The “East Asian Miracle” and the Theoretical Analysis of Industrial Policy: A Review

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Abstract

How to account for the “East Asian miracle” and what role public policy has played in the process are questions that have aroused heated debate in recent years, especially among the mainstream neoclassical school and the revisionists. Instead of attempting a complete survey, the paper reviews mainly new developments in the last few years, which include additional rounds of arguments in the debate, and further advancements in the theoretical analysis of industrial policy.

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The growth record of the East Asian economies has been impressive, especially when compared to that of other developing countries. How can such a record be accounted for? What lessons can we draw from it? What has been the role of public policy? These are questions that have aroused heated debate in recent years, especially among the mainstream neoclassical school and the non-orthodox or revisionists[1]. The related literature has indeed grown tremendously, and there has been some interesting developments.

Since this debate has been evaluated many times, this paper will not attempt a complete literature survey here. Instead, the paper will review mainly some of the new developments, which include additional rounds of arguments and counter-arguments in the debate itself, and further advancements in the theoretical analysis of industrial policy. The discussion will be selective, with the intent of integrating the debate literature with the new theoretical developments.

The first section contains a survey of some issues in the current debate on the causes of the East Asian growth. A more detailed and critical appraisal of the various theories of industrial policy is in the next section. The third section contains the conclusion.

1. The Debate

In the 1960s, the structuralists dominated the field of development economics (DE). They view development as a process of dynamic, nonmarginal change, and the market mechanism cannot be relied upon to guide the investment process. Interventions are hence required to bring forth development. Gerschenkron(1962) emphasized the role of state in substituting for market in backward countries trying to catch up. At the same time, Keynes was advocating government interventions in the advanced countries.

The lack of success in the Latin American countries brought us the dependency theory and a neoclassical reaction to DE in the early 1970s. As pointed out by Shapiro and Taylor(1990), DE indeed offered little guidance as to how the state should

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[1] See Wade (1990: Ch. 1), Shapiro and Taylor (1990) and the large body of literature discussing

intervene, and it tacitly assumed that the state had unlimited capacity to intervene. In this respect, it was duly disputed. The growth record of the East Asian countries again presented challenge to both the dependency theory and the neoclassical school since the late 1970s. The popularity of the dependency theory has been waning since, for it obviously has difficulties explaining why the high degree of trade dependency in East Asia did not inflict the damage it was supposed to. However, the dependency theory remains as the basis of many Western radical critiques of the East Asian story[2].

1.1 The neoclassical explanation

The neoclassical mainstream, which has a much longer tradition, has always insisted that free markets are efficient and can promote growth everywhere. And it certainly is not about to change its stance when explaining the East Asian experience. It first claimed that free markets are responsible for the East Asian growth. Later, when evidence of pervasive interventions emerged, it has said that interventions did not matter for they did not interfere with free markets in this case. Indeed, it has the whole conservative political resurgence in the 1980s as its backing, and derives much confidence from the fall of the former Soviet Block.

The World Bank's influential study, *The East Asian Miracle*, is a good representation of the neoclassical side in the current debate so far[3]. It acknowledges the frequent occurrences of sectoral intervention in the East Asian growth processes, even though it tries to argue that industrial policy was not effective. It conceded a little by saying that the intervention was not harmful, though still not helpful.

How can the neoclassicists account for the fact that government interventions had been prevalent in the successful East Asian countries? There are three possible ways: 1) the East Asian governments did not intervene much, or 2) the degree of intervention was less than that of elsewhere, or 3) as argued in the World Bank (1993), the interventions did neither harm nor good. Though 1) was popular earlier on, it can no longer be credible now after so much evidence of actual interventions has been documented. Thus, the neoclassical economists now hold either views 2) or 3). View

World Bank (1993) as cited in Fishlow et al. (1994).

[2] See Hart-Landsberg (1993) and Bello and Rosenfeld (1990) for example.

3) is similar to 2), for it basically claims that those interventions which are market-friendly are effective, and those which are selective are not effective. Evidence in support of 3) as presented in World Bank (1993) has been found less than convincing in the literature cited.

The World Bank book stresses the importance of "getting the fundamentals right", stated as one of the major lessons of East Asian growth in the book. Few would dispute the value of the fundamentals, but many would wonder whether they are sufficient conditions for growth. There is yet a developing country which grew out of poverty relying purely on the right fundamentals and no selective interventions. On the other hand, there is evidence that price reform alone did not produce desired results[4]. The issue of the effectiveness of industrial policy still remains. The question is whether or not East Asia grew rich mainly due to getting the fundamentals right. Did they really get them right?

1.2 The dichotomy between inward- and outward-oriented policies.

Inward- versus outward-oriented policies. Originally, according to the neoclassical orthodoxy, the East Asian success was due to the adoption of outward-oriented policies, which in turn was equated with reliance upon the free market[5]. On the other hand, the poor performance of the Latin American countries were attributed to their adoption of import-substitution policies. Thus, the neoclassicists claim that the superiority of export-oriented policy and free markets has been confirmed.

Fundamentals versus selective interventions. The World Bank (1993) classifies policies into two groups: fundamentals and selective interventions. It is more helpful than the import-substitution versus export-promotion policy classification. However, in the end, the lesson the book stresses most is that export-push strategies had been most successful and most applicable to other

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[3] A large body of literature has sprung up to discuss this book. See Fishlow et al.(1994).

