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Some Observations on William Easterly’s View
of East Asian Growth**

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The ‘Luck View’ vs. the ‘Long View’: Some Observations on William Easterly’s View of East Asian Growth

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Abstract

In several recent papers, Easterly has propounded a ‘Luck View’ of the East Asian growth. This view is untenable, unwarranted, and unfortunate. It is untenable, because the ‘Luck View’ cannot explain the geographical concentration of the East Asian growth phenomenon. It is unwarranted, because such a portrayal is not necessary to discount the validity of the new growth models whose equilibrium growth rates depend on country specific characteristics. Finally, it is unfortunate, because East Asian nations achieved economic growth through considerable labor and ingenuity, so that describing this growth as a matter of luck may not be a fair characterization. Proper understanding of the East Asian growth rather requires taking a ‘Long View’ that sees this growth as a part of the transition of human societies from a pre-industrial to the industrial level on a global scale through the process of diffusion. From this viewpoint, Japan can be seen as another focal point for diffusion of industrialization in Asia. Many particularistic historical conditions were necessary for Japan to play this role and for the Gang of Four, namely Hong Kong, Korea, Singapore, and Taiwan, to emerge as the first batch of NIEs. However, with the road paved, it has become easier for other nations to follow the route, as the experience of other East Asian countries such as Thailand, Malaysia, Indonesia, and recently China and Vietnam, shows. The proposition of industrialization through export-led growth thus has become more general. Neoclassical growth theories, both of the original and new varieties, are not geared to capture sweeping historical processes. However, the rapid growth of the NIEs and the subsequent tapering off of their growth rates can to some extent be seen as compatible with the convergence implication of the original neoclassical growth theory.

1. Easterly’s ‘Luck View’ of East Asian Growth

In a recent paper, William Easterly (1995) suggests that the East Asian growth may be viewed as a random outcome, as a result of ‘luck.’ By East Asia, he mainly considers the four Newly Industrializing Economies (NIE), namely Hong Kong, Korea, Singapore, and Taiwan. He provides an elaborate argumentation to show why such a view may be valid. First, he shows that the Barro (1991) growth regression cannot explain East Asian growth performance sufficiently. Predicted values of growth (during 1960-85) obtained from this regression are smaller than actual growth rates, resulting in large residuals. In his view, this should not be surprising, because values of the explanatory variables of this regression for the above NIEs are ‘less than superlative’ (p. 269), as judged by their ranking. The determinants of growth, according to the Barro regression, are (i) the

¹ I would like to thank Eric Ramstetter for his helpful comments on earlier drafts of the paper. The views expressed in this paper are the author’s own and do not reflect in any way the views of ICSEAD or any other organization with which he is associated. Send your comments to nislam@icsead.or.jp.

primary enrollment rate in the initial year, 1960, (ii) the secondary enrolment rate in 1960, (iii) the share of government consumption in GDP, (iv) the deviation of investment deflator from United States (a measure of price distortion), (v) the number of revolutions and coups, (vi) the number of assassinations, and (vii) the initial per capita income.² Based on the t -statistic of the residuals, Easterly computes the probability of the sum of predicted growth rate and the associated residual to exceed five percent, which is taken as the minimum rate required for the growth to be qualified as ‘miraculous.’ He finds that this probability is very low for Korea, Taiwan, and Hong Kong. For Korea, this probability is found to be only 8.8 percent, leading Easterly to comment that “there would then be nothing special about Korea – it would just be the economy that got *lucky* (my emphasis) out of a larger set of countries with good but not great economic policies.” (p. 271). He thinks that other NIEs were also lucky to have large residual values.

Easterly shows that the situation does not change radically if alternative specifications of the growth regression are used. One reason for this is that the values for NIEs are not spectacularly high for a whole range of other possible determinants of growth. To establish the point, Easterly uses the Levine and Renelt (1992) specification, which includes the investment rate as an explanatory variable. Again, the results show large residuals for the NIEs.³

To bolster the ‘random’ or ‘luck’ view of the East Asian growth, Easterly next points to the very low correlation among growth rates of different periods. In this regard, he draws upon the findings of his (with others) previous paper, Easterly et al. (1993). In this study the correlation between the growth rate for the 1960s and that for 1970s in a sample of 100 countries was found to be 0.21. Similarly, the correlation between the growth rate for 1970s and that for 1980s was found to be only 0.31. According to Easterly, such low values of inter-temporal correlation (ρ) of growth rate suggest that growth performance is fickle. A country may do well in a particular decade and not so well in the next decade. This lack of persistence, according to him, also suggests that time-invariant characteristics of a country will have limited success in explaining variation in growth performance.⁴ In other words, fixed country characteristics cannot explain growth performance.

In this general background of low temporal correlation (or persistence), Easterly however finds that the NIEs prove exceptional. In a scatter of growth rate for 1960-73 (along the x -axis) versus growth rate for 1974-88 (along the y -axis), the NIEs are found to lie in the north-east corner of top deciles. In other words, this set of countries performed well in both the periods considered.

