knowledge. See Hausmann *et al.* (2007) and Sabel and Reddy (2007).

3. Paraphrased and quoted in Lapper (2004), emphasis added.

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