[4] See Taylor (1988).

[5] See, for example, Balassa (1982) and Krueger (1981) among others.

developing countries. The definition of the ‘fundamental’ has also been questioned. Some items included, such as investment in human capital, may not be general as claimed, but rather specific in nature.

Actually, most of those neoclassical economists who hold view 2) also believe in the superiority of the export-promotion policies and the fact that they are in line with the free market. The only concession they make now is to admit that the East Asian countries did subsidize their exports, but they claim these subsidies to be "pro-market" as well. They argue that subsides are inherently better than other distortions, and those given by East Asian governments tended to be general and hence almost "neutral".

However, it is now well known that the export-push strategies in East Asia are very much linked with selective industrial policy. Taiwan and Korea pursued secondary import-substitution policies vigorously and extensively[6]. The two types of policies are not mutually exclusive and hence cannot be used as an explanation for growth or lack of it. Besides, the simple correlation, let alone a causal relationship, between so-called outward-orientedness and economic growth has long been disputed[7]. There have been numerous cross-country empirical studies with results going both directions.

Classifying policy measures along other lines has proved more fruitful. Rodrik(1996) finds lumping together "a wide range of policies... under the label of import-substitution policies" (p.14) very misleading. (The same thing can be said about export-oriented policies as well.) He instead distinguishes between macro- and microeconomic policies. He also uses a list of policy desiderata for orthodox policy reform[8] to evaluate the East Asian case. He finds that Taiwan and Korea "followed

[6] The well known works are Amsden (1989) on South Korea and Wade (1990) on Taiwan. Taiwan's case is discussed further in Chu (1997b).

[7] The World Bank study puts tremendous emphasis on this correlation. For a critique of this claim, see Rodrik (1994, 1995). The World Bank book also stresses the correlation between higher productivity growth and export activity, citing some industry-level studies. It is true that, for some small economies, exporting means gaining access to a larger and more competitive market and hence possibility to realize scale economies. It does not, however, imply that promoting exports is the same as relying upon free markets.

[8] The list originally came from Williamson (1994), and is used to advocate conservative

the orthodox path ...in maintaining conservative fiscal policies and competitive exchange rates", which accounts for their macroeconomic stability. "In the area of microeconomic interventions, however, their experience diverged from the orthodox path"(p.18). On the other hand, the Latin American countries have come much closer to the list of policy reform desiderata than the East Asian ones in the 1980s, though successful growth did not necessarily follow.

Thus, the East Asian case does confirm the importance of maintaining macroeconomic stability, but it is at most a necessary, not a sufficient, condition for growth. Moreover, this also falls far short of fulfilling the list of fundamentals. The World Bank's (1993) list of fundamentals include a high level of domestic savings, broadly based human capital, good macroeconomic management, and limited price distortion.

Specifically, the level of savings in the East Asian countries actually rose after growth started, not before[9]. Furthermore, much of the investment in human capital also has been specific, not general, and coordinated with selective industrial policy[10]. And, the measurement and estimate of price distortion has been tenuous, and its causal link with growth disputable. This leaves, then, only macroeconomic stability, really.

Macroeconomic management and microeconomic intervention. This development in the literature -- disentangling the import-substitution and outward-oriented policies, separating macroeconomic management and microeconomic intervention -- helps to refute an argument often stated by the orthodoxy[11], i.e., argument 2) above, stating that "though interventions did take place, the degree of distortion has been less in the East Asian countries". That is,

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macroeconomic management and minimal microeconomic interventions.

[9] Taiwan's gross national savings as a percentage of GNP was 14.6% in 1955, 20.7% in 1965, 26.7% in 1975, and 33.6% in 1985 (CEPD, 1995).

[10] For example, the percentage of tertiary level students majoring in engineering was highest in Taiwan among a sample group of East Asian and Latin American countries (Lall, 1992).

[11] It also clarifies what Wade (1990) tried to do in his seminal study on Taiwan. He tries to identify what development in Taiwan conforms to the orthodoxy, called 'free market theory' in his book, or his own 'governing the market theory'. His findings, though consistent with the more recent literature, could be greatly clarified by the latter.

> East Asian countries have managed macroeconomic affairs better, but the extent of their interventions in microeconomic areas is certainly not less than that of other developing countries.

Averaging the two will not do. What matters is whether industrial policy was helpful in bringing forth investment and successful growth.

The neoclassical concept of 'the degree of (aggregate) distortion' is not only ambiguous, but also misleading. It presumes that everything can be reduced to and measured by 'deviations' from the market price, and that 'deviation' should be minimized regardless of the sphere concerned. By collapsing everything into a single indicator, the concept precludes qualitative distinction between macro- and microeconomic interventions and the possibility of deriving a lesson to be stated below.

Thus, there is more agreement now among the revisionist camp, that messing with macroeconomic policies would not help growth[12]. Amsden (1992), who has always insisted that the East Asians succeeded by 'getting the prices wrong', also subscribes to this view. The 'wrong prices' are obtained by providing subsidies to industries, not by manipulating the exchange rate or other macroeconomic variables.

On the other hand, it is incorrect for the orthodox to claim that sound macroeconomic management by the East Asian governments was the key to their success, and that this in turn shows the superiority of the free market mechanism. This is because not only have these governments been intervening in sectoral development, but also because the crucial factor has been precisely successful microeconomic intervention, which directly affects investment behavior, and which is the unique factor that sets the East Asian economies apart from the less successful ones.