Easterly tries to explain NIEs’ persistent high growth rates as a random outcome too. He asks the probabilistic question: “How unusual is it that four countries would appear in the top decile in two successive periods?” To answer the question he conducts a Monte Carlo study with ρ equal to 1/3, and reports that “twelve out of fifty simulations show four or more countries in the top decile across successive periods.” (p. 277) Based

² The variables in (iii), (iv), and (v) are averages for the period, i.e., for 1960-85.

³ Taiwan is absent from the Levine and Renelt (1992) sample. Also for Singapore, the residual proves lower showing that the investment ratio matters more for Singapore as a source of growth than it does for Hong Kong and Korea, supporting thus the Young (1992, 1995) hypothesis regarding the source of growth in these economies.

⁴ In fact Easterly et al. (1993) show that with a ρ value of 0.3, the highest value of R^2 that a growth regression with fixed country characteristics as explanatory variables can attain is about 0.6.

on these simulation results, he concludes that “While not the most likely outcome, it is not unusual to find four consistently outliers even with relatively small permanent differences in cross-country performance.” (p. 277)⁵

Overall, Easterly argues that East Asian growth can be viewed as a random outcome, as a matter of luck. He draws an analogy with baseball, saying “just as a baseball star is dubbed a clutch hitter after a lucky hit, some so-called economic miracles are likely due to random variation” (Easterly et al. 1993, p. 481). He therefore cautions that few policy lessons may be taken from the East Asian growth experience.⁶

2. The Problem with the ‘Luck View’ of East Asian Growth

The problem with the ‘Luck View’ of East Asian growth is that it cannot explain a crucial feature of this growth phenomenon, namely its geographic concentration. It is true that out of a sample of one hundred countries, there is a reasonable probability for four countries to be outliers. It is also true that there is a reasonable probability that the same set of four countries can prove to be outliers in two successive periods. Where this randomness theory breaks down is in explaining that all these four outliers should come from the *same region*. The probability of such an outcome is miniscule indeed. It is this aspect of the East Asian growth that Easterly’s ‘random’ or ‘luck’ view cannot explain.

Actually, Easterly himself recognizes this problem. For example, towards the end of his long analysis, Easterly offers the following remark: “What may be unusual about the Four’s success is that they were all in one region.” (Easterly 1995, p. 283) Elsewhere, he mentions that “Of course, the most obvious trait the Four have in common is that they are in the same region: East Asia. The more recent success of other East Asian economies like China, Thailand, Malaysia, and Indonesia has added to the case of East Asian exceptionalism.” (p. 274) It is indeed this *East Asian* exceptionalism that is at the heart of the issue. The question of interest is why robust growth was possible in East Asia while it eluded many other developing regions. The issue of region is not a peripheral matter. It is of central importance, and it cannot be explained away as a random outcome.

Easterly is correct that adding an East Asia dummy in the growth regression and finding it significant does not help us much in resolving the issue, for it still leaves us with the task of explaining the observed significance of the dummy. Easterly also thinks that using such variables as “Confucian work ethic” is of dubious value, because they may be more of an *ex-post* explanation rather than *ex-ante* determinant of growth. (p.

⁵ In the last section of the paper, Easterly (1995) also examines the persistence of NIE residuals obtained from pooled cross-section, decade regressions, where each country has up to three decade-average observations, for the 1960s, 1970s, and 1980s. Again, he uses both Barro (1991) and Levine and Renelt (1992) specifications. He also considers growth rates in both per capita and per worker terms. In Table 11.7 of the paper, he presents the values of the residuals for the NIEs for these three decades obtained from per capita and per worker specifications of Barro and Levine and Renelt regressions (i.e., all together we have four sets of residuals for each of the NIEs.) He finds that “The residuals stay consistently high and positive in the Levine-Renelt regression with per-capita growth rates, but somewhat less so in the Barro regression with per capita growth rates. The residuals are more unstable when per worker instead of per capita growth rates are used: Singapore has residuals close to zero for two out of the three decades in both Barro and Levine-Renelt per worker regression.” (p. 280)

⁶ “The finding that much variation in growth rates is due to random shocks should induce caution in attributing high growth rates to good policy (or to a good ‘work ethic’).” (Easterly et al. 1993, p. 481)

274) More importantly, such variables may be just another way of inserting the East Asia dummy, thus without adding much in terms of explanation.

In pondering about the 'region' issue, Easterly actually provides some useful clues about the lines along which the answer to the East Asian puzzle is to be sought. He correctly notes that "The spatial association of success with East Asia (even if the category 'East Asia' is partly endogenous) would imply that more attention should be paid to economic geography, as argued by Krugman (1991)." (Easterly 1995, p. 283) He laments that researchers have not focused more intensely on the geography aspect of East Asian growth rather than limiting themselves to 'speculating' about 'cultural or other fixed regional traits.'⁷ Such fixed traits, according to him, cannot explain the differences in growth, because while the fixed traits were there for ever, the growth is only recent.