Thus, so far, one of the lessons from East Asian economic growth could be restated as the following:

> It is important to have conservative macroeconomic management on the one hand, and extensive and effective microeconomic intervention on the other.

The crucial factor has not been the good macroeconomic management factor. So

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[12] See the literature that specifically discusses World Bank (1993), as cited in Fishlow et al.(1994: 77-8), and also the symposium on this World Bank book in *World Development*, April 1994.

far, none of the countries, which adopted the orthodox reform package and did no microeconomic interventions, could muster a growth record that comes close to those of East Asia[13]. It should also be noted that the uniqueness of the East Asian case lies in the success of their interventions, not the interventions themselves, because many governments intervened in sectoral development but not necessarily with success.

1.3 Why were East Asian interventions successful?

This then bring us to another area which has seen tremendous growth, that is, the literature regarding why the East Asian interventions have so far been successful. As Amsden has been emphasizing, the East Asian governments are special for they have been able to discipline the private sector using performance standards. Even the World Bank (1993) study has extensive discussions of these institutional arrangements and government-business relations, and talks about creating 'competitive contests' to limit rent-seeking.

But where did this ability to discipline business come from? The discussion about state autonomy and capacity in East Asia has been going on in fields other than economics (e.g., sociology and political science) for more than two decades now[14]. It is said that a certain degree of state autonomy is required to impose discipline on business, and it takes a certain amount of state capacity to have the ability to do it right, i.e., a relatively insulated technocratic bureaucracy. However, it is now increasingly realized that it also requires some kind of connectedness between government and business, so that necessary information can flow in both directions. Otherwise, the government cannot formulate feasible policies or carry them out effectively. Evans (1992) calls it 'embedded autonomy', while Weiss (1995) stresses more the directive role of the government in developing her theory of 'governed interdependence'.

How the initial conditions affected the make-up of the East Asian states has certainly been much explored. The relatively strong position of the state in relation to society hinges especially on the absence of a strong landed agricultural class. Sticking to the quantitative convention, economists use the distribution of income to represent

[13] See Amsden (1994) and Rodrik (1996).

this factor to evaluate its impact on subsequent growth[15]. It is, however, not clear from these analyses whether the lessons drawn from the East Asian case can be applicable to countries without these initial conditions, or whether the initial distributive conditions have to be rectified first.

Economists in the neoclassical school have also begun to do political economy analysis of the role of the state in development[16]. By assuming self (rent)-seeking individuals and a 'neutral' or passive government, the conclusion has been that government failure will be inevitable with microeconomic interventions. Some have argued that government failure would be a greater evil than market failure, which supposedly is the only justification for government interventions. It is believed that the power of the government to intervene in the marketplace inevitably brings not only distortion but also rent-seeking.

Rent-seeking theories are now becoming more popular. However, how can the rent-seeking model be applied to explain the East Asian case? Why did interventions in East Asia, regardless of the quarrel over its effectiveness, not result in ruinous rent-seeking activities as elsewhere? Claiming either 2) the degree of intervention was less than that of elsewhere, or 3) the interventions did neither harm nor good, does not really address the issue though. Furthermore, there is still the question of why states behave differently, and why similar interventions may have different results in different countries, since microeconomic interventions in the East Asian countries are not unique among developing countries; what is unique is their success. There is no doubt that interventions have brought on rent-seeking activities and failed badly in many countries, even in some advanced countries as well. That, however, should not preclude us from asking why they brought better results in East Asia. Actually, it only makes the question more interesting and urgent.

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[14] See, for example, Haggard (1990).

[15] A relatively more equal initial distribution of income has been mentioned by most of the literature as an important explanation for the East Asian success. Rodrik (1994) has even found that this factor could explain most of the difference in the economic growth.

[16] See Lal (1983), Krueger (1993), and Buchanan (1980), among others.

2. Theoretical Analysis of Industrial Policy

2.1 No neoclassical theory of growth?

What is the theoretical justification for industrial policy? There have been interesting developments in various related fields.

Even though it is said that the neoclassical apparatus is well developed, it does NOT really have a theory of economic development, except the strong belief that markets are efficient and can be relied upon for development. That is, there is no separate theory for development; markets should work in all situations. Growth is supposed to be easier to understand than development. Even there, as shown in Lucas (1988) and Roemer (1994), there is no neoclassical theory of growth which can explain the basic fact yet. As noted by the *Economist*, “To its shame, [mainstream] economics neglected the study of growth for many years”[17]. This is especially striking, and reflects on the inefficiency of the market for intellectual ideas itself, as most would agree that growth probably is the most important subject to be studied[18].

The new field of endogenous growth did not emerge till Roemer (1986), and the ‘novelty’ is to “emphasize that economic growth is an endogenous outcome of an economic system”. This is certainly much better than letting the so-called exogenous factors explain growth, which amounts to giving up rendering an economic explanation of the most important economic subject. However, the general emphasis on learning and increasing returns in the modeling of endogenous growth has yet to produce results which can explain both the growth in East Asia and lack of it elsewhere.

The classical school of Adam Smith, Ricardo and Marx focused on economic growth and had their version of endogenous growth theories. The neoclassical school shifted toward studies of resource allocation and static efficiency, and hence has little to say regarding dynamic growth.

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[17] *The Economist*, May 25, 1996, p.23.

[18] As admitted by Lucas (1988) after he discovered this subject.

The sophisticated trade theory of comparative advantage is again a static theory. The model usually starts with given endowment, while development should entail changing endowment. Like other neoclassical theories, growth is not endogenized in the trade model, and hence cannot be explained by trade either. Shifting from being a closed economy to free trade will bring only one-time gain, but no growth effects. So nowhere in the trade theory does it tell us that free trade will deliver higher growth rates.

There is a rather ambiguous climbing-the-ladder hypothesis, which claims that the developing countries can keep moving up on the ladder of comparative advantage as they develop, but it does not specify the mechanism through which the moving will take place. This along with the flying-geese theory will be discussed next.

2.2 Flying geese and comparative advantage theories.

2.2.1 The various models

The original flying geese model. The theory of flying geese has been widely accepted outside of mainstream economics, especially in Asia. Originally, it was developed by a Japanese economist, K. Akamatsu, in the late 1930s, and restated by M. Shinohara (1962). Akamatsu suggested that the successive development of imports, domestic production, and exports follow the 'wild-geese-flying pattern'. That is, a new product and technology is first imported into a developing country, and then as domestic production picks up, volume of import declines; and export starts to grow as domestic production reaches a certain scale. His model was the successful import-substitution process of Japan's textile industry.

The catching-up product cycle theory. The version in use today is a modified one, combined with Vernon's product cycle theory, chiefly used to describe the diffusion process from Japan to other Asian countries[19]. Some Japanese economists term it 'catching-up product cycle theory', suggesting that Asian developing countries follow Japan's path and repeat the same product cycle[20]. Japanese direct foreign

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[19] See Bernard and Ravenhill (1995) and Korhonen (1994) for a discussion of the development of this theory.

[20] See Kojima (1973) and Yamazawa (1991).

investment is also considered to provide a crucial impetus. This version has been popular especially among the Japanese economists and political scientists. For example, Cumings (1984) argues that economic development in East Asia can only be understood within a regional framework, which began with Japanese colonialism. Asian countries then followed Japan in a flying-geese pattern of sequential development in the postwar period.

This body of literature brings our attention to the important international and regional political economy perspective, which has been taken for granted and hence left out of the analysis by the mainstream economics. But what is the driving force or the mechanism by which changes will take place? The 'catching-up product cycle theory' has three components: the original Akamatsu flying-geese model, the product cycle theory, and the neoclassical comparative advantage theory.

The original flying-geese theory, based on the import-substitution process of the Japanese textile industry, is really a model for the advanced countries. Learning the technology and catching up with the front-runners was accomplished via producing for the protected domestic market.

Both the product cycle and the comparative advantage theories focus on the relative wage level as the determinant of international division of labor. In Vernon's product cycle theory, production initially takes place in the advanced country because its industry has advantage in innovation and knowledge about the local markets. Once the product enters into the mature stage, the location of production will solely be determined by production costs, i.e., the wage level. Since the wage level will rise with economic development, each country will then be propelled along the path of product cycles. Some neoclassical economists have termed it climbing-the-ladder theory; LDCs climb the ladder of comparative advantage, following the path of the DCs[21].

The wage gap explanation. According to this model, economic development will 'naturally' take place in the LDCs as the relative wage level becomes low enough. When the gap in the wage level between Japan and, for example, Taiwan has become wide enough for the production of certain products to become economically viable in Taiwan and non-viable in Japan, it will occur 'naturally'. How it will occur and who

[21] See Balassa(1982) among others.

will undertake the production is not clear and seems unimportant to the model. Presumably, foreign direct investment will do the job, i.e., moving the production there, diffusing the technology afterwards, and hence stimulating the development process. However, local entrepreneurs can also undertake the production as well.

Thus, in this model, all the inherent difficulties involved in getting the growth process started in the LDC, which has been the focus of development economics, are non-existent. The model follows the basic neoclassical thesis, which says markets are efficient and will create growth if left alone. The added features here are the regional perspective and a sequential development pattern or a product cycle path.

The *ad hoc* nature of the wage gap explanation should be evident. For the wage gap to be the main explanatory variable, the next LDC to join the flying geese formation should be the one with the lowest wage level. In reality, it has never happened that way before. When the East Asian countries started their export growth, their wage levels were higher than many other LDCs. The model does not tell us why the wage gap did not bring these LDCs "the magic".

The model cannot explain the hierarchy of the flying geese pattern, and why most of the LDCs did not join the formation, or why the effect of the wage gap varies across countries. The impacts of direct foreign investment (DFI) have been quite varied, and there is no reason why Japanese DFI should have different effects from that of other advanced countries. Besides, it has been shown that DFI always trails development, and never leads it. The expanded flying-geese model may have some descriptive value, but lacks explanatory power.

External factors really cannot explain the East Asian growth, because the opportunities in the international market were open to most, and many other countries received American aid. Geographical proximity to Japan can at most be one of the factors in the analysis, but cannot be a main explanatory factor by itself. The transmission mechanism is missing.

Nonetheless, the image of Japan leading other Asian countries in a flying-geese pattern is getting popular in the press and its descriptive value does make an impression. Is there really a pattern there? How can we explain it either way?