Easterly (1995, p. 283) further notes that "The East Asian successes look at least casually a lot like growth radiating from poles with Japan followed by the Gang of Four, followed by China, Thailand, Malaysia, and Indonesia." He therefore thinks that 'contagion' may be a better candidate as an explanatory factor of the East Asian growth. He refers to Wang and Moody (1993)'s result showing spillovers from Taiwan and Hong Kong to coastal provinces in China and also to Chua (1993)'s result showing that countries benefit from their neighbors' good policies. He conjectures that 'something extra' in East Asia is "partly the mutually beneficial set of spillovers from high investment and other favorable country characteristics." However, he notices that this in itself is not sufficient to explain concentration of success and suggests that "what is also needed is that neighbors influence each other to adopt high investment rates or other 'good' characteristics (or that growth itself spills across borders)." Easterly notes that some past attempts, such as of De Long and Summers (1991), at identifying spatial correlation based on physical proximity have had no success. However, he rightly suspects that this failure may be more due to the inadequacy of the methodology used. Easterly therefore surmises that "it may be that more complicated interactions between countries remain to be studied." (p. 283)

Thus Easterly provides useful clues to the understanding of the East Asian growth. His ideas of 'contagion,' 'growth radiating from poles,' and 'more complicated interactions between countries' are all very well taken. However, first of all, this emphasis on the geography aspect of East Asian growth contradicts his earlier portrayal of East Asian growth as a random outcome. Second, he does not pursue what these 'complicated interactions' might be. Yet it is in here that an explanation of the East Asian growth may actually lie.

3. Towards a 'Long View' of the East Asian Growth

'Diffusion,' 'contagion,' 'complicated interaction,' 'growth radiating from a pole,' etc. are indeed the right kind of concepts necessary for explaining the East Asian growth. Clearly the growth of the NIEs cannot be separated from the growth of Japan. Some Japanese economists have in fact put forward such descriptive allegories as "Flying Geese" to portray the growth process of the East Asian region, with Japan in the lead followed by NIEs, followed in turn by ASEAN four (Indonesia, Malaysia, Thailand),

⁷ "It is surprising that the literature does not make more of this (geographical – NI) concentration (other than to speculate about cultural or other fixed regional traits supposedly favorable for growth)." (Easterly 1995, p. 275)

followed finally by China and Vietnam, etc. The industrialization of the Gang of Four therefore cannot be understood without understanding the industrialization of Japan.⁸

The phenomenon of East Asian rapid industrialization makes better sense when viewed from a longer perspective. The transition of human societies from the pre-industrial to the industrial stage is a world-wide, global process. The closest parallel from earlier history is probably provided by the transition of human societies from the Paleolithic stage based on hunting and gathering to the Neolithic stage based on farming. This transition did not occur everywhere at the same time. The Neolithic agriculture and settled societies based on it first arose in the Near East, where the conditions necessary for such a development first converged. From this initial (primary) focal point, the Neolithic culture spread to other parts of the world through diffusion. This diffusion was an arduous and complicated process, occurring over several thousand years, in the course of which subsequent (secondary, tertiary, etc.) focal points also emerged.⁹

Similarly, the industrial revolution first occurred in England, because the material and ideological conditions necessary for this revolution first converged there. England therefore became the initial focal point of industrialization, from where it spread to other parts of the world, beginning with the countries of Europe and then onto the countries of the New World where Europeans settled. The process of transition of human societies from the pre-industrial stage to that of industrial stage continues on a world scale.¹⁰

From this viewpoint, Japan can be seen as another focal point for the spread of industrialization. Why of all the non-European countries, Japan could industrialize first and thus serve as another focal point is an intriguing question that historians, economists, and other social scientists have been discussing for a long time.¹¹ The similarity of Japan's feudal institutions to those of Europe, the economic integration and commercialization of its economy achieved under the stability of the Tokugawa rule, the Confucian tradition of loyalty to the Emperor (a loyalty that could quickly develop into a patriotic-nationalism), the combination of warrior and scholarly qualities in its Samurai class (which could thereby serve as the ready standard bearer of this nationalism), etc. all helped Japan to respond to Western aggression (represented by Commodore Perry's warships) the way it did. Japan avoided being colonized, borrowed best technologies and institutions from the advanced industrial countries, and quickly implemented a state-led, outward-looking industrialization of her own. Japan thus

⁸ Two of the NIEs, namely South Korea and Taiwan, were in fact under Japanese rule for a while in the pre-World War II period.

⁹ This is not the place to dwell on the complexities of the transition of human societies from the Paleolithic to the Neolithic stage. In some parts of the world, such as in the Amazon forests, human societies continue to remain in the Paleolithic stage, relying on hunting and gathering only. These societies will eventually be absorbed directly into industrial societies, thus skipping the intermediate types of societies. Elsewhere, such as in the Steppes, the physical conditions never made settled agriculture possible.