2.2.2 A critique

No catching up? Curiously, even though the current version of the flying geese model is called the ‘catching-up product cycle theory’ by some, it does not necessarily lead to eventual catching-up in the model itself. One possible way to read the model is to follow the Vernon’s product-cycle theory. The firm in the advanced country has advantage in innovation due to its technological capacity and knowledge about the market. When the product becomes mature, NICs learn to produce the product competitively. At the same time, firms in the advanced countries continue to compete among themselves in innovation activities. Consequently, the production of the mature products and repetition of the product cycle does not compete with the advanced countries on the world frontier, in no way implies eventual ascent to the frontier, and so there is no catching-up.

Just as this theory does not specify the transmission mechanism through which each particular country joins the flying geese formation, neither does it have a mechanism which explains how the geese flying behind will catch up with the front-runner. There is no other mechanism specified, except the wage gap, which is *ad hoc* and totally inadequate as discussed above.

Globalization. What is the record so far? Are the East Asian NICs catching up with Japan? Bernard and Ravenhill (1995) do not think that other Asian countries would replicate the Japanese model exactly. Globalization of production networks and the fast pace of technological change mean complex and hierarchical regional networks of production. Technological diffusion has been partial, at best. Japan’s dominant position in these regionalized networks of production remains unchallenged. The depth of industrialization in Taiwan and Korea is also found to be much less than that of Japan, and their technological dependency on Japan does not seem to be declining. The Southeast Asian NICs rely much more heavily on foreign technology and multinational corporations, and their chances of catching up with Japan look even more remote. The explanations offered as to why other Asian countries could not replicate the Japanese model include mainly the globalization of production networks, the rapid pace of technological change, and the fact that Japan did not give up production.

There are different factors at work though. The picture described by Bernard and Ravenhill certainly is much more realistic. The usual boundaries which separate national economies, products and industries are getting blurred and need revision. The persistent technological gap and production hierarchy reminds us that the Asian NICs have yet to catch up. However, how the globalization of production networks, though indeed a phenomenon, works as an explanatory variable is a different matter.

What is the driving force? To postulate a causal relationship is to assume that international competition dictates a certain pattern of division of labor based on comparative advantage, that the degree of globalization is high, and that each country can specialize only in certain production processes. In a modified manner, however, the globalization theory is similar to the flying geese model. The difference lies in the boundaries and categories used in the analysis. The flying geese model uses the more traditional national, product and industry categories, while the other does not do so exclusively. But the implicit determining factors are similar, i.e., comparative advantage and 'natural market forces'. Thus, this globalization theory also suffers from the problem of missing the transmission mechanism.

External factors, if used as the main explanatory variables, simply cannot offer a consistent account, since there are always numerous other LDCs, which have faced the same external conditions but did not react the same way. The national economy is still an important analytical category, because policy and history does matter a great deal. What kind of production and industrialization will take place in a national economy is still a very important and relevant issue. Increasing globalization just means that the boundary conditions for development are changing. More will be discussed next in the section on industrial strategy.

Effects of labor-intensive exports vary. There are indeed a certain number of labor-intensive industries shifting between developing countries. The list certainly changes but includes apparels, sport shoes, umbrellas and the assembly parts' of the electronics industry. The characteristics of these foot-loose industries include a high percentage of labor costs in total costs, separable production stages, and frequent style changes or short product life cycles which makes automation unfeasible. It needs to be emphasized that this type of production has occupied only a small portion of the advanced countries' imports, and that its share shows no sign of an increasing trend. As Amsden (1992) has repeatedly argued, there are simply not enough labor-intensive industries to allow low wages alone to act as an engine of growth for all LDCs. It can certainly be argued that these industries did not act as an engine of growth in East Asian countries.

The impact of these industries, of course, depends upon how much linkage they generate. The extent of local sourcing may vary greatly, and actually depends upon the degree of local industrialization, which already exists. If the overall economic conditions are favorable, linkages will be strong. If not, then it may become an export enclave, as has occurred in many LDCs, in which case the phenomena does not last long. The point is that these industries by themselves cannot be the leading sectors, as they certainly were not in East Asia. The wage factor does affect the locational decision, but does not guarantee that linkage effects will be materialized.

Before. What happens before and after the rise and decline of labor-intensive industries is more important. The exclusive focus on the level of wage is misleading. As Stiglitz (1994) has shown, even in the advanced country business activities rely not just on price information, but also on various other non-price mechanism, such as contract, reputation, and rationing. These non-price mechanisms are certainly in short supply in the LDCs.

The nominal wage level may look low in many LDCs, but the productivity level is usually low too. Even if the level of productivity was tolerable, other costs may be high, such as transportation, bureaucratic red tape, other infrastructure and various risks. The fact that the level of all these other costs is high implies that it requires state action to lower it. This is exactly the part of state intervention required for overall growth. That is, to even make the effective wage level truly low, it requires a state that is willing and able to intervene to lower the cost of doing business, i.e., a developmental state.

The neoclassicists may turn around and say that this just proves that the state only needs to intervene to make the market work. By saying this, however, they are actually demanding a particular kind of state, developmental in substance yet neoclassical/conservative in form.

After. What will happen after these labor-intensive industries leave the country? Remember that the neoclassical trade theory of comparative advantage never really tells us how the country's comparative advantage will change over time. In reality, if it has been an export enclave, then it would be like a mining town, with boom and bust[22]. Even if some linkages have occurred, if the host country did not push

[22] Some multinational firms had tried various locations in Latin America for doing labor-intensive production, but without great success. The title of Morawetz's book (1981) is telling: *Why the*

industrial deepening before this, then growth will not be sustainable either.

In Taiwan and South Korea, the government was instrumental in pushing the first wave of manufactured exports in the 1960s. It altered the incentive structure for exports by reforming the exchange rate regime, granting loans and providing subsidies. Even before export activities began growing in earnest, these governments already started planning for secondary import-substitution to promote industrial deepening. The multinational electronics companies did not move their assembly work there after the export growth had started. This is consistent with the general finding that foreign direct investment usually lags behind, rather than leads, development. Moreover, the footloose type of production actually was the same, i.e., lagging behind rather than leading development. In Taiwan and Korea, there were other industries that could take the place of these, i.e., industrial deepening had taken place before the departure of these labor-intensive industries. The current wave of industrialization in the Southeast Asian countries has been heavily dominated by foreign direct investment from the East Asian countries, and its sustainability will depend upon what the Southeast Asian governments do to prepare for the future.

In any case, a low wage level by itself will not bring forth development, as demonstrated by the fact that wages are all low in the stagnant LDCs. The impact of footloose labor-intensive production on the host country depends upon the conditions in that country and what its government has done to promote industrialization. The impact of these industries has been very limited.

2.3 Market failure - revisionist version.

The only case in which the neoclassical orthodoxy allows for government intervention is that of market failure. Some neoclassicists, who argue that government failures are worse than market failures, have challenged even this case. The revisionist camp, on the other hand, has found this framework ad hoc and unsatisfactory. Amsden (1994) pleads for an inductive approach to economic development instead. Indeed, according to Wade (1994), the fact that “the mainstream is inattentive to history” and that “the neoclassical theoretical apparatus is much

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emperor’s new clothes are not made in Columbia?.

better developed" (p.69) can help to explain why the mainstream still holds the view that East Asian growth is due to the free functioning of the market. Historical evidence seems to be the best weapon for the so-called revisionists, because there has been almost no cases of successful development without government interventions, and also because the theoretical framework for the alternative is less well developed.

The information paradigm. For a theoretical framework, a higher degree of development does not necessarily imply a higher level of explanatory power. The market for intellectual ideas is not known to function perfectly either. Nonetheless, prominent economists using this market have seriously challenged the competitive or neoclassical paradigm. Stiglitz (1994) summarizes his twenty-year work on developing the information paradigm, or the new theory of the firm. He finds that the neoclassical model fails to take into account problems that arise from the absence of perfect information, costs of acquiring information, and the absence of or imperfections in certain risk and capital markets. The fundamental welfare theorem, which states that markets are efficient, was derived by assuming away these problems. However, none can dispute that these problems not only exist but also are prevalent. Stiglitz shows that "once information imperfections (and the fact that markets are incomplete) are brought into the analysis, as surely they must, there is no presumption that markets are efficient"(p.13) and the invisible hand theorem no longer holds.

The fundamental welfare theorems of the neoclassical model form the basis of the market failure approach to government intervention. Since markets are in general presumed to be efficient and failures are exceptions, the role for government is a limited one. It is also believed that the price mechanism can allocate resources efficiently. Stiglitz's information paradigm again challenges all of these results by introducing information and shows that there are various non-price mechanisms that help to allocate resources. This new paradigm has presented a serious challenge to the orthodoxy, and the challenge has not yet been answered. Blind faith in efficient markets is no longer justified.

Market failures and natural path. As a counter development to the neoclassical efficient market paradigm, the revisionist camp at first had a market failure approach to development. It is argued that market institutions are not well developed in the developing countries, and so market failures abound. Thus, government interventions are justified. This line of reasoning has an apologetic tone to it, for it still subscribes to the idea that there is a predestined development path dictated by the market and the country's comparative advantage. Thus, 'distortion', though usually bad, can be helpful in this case, because it can help the functioning of the market by remedying its failures. The role of intervention is limited of course. But as discussed above, the comparative advantage theory only tells us what the pattern of trade specialization should be, at the present time, given the current endowment. It does not tell us how changes occur. Thus the course of development actually remains uncharted.

The notion that a country's industrial and trade structure can only be determined by its comparative advantage, which dictates a "natural path", is implicit and taken for granted in all the neoclassical writings. Any intervention hence must be a distortion and leads to a state which is less desirable than the 'natural' state. For example, in the World Bank study (1993), one of the way the book uses to demonstrate the ineffectiveness of industrial policy is to show that the industrial structure of the East Asian countries did not deviate from this "natural" structure even with interventions. For a critique of this demonstration, see Wade (1994) and the special section in *World Development* (4/1994).

Governing the market theory. Wade (1990) develops a concept of 'governing the market'. The term is a very catchy phrase, almost grand, indicating clearly that the East Asian states have played a crucial role in guiding economic development. However, when he tries to clarify the concept further[23], his explanations seem anti-climatic. He distinguishes between policy action which either 'leads the market' or 'follows the market'. The former is public action taken before the private sector would act on its own; the latter is that taken after. The developmental state is, of course, the one that exercises 'big leadership' most of the time. The developmental state in this definition seems to be just "speeding up" the development process, or to be making sure what should occur does indeed take place, and neither of these actions comes really close to 'governing the market'.