¹⁰ Many historians had a 'parallelistic view' of human history. According to this view, all societies at all places evolve through the same stages *in tandem*, in a sort of parallel fashion. Actual historical record however shows that instead of moving in tandem along parallel tracks, human societies evolve through interaction. This is the basis of the 'diffusion view' of human history. According to this view, the material and ideological conditions necessary for the emergence of a new type of society converge to a focal point, and then the new type of society spreads elsewhere from the focal point through diffusion.

¹¹ Althusser and Balibar (1971) suggest the concept of 'over-determination' to deal with this type of question, which is structurally similar to the question why of all the countries England could industrialize first. See also Powelson (1997) on this issue.

converted herself into an industrial nation in a matter of decades and thus became another focal point for the spread of industrialization.

Once the fact of Japan's emergence as another focal point in the spread of industrialization is recognized, it becomes easier to see why countries of East Asia are undergoing rapid industrialization. In historic terms there is a parallel between this process and the process of industrialization of the continental European countries in the wake of industrialization of England. We see a role of geographic contiguity in that process too.

This very long and broad view however does not solve the particular questions that surround the East Asian growth phenomenon. In particular, it does not answer the question of lessons that East Asia can offer to other developing countries. If physical proximity to Japan is all that is required to achieve rapid industrialization then East Asia might as well have no lesson for the remaining developing countries, because they cannot be physically any nearer to Japan than they already are. Also, the physical proximity view of diffusion runs into difficulty in explaining the Latin American experience of development. Since the late nineteenth century, the United States overtook England as the most advanced industrial nation of the world. Yet its enormous presence nearby did not lead to spectacular growth performance in the Meso-American, Caribbean, or South American countries. Hence physical proximity alone cannot be sufficient for diffusion to succeed. We therefore need to descend from the meta-view of diffusion to a more ground level examination of the conditions necessary for industrialization.

4. Lessons from the East Asian Growth

If physical proximity alone cannot ensure diffusion, what are the other factors that helped East Asian economies to industrialize rapidly? The list of factors that helped East Asia to grow and/or of features of East Asian growth is a long one and depends on the particular researcher. F. Gerard Adams (1998, p. 3) offers the following list with the names of the proponents of the corresponding factors/features in parentheses:

- a) Export orientation (Dollar, 1992; Krueger, 1995)
- b) Macroeconomic stability (Adams and Davis, 1994)
- c) Public sector management and industrial policy (Wade, 1990)
- d) Cultural factors (Mackie, 1992)
- e) Input-based growth (Kim and Lau, 1992; Young 1992; Krugman, 1994)
- f) Liberalization of markets and free trade (Hughes, 1998)

The main problem here lies in distinguishing between 'determining factors' and 'associated features.' Put in another way, it is the difficulty of distinguishing between 'cause' and 'effect.' For example, 'high investment rate,' 'macro-economic stability,' etc. definitely helped East Asia to grow fast. However what are the underlying factors that enabled East Asian economies to achieve 'high investment rate' and 'macro-economic stability'?

This discussion is therefore not far from the general discussion in the empirical growth literature with regard to the sources of economic growth. In this discussion, such factors as 'the investment rate,' etc. are only the 'proximate' determinants/sources of

growth. What researchers are now more interested in is finding the ‘fundamental’ determinants of growth that work at a deeper level and influence the shallow level (so to speak), ‘proximate’ determinants. This literature is not settled yet. However, it seems to be gravitating toward an increasing emphasis on the role of institutions. For example, analyzing the experience of sixty two developing countries, which were colonized by European nations, Acemoglu, Johnson, and Robinson (2001) conclude that physical conditions of a country matter only to the extent that they influence the formation of institutions. Once the institution variables are included in the (regression) analysis, geography variables do not play any additional role. In short, for practical purposes, institutions may be regarded as the fundamental determinant of economic growth. Rodrik et al. (2002) have also emphasized the role of institutions in economic performance. Is it possible to identify some institutional characteristics of the East Asian countries that may help explain their fast economic growth?

Pre-industrial societies of East Asia were in many ways different from the pre-industrial societies of Europe and other parts of the world. China dominated the scene. A particular institution that flourished in China throughout the Middle Ages is the recruitment of government officials through public examinations that were in principle open to all strata of the society. Relative to the time and age, this was a remarkably advanced system. It reflected the society’s emphasis on education and learning. It also provided avenues for vertical social mobility and thereby helped preserve societal unity and harmony. This tradition of a scholarly bureaucracy not directly attached to property and serving the overall national (read Imperial) interests has remained a part and parcel of the Chinese society for about a thousand years. Under the influence of China, this tradition spread to various degrees to the neighboring societies of Korea and Japan too.¹²

Of course, this system of recruitment of civil bureaucracy through open public examination could not prevent China’s subsequent stagnation, and perhaps through some convoluted ways contributed to the stagnation. However, the Confucian tradition of learning and scholarly bureaucracy serving the broader interests of the country remained available in the society for getting marshaled and utilized when such an occasion and opportunity arose. As noted earlier, in Japan’s Samurai class, the qualities of scholarly bureaucracy converged with those of warriors. That partly explains why Japan could withstand Western aggression while China, lacking martial qualities in its scholarly bureaucracy, succumbed.

Much has been written on the relative role of market forces and industrial policies in East Asian growth. Even those emphasizing the role of market forces had to recognize that East Asian industrialization was not of the *laissez faire* variety.¹³ It was a state-led

¹² For an excellent account of the East Asian societies in the Early and Middle Ages, see Reischauer and Fairbank (1958) Here is a description from their book of the role of the scholar-bureaucrat in the pre-industrial Chinese society: “Society was traditionally divided into four classes, which in descending order were the scholar-administrator (or warrior-aristocrat in ancient times), the farmer, the artisan and the merchant. Whatever the actual relationship between the last three classes, no one disputed the supremacy of the scholar-administrator, who as an educated man was presumed to be morally superior. Exercising the supreme authority of the emperor, the paterfamilias of all Chinese society, the scholar-administrator came to dominate all aspects of public life.” (Reischauer and Fairbank 1958, p. 30)

¹³ See Wade (1990) and World Bank (1993) for presentations of this debate. Actually protectionist commercial policies in the form of policies toward colonies were necessary for even the British industrial revolution, the paragon of *laissez faire* industrialization. For a detailed account for this process, see Dutt (1969).

process, at least in the initial phase. There is a similarity in this with the earlier diffusion of industrialization from England to continental Europe. The state played an important role in the industrialization of such countries as Germany and Italy. The power of the state was marshaled to promote industrialization in many other countries too. The extreme in this regard was reached in the former USSR and other socialist countries, where market forces were almost completely supplanted by the state dictates. Following the USSR, many developing countries, such as India and some countries of Latin America, also emulated a process of state-led industrialization. Many of these countries achieved high investment rates too. However, the state-led industrialization in these countries faltered, while that in the East Asian countries flourished. The main reason for these divergent outcomes was that while the former looked inward, the latter followed an outward-looking policy.

It is easy to advocate outward orientation *ex-post*, when the success of the East Asian industrialization is already a fact. It was not so easy to do so in the fifties when efficacy of outward orientation of developing countries was an open question. The memories of export collapse of the Depression years were still alive, and the example of inward looking industrialization of the USSR still appeared very promising. In this background, when much of the developing world was stuck with export-pessimism a la' Raul Prebisch, how was it possible for the East Asian countries to adopt an outward looking policy?

Part of the answer again lies in the example of Japan. Beginning with the Meiji Restoration, Japan had already shown how a latecomer to industrialization can make successful use of 'openness.' With Commodore Perry's ultimatum, 'openness' for Japan appeared as a *fait accompli*. The issue was how to use the openness thrust upon her to the best of her interests. The Meiji slogan of "Rich Nation, Strong Army!" conveys this duality of the Japanese position. Japan's openness of the early period can best be termed as 'controlled openness.' She strove to use the openness to acquire the advanced technologies and institutions as fast as possible so that she can withstand any foreign pressure in future. This 'nationalistic' aspect of the Meiji Revolution (considering outsiders as 'barbarians,' and opening up only to grow strong so that the 'barbarians' can be expelled and held at bay) eventually found expression in the Japanese foreign policies prior to and during the Second World War. After the defeat, and being occupied by a foreign (American) force, the militaristic aspect ('Strong Army' part of the Meiji slogan) of the Japanese duality with regard to openness had to recede. However the economic aspect (namely the 'Rich Nation' part of the Meiji slogan) continued. The Korean War and the ensuing Cold War led to the special security relationship between Japan and the United States. Underpinning provided by the U.S.-Japan defense pact on the one hand and the robust growth of the U. S. economy of the fifties and sixties on the other, provided ideal market opportunities for Japan to pursue a vigorous export-led growth based on controlled openness. Thus, just as openness was thrust upon Japan in the 1860s, it was in a sense again thrust upon her by the outcome of the Second World War.¹⁴

In a sense, openness was also thrust upon other East Asian NIEs. Like Japan, South Korea herself came under the U. S. occupation after the Second World War. The Korean War and the Cold War led to special security relationship between Korea and the United States too. So far as geo-political relationships vis-à-vis the United States are concerned, Taiwan was also in the same situation, though it was 'occupied' by

¹⁴ For an excellent account of the factors leading to Japanese industrialization, see Morishima (1982).

Kuomintang army rather than the U.S. army. These special security relationships made the prospects for export to the U.S. brighter for entrepreneurs of these countries, and the roaring U.S. economy of the fifties and sixties made it easier for these prospects to be realized. That explains why, unlike other developing countries, the East Asian economies could adopt outward looking policies and could successfully implement an export-led industrialization policy.