The crucial distinction to Wade is that government intervention takes place before it is time, before the market. It is not assumed that the action would "change" the course of development. Indeed, "the market" is implicitly presumed to dictate a

[23] Wade (1990: 28-29).

development path based on the country's comparative advantage, and hence any alteration is possibly unjustifiable. Without giving up this neoclassical notion of the market, this catchy phrase, "governing the market", cannot sustain its intended meaning. This is so despite the fact that Wade (1990) has strongly emphasized the role of selective sectoral policies in his later discussions[24].

Wade has also presented evidence that some of the state interventions in Taiwan conformed to the market, though overall, interventions were crucial. As Lall (1994) says, state actions are to remedy market failure, and hence must be market-friendly or market conforming. Moreover, according to Amsden (1992), the LDCs are unable to grow because the market is working, not because it is failing, i.e., given their poor productivity, they cannot compete against more advanced countries without protection. Hence you need interventions to change prices and incentives, i.e., in her words, "to get the prices wrong".

Even though these may seem to be different ways of saying the same thing, they actually involve different development theories, and different notions about the role of the market. If still subscribing to the neoclassical notion of a pre-determined natural path, dictated by "the market", then interventions must be justified by market failures, with apologies as well, as in the case of Wade (1990) and Lall (1994). On the other hand, Amsden deliberately tries to throw away that confining notion.

Indeed, the market is always functioning, one way or another, and producing results, which often include underdevelopment. After the initial learning took place, the market will play a more important role. For, after all, it is capitalism that is being developed. The most difficult part is the first step in bringing forth dynamic changes. Even for industrial upgrading in the later stage of development, the state's role in strategic choice is still important. Interventions concern more with dynamic changes, less with static functioning of the market.

As discussed above, Stiglitz (1994) has demonstrated that there is no theoretical ground to presume an omniscient market in the static sense, let alone for the dynamic one. The markets are not even efficient in short-term resource allocation matters. According to the Arrow-Debreu model, to assert that markets will be efficient in

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[24] Wade cited some new theoretical development, such as the theory of industrial strategy, to reframe his governing market theory in his more recent works. See Wade (1994).

terms of long-term investment decisions requires making some rather strong assumptions, such as the presence of a whole set of future markets for every circumstance, and perfect information infinitely into the future, which hardly bears much resemblance to reality. Thus, confidence in the free market mechanism to achieve efficiency in the long term is not warranted. Those revisionists who follow the market failure thesis, somewhat like their neoclassical opponents, implicitly put too much faith in the market. It takes further theoretical development, such the theory of industrial strategy, to be discussed next, to allow the revisionists to escape from the straight jacket of the ‘free market thesis’.

2.4 Theory of industrial strategy.

In today’s world, the myth of the market still reigns supreme. Thus, it seems ‘natural’ to assume market failures to be the exceptions in both the short- and the long run. Even though there is no formal neoclassical growth theory to provide support; even after the information paradigm has shown market failures to be the norm even in the short-run. Being based upon the faith in the market, the notion that there is a natural development path indeed has pulverized discussion of economic development. To liberate us from this neoclassical notion more theoretical work is needed. It needs to be demonstrated that the market solution to all intertemporal choices is not optimal, and that conscious and coordinated interventions can lead to more desirable outcomes. In other worlds, there can be more than one market equilibrium given the initial conditions, that strategic choice affects outcomes, and that history matters.

Theoretical discussions like Stiglitz’s leave a potential role for government interventions to help shape the course of a country’s economic development. Some Japanese economists are developing economic analysis of industrial policy, which can provide theoretical foundations for an alternative revisionist view. It is only fitting that these theories would come from the land where industrial policy has achieved the greatest success in the postwar period.

Multiple equilibria. It is argued, in Itoh, et al. (1991), that industrial structure changes with time and policy, and history, culture and institutional factors can affect the direction of its change as well. There will be costs in setting up industries, especially arising from scale economies and information problems. Set-up costs in turn result in multiple equilibrium. The outcome is not determinate and will be influenced by participants' choice of strategy. The final equilibrium that eventually emerges depends upon factors such as the collective information shared by the participants and the coordination enforced by outsiders. Thus, enters the role of industrial policy.

Japan's economic bureaucracy had long decided, without using any formal economic models, that industrial policies should aim for "advancement of industrial structure", and that "an appropriate industry should be decided on two criteria-- an income elasticity criterion on the demand side and a productivity criterion on the supply side." (*White Paper on International Trade and Industry*, 1964, p. 238, quoted in Itoh et al., 1991, p. 32).

It is hence an important policy issue to "choose an industrial and trade structure". To prepare for setting up a higher value-added industry in the future, the country has to start investing in the related infrastructure, physical and human capital. Since most of these investment may be specific, not general, functional (non-industry specific) government policy measures may not be effective. Adding to this is the fact that resources are always scarce.

Chang (1994: Ch. 3) has a useful summary of these arguments for industrial policy[25]. He points out that "industrial policy can be most efficient in a context where interdependence and asset specificity are important". Industrial policy is also a superior way to promote technical change, for it does not kill off the profit motive, and it promotes changes in addition to what the market can produce, through the socialization of risk (p.89). Though, as stressed by all others, the real question is how industrial policy can be made to work.

The Learning paradigm. Without relying upon fancy models, Amsden (1989, 1992, and 1994) has been articulating a learning paradigm to account for late-industrialization. Besides her extensive knowledge of Taiwan and other Asian countries, she relies mostly on her now heavily quoted study on South Korea (1989). She follows a modified Gerschenkron approach, and advocates an active role for government intervention in bringing forth industrialization. She specifically does not subscribe to the market failure theory. The government has to "get the prices wrong"

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[25] Shapiro and Taylor (1990) also has a helpful review of this debate, with more focus on situations in the developing countries.

for the LDC to industrialize. As opposed to the fancy deductive models of the mainstream school, she advocates an inductive approach to economic development studies.

The technological gap between front-runners and latecomers has been widening. According to Hikino and Amsden (1994), the ratio of the average GDP per capita in the developed country to that of the LDC was 1.9 in 1860, 3.4 in 1913, 5.2 in 1950 and 7.2 in 1970. (p.290) The implication of the widened gap is that latecomers now cannot leapfrog, instead they have to follow and learn.

She thinks that the necessary condition for industrializing in the 20th century is systematic and well-coordinated government intervention to promote manufacturing investment, with a clear set of principles governing subsidy allocation. The learners need to target postadolescent or mid-tech industries, the technology of which is more easily available and the global demand for which is growing. They also have to adapt borrowed technology on the shop floor to suit their conditions, and continue to upgrade it. Lacking core technology, they often need to diversify into unrelated fields. The top management's function is confined to allocating resources among the units and monitoring their performance. It hence can not contribute directly to shop floor improvements. Thus, late-industrialization have three characteristics: heavy government intervention, a focus on the shop floor, and a group firm structure. But Amsden was not definite about where the late industrializers would end up. She also wonders what the learners would do after they 'get close to the frontier'; the sooner they learn, the sooner they have to abandon the learning paradigm. Would the learners join the front-runners eventually? This important issue is yet to be examined.

Thus, theoretical analysis of industrial policy is being built up. There are, however, not enough studies of the actual implementation of industrial policy in East Asian countries. Though some firm or industry level studies have helped us to understand the learning process and growth experiences during the process.[26] Opponents of the revisionists have insisted that the effectiveness of industrial policy in the East Asian countries be not yet proven. It will indeed take more of those studies to dispute that claim.

[26] See Lall(1994) among others.

3. Conclusion

In the current debate regarding how to account for East Asian economic growth, the prevalence of government interventions has become hard to deny. The neoclassical theorists, however, try to write off the effect of interventions by arguing that these interventions have been of no effect or that the degree of aggregate distortion is less than elsewhere. It is found that the distinction between macro- and microeconomic measures is helpful, while the dichotomy between out- and inward oriented policies is misleading. East Asian countries continued to practice import-substitution policy after they switched to export-oriented regimes. They did manage macroeconomic affairs better then most other LDCs, but the extent of their interventions in microeconomic areas is definitely not less than that of other countries. More studies are needed to document the effects of microeconomic interventions more fully, and some industry studies are being done now. But to use the ambiguous notion of the degree of aggregate distortion to fudge the issue simply will not do.

On a theoretical level, the neoclassical school deals mostly with static concerns, and has little to say about dynamic changes, and hence has no formal growth theory. The comparative advantage theory is also static and provides no theoretical account of how a country's advantage and position will change, which after all is what economic development is all about. However, to make up for the deficiency, there is an overwhelming belief that markets will work, especially so after the neoconservative resurgence in the last two decades.

The popular version of the flying geese model, also called the catching up product cycle theory, is also based on the comparative advantage theory, and assumes automatic dynamic changes without specifying the transformation mechanism required. It implicitly relies upon the wage gap factor to explain the changes, but in doing so it really cannot explain why other LDCs with even lower wage levels could not duplicate East Asian growth. In reality, the East Asian NICs have not replicated the Japanese model exactly, while the Southeast Asian countries are even more behind in terms of technological diffusion.

Many revisionists, as called by the World Bank (1993), use market failures to justify government interventions. Along this line of reasoning, the debate with the neoclassicist then becomes one about how pervasive market failures are, and, as the neoclassical political economic analyst calls it, about the relative merits of market and government failures. This revisionist version of market failure still subscribes to the notion that there is a market, which determines ‘a natural path’ for the economy. Government interventions just remedy or restore the market. Wade’s ‘governing the market’ theory is also in this vein.

This notion is not only confining, but also has no theoretical backing even in the neoclassical theory. New developments like Stiglitz’s information paradigm have demonstrated that the omniscient market does not exist in the static, let alone for the dynamic, sense. Once the information element is introduced, the results of the Arrow-Debreu model no longer hold. Markets are simply not efficient. To further assume that there is a predetermined development path dictated by the market is groundless.

The theory of industrial strategy shows that there are usually multiple equilibrium given a set of initial conditions, and that strategic choice affects outcomes. Thus, history and government policy can make a difference. Conscious and coordinated interventions can lead to more desirable results.

Amsden’s learning paradigm is consistent with the theory of industrial strategy. However, her paradigm relies more on induction method. She thinks that the widening gap means Gerschenkron type of leapfrogging is unfeasible for the latecomers in the later half of the 20th century. Therefore, more than ever, the learners have to rely upon systematic and coordinated government intervention to promote manufacturing investment. The emphasis on learning also means a focus on the shop floor and a group firm structure.

As widely agreed, more micro-level studies are needed to further discussions in the current debate on the role of the state in East Asian economic development. However, recent development in the theory of industrial strategy should help us to better focus our efforts in this endeavor.

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