However, not all countries can make use of the export opportunities presented to them. Further, opportunities also have to be sought out. Thus special geopolitical, security relationships, strong U.S. economy in fifties and sixties, etc. can explain only the demand side of the equation, so to speak. The East Asian economies had to come up with the supply. This is where the East Asian tradition of scholarly bureaucracy serving greater interests of the country fits in. Availability of such a bureaucracy helped the East Asian economies to exploit the export opportunities that were presented to them at the time. These bureaucracies could formulate and successfully implement industrial policies that were necessary for utilizing the opportunities. The public spirit of the scholarly bureaucracy permeated through other strata of the East Asian societies too, including its business entrepreneurs. This shared tradition facilitated the collaboration between the business community and the civil bureaucracy that was necessary for successful formulation and implementation of the necessary industrial policies.

In sum, the Confucian tradition of learning and of a scholarly bureaucracy serving greater interests of the country is an institution that many of the East Asian countries inherited. It is exogenous so far as the recent growth performance of these countries is concerned. It is not that this tradition *per se* and all by itself was the reason for East Asian growth. As Easterly correctly noted, if that were the case, East Asian economies should have always enjoyed high growth rates. It is only in a certain configuration of circumstances that this tradition could play out the role.¹⁵

The above emphasis on a scholarly bureaucracy dedicated to broader national interests does not mean that other factors were not important for the success of East Asian industrialization. One of these was the land reform carried out in Japan, Korea, and Taiwan by their post Second World War governments. These reforms played an important role in creating relatively egalitarian baseline societies, which in turn helped in efficient delivery of such public inputs as education and healthcare and in the emergence of a broad-based domestic market that could successfully complement the foreign market. One reason why successful land reforms could be carried out in Japan, South Korea, and Taiwan, is because these countries came under occupation authorities, namely the United States for Japan and South Korea and *Kuomintang* for Taiwan. The occupation authorities were redistributing land owned by local landowning class. It is always easier to redistribute other's property than to do one's own.¹⁶ That is why while land reform proved so difficult (if not impossible) in many Latin American and other developing countries where national governments were intimately connected with the local landed class. This also shows that successful land reform of the East Asian countries cannot be viewed separately from other aspects of their particular situation.

The above indicates the complex interaction of various factors that was necessary to generate, what is now known as, East Asian growth. It also shows that this growth is not

¹⁵ Again, the Althusserian concept of 'over-determination' can be helpful in understanding this process and its outcome. See Althusser and Balibar (1971).

¹⁶ This also explains why successful land reform was possible in post revolutionary Russia and China, where revolutions ushered in governments representing classes opposed to the landowning class.

a matter of static permutation and combination of some known factors. It is matter of dynamic unfolding of various factors and circumstances, some of which are difficult to replicate. It also shows that regressions represent a woefully inadequate framework for analyzing this complex dynamic process. Diffusion is indeed a too complicated process to be successfully captured by the simplistic mechanical framework of regression analysis.

Does this mean that East Asian growth as represented by Japan, Hong Kong, Korea, Singapore, and Taiwan is every bit particularistic and does not have anything yielding to generalization? That is not the case. Emulation of the export-oriented model of industrialization by other countries of the region, such as Malaysia, Indonesia, Thailand, and others shows that this model is not entirely contingent on the particular factors and circumstances that gave rise to industrial Japan and the first batch of NIEs. At the same time, this emulation does not imply that these particular factors and circumstances were historically unimportant. This is because it is always easier to follow than to pave the way. Japan blazed the trail of latecomer industrialization in Asia based on controlled openness and export. The first batch of the NIEs made this route clearer. As a result of these experiences, the broad contours of this route are now well understood so that countries can follow it without having to have all the particular conditions that made the initial journey along this route possible. The hallmarks of this route generally are export orientation, macroeconomic stability, high savings rate, promotion of human capital, egalitarian distribution, and industrial policy predicated on controlled openness. Thanks to the success of the East Asian model of industrialization, it is now being emulated in other parts of the world, including South Asia, Africa, and Latin America. The process of diffusion has thus reached wider circles of countries.

Meanwhile, the growth rates of the NIEs have slowed down, and Japan has been experiencing a long period of either recession or very low growth. From the diffusion point of view, this should not be surprising. Once an economy has by and large completed its transition from pre-industrial to industrial level, the pace of its further growth is expected to be similar to those of the developed industrial countries. This is not to say that current growth pattern of Japan and the NIEs exactly matches that of western industrial countries. Part of the mismatch may be attributed to the remaining incompleteness of the diffusion process (which may be particularly true for the NIEs) and part to the individual country's special circumstances (which may be particularly true for Japan) that require further concrete analysis.¹⁷

5. Diffusion and Growth Theory

An underlying theme of Easterly (1995) and Easterly et al. (1993) is to show that the East Asian growth experience does not constitute evidence supporting the New Growth Theories (NGT). A general feature of the NGT models is that the equilibrium growth rate is influenced by country specific characteristics.¹⁸ This would suggest persistence in

¹⁷ It may be noted in this context that the growth patterns of individual western industrial countries also do not always match with each other. For example, many of the European economies suffered from very low growth rates in the 1980s while the United States experienced economic growth at reasonable rates.

¹⁸ For example, the equilibrium growth rate (γ) for the Romer (1990) model solves out to be as follows:

growth rates. By showing that such persistence does not hold empirically in a large sample of countries and that the observed persistence for the East Asian economies can be viewed as a random outcome and finally by noting that the East Asian growth rates have slowed down in the late nineties, Easterly strives to undercut the East Asian growth experience as an evidence supporting NGT. In a sense, this is a redundant effort, because NGT models are designed to explain growth in the technologically frontier countries and not growth in countries, such as the East Asian countries, that are striving to catch up with the frontier. To be sure, the original neoclassical growth theory (NCGT) was also devised to describe the growth process in developed industrial countries. Moreover, by treating it as exogenous, NCGT does not provide any explanation for technological progress within these developed countries, let alone of the process of technological diffusion from these countries to the developing countries.¹⁹

In this sense, neither variants of the neoclassical growth theory, original or new, can match the grand overarching framework of diffusion as a theory of social evolution. Though some researchers have tried to stretch the neoclassical theory to cover both pre-industrial and industrial economies (see for example, Hansen and Prescott 2002), most practitioners of the neoclassical theory do recognize that this theory was developed primarily to describe the growth experience of the developed countries in the post World War II period.

However, the importance of technological diffusion did not escape the notice of many economists and historians. Many economists in fact tried to discuss the process of technological diffusion staying close to the neoclassical methodology. One of these early attempts is by Nelson (1968), who first shows that “differences in capital-labor ratio alone explain only a small portion of inter-country productivity differences,” (p. 1225)²⁰ indicating that countries are not characterized by identical production function differing only in capital-labor ratios, and that there are rather important differences in technology level. Nelson next abandons the assumption of identical production function and perfect and competitive factor markets, and presents a scenario of technological diffusion, whereby the new “modern technology” gradually displaces the old “craft

$$\gamma_{C,Y,N} = \frac{1}{\theta} \left[\left(\frac{L}{\eta} \right) A^{\frac{1}{1-\alpha}} \left(\frac{1-\alpha}{\alpha} \right) \alpha^{\frac{2}{1-\alpha} - \rho} \right],$$

where A represents the country-specific fixed characteristics, while L is the size of the labor force, η is the fixed cost per invention, ρ is the rate of time discount, θ is the elasticity of intertemporal substitution, and α is the exponent of capital in the production function.

¹⁹ For a more general discussion of the relevance of New Growth Theories for developing countries, see Islam (2004)

²⁰ Nelson (1968) finds that “if a linear homogeneous production function, that is common to all countries, is assumed, and competitive factor pricing as well, then differences between rich and poor countries must transcend differences in the capital-labor ratio.” (p. 1226) In fact, Arrow et al. (1961) also recognize that “something else, as well as differences in capital-labor ratios, must distinguish high- from low-wage countries,” because the rate of return to capital does not differ that greatly between these two sets of countries. Nelson therefore pointedly asks the questions: “Why does the rate of return on capital in less developed countries fall to roughly world levels at such a low capital-labor ratio? What are the key differences between less and more developed countries that repress both output per worker and the return to capital in the former?” (p. 1227) Based on his analysis, Nelson concludes that “the assumptions of a common production function, and perfect and competitive factor markets, have proved both convenient and fruitful for modeling many economic phenomena. However, they would appear to get in the way of understanding international differences in productivity – particularly between advanced and underdeveloped economies.” (p. 1229)

technology.”²¹ Nelson shows that his scenario of diffusion can capture many of the differences between Columbia and the US.²²

Among historians, Alexander Gerschenkron (1952) studied the process of technological diffusion among European countries, and put forward the important notion of “advantages of backwardness,” which refers to the fact that further behind a country is from the technological frontier, the more opportunities it has to borrow and benefit from technologies ready off the shelf, instead of having to invent these technologies herself. Clearly, the “advantages of backwardness” diminish as the country nears the technology frontier. Many recent models of technological diffusion have tried to formalize this idea.

However, many economists ignored Nelson’s emphasis on technological differences across countries and tried to apply the NCGT to study cross-country growth regularities. To the extent that NCGT postulates diminishing returns to capital accumulation, it suggests that as countries accumulate capital, their growth rates will slow down. This forms the basis of the convergence hypothesis. The assumption of identical production function yields the stronger hypothesis of unconditional or absolute convergence, meaning convergence not only in terms of growth rate but also in terms of per capita income.²³ Viewing just from the NCGT perspective it may be postulated that the institutional changes and policies adopted in the East Asian countries in the aftermath of the World War II led to a jump in the steady state value of per capita income of these countries, prompting vigorous transitional growth. As these economies got close to their (new) steady state positions, the growth rates have tapered off because the source of transitional growth dried up.²⁴

In reality, diminishing returns to capital of the NCGT and diminishing “advantages of backwardness” *a la* Gerschenkron work together. This is because generally new technologies are embodied in new capital goods. Thus a country can exploit the “advantages of backwardness” mainly through capital accumulation. Viewed from cross-country point of view, the diminishing returns of the NCGT may therefore also proxy for diminishing “advantages of backwardness.” Thus the fact that the growth rates of the East Asian economies have slowed down in recent years conforms to the combined perspective of NCGT diminishing returns to capital accumulation and diminishing “advantages of backwardness.” The neoclassical growth theory therefore in a sense does not contradict the theory of diffusion.

6. Conclusions

²¹ “For viewing the economic development process as a diffusion process naturally leads one to abandon the two basic assumptions of the neoclassical model – that all firms in all countries are on the same production function, and that markets are in full equilibrium.” (Nelson 1968, p. 1230)

²² Under his simplified assumptions, the diffusion process results in logistic time path for productivity, “with slow growth initially, then acceleration, and finally a slowing down of the rate of productivity growth as new technology becomes dominant.” (Nelson 1968, p. 1235) Nelson thought that though over-simplified, his model of technological diffusion “does seem to capture the spirit of diffusion point of view with respect to international productivity differences, and it certainly generates some interesting implications regarding differences between less and more developed countries.” (p. 1237)

²³ For a detailed discussion of the convergence issue, see Islam (2003).

²⁴ Easterly et al. (1993) notes the possibility of viewing the East Asian growth in this manner too.

This paper examines the “Luck View” regarding the East Asian growth propounded by William Easterly in several recent papers. The paper points out that the “Luck View” is untenable, because it cannot explain a crucial feature of the East Asian growth, namely its geographical concentration. Yet it is this geographical aspect of this growth phenomenon that is at the heart of the issue. One reason why Easterly and his co-authors propound the “Luck View” regarding the East Asian growth is to show that this growth cannot be offered as evidence supporting the New Growth Theories that suggest country fixed characteristics as determinant of the equilibrium *growth rate*. However, this effort is redundant, because New Growth Theories, just as the original neoclassical growth theory, is primarily geared to explain the growth phenomenon of the technologically frontier countries and not of such countries as the NIEs, which were and are in the process of catching up with this frontier. From this point of view, the “Luck View” is unwarranted. Finally, the “Luck View” is unfortunate, because it is an unfair characterization of the East Asian growth, which was achieved by considerable labor and ingenuity of the East Asian nations.²⁵

A more useful way of understanding the East Asian growth is to adopt a “Long View” that sees this growth as part of the transition of human societies from the pre-industrial level to the industrial level on a global scale through the process of diffusion. The closest earlier parallel from human history is provided by the transition of human societies from the Paleolithic societies based on gathering and hunting to Neolithic societies based on agriculture. The Neolithic society first emerged in the Near East (the initial focal point) and then spread elsewhere through diffusion. Similarly the industrial revolution first took place in England (the initial focal point) and hence been spreading elsewhere. In the long arduous process of such diffusion secondary focal points also emerge. In the case of industrialization, Japan emerged as a focal point for industrialization to spread in Asia.

Once the role of Japan as a secondary focal point is recognized, it becomes easier to understand why the Gang of Four could emerge as the first batch of NIEs. Many of the historic-particularistic conditions that allowed Japan to be the first industrial nation in Asia were also shared to some extent by these economies. It is these shared conditions, and not just physical proximity to Japan, that underpinned the success of the NIEs.

However, now that the route to industrialization through export-led growth has been traversed repeatedly (first by Japan and then by NIEs), the role of the historic-particularistic conditions necessary for journeying along this route has subsided to some extent, and it has now become possible for more countries to embark on this route. The general contours of this route has become sufficiently clear so that countries that do not fulfill all the original particularistic conditions can also follow this route, as can be seen from the experience of such other East Asian economies, as Malaysia, Thailand, Indonesia, Vietnam, and China. It now seems that economies of other regions are also proving capable to follow this route.

²⁵ Here is an example of the East Asian sentiment in this regard: “The Development Report of the World Bank 1993 ... was given the subtitle *East Asian Miracle*. I have never thought, however, that the impressive achievement of East Asian development was a miracle in any sense. ... Japanese and Asian development has been the fruit of the sweat, tears, and blood of all East Asian nations....One should not overlook the fact that almost all the peoples of East Asia have achieved not just economic development but indeed new nation-building after hundreds of years of colonial submission....(E)ven economists’ analyses of Asian development should pay attention to not only the logos but also the pathos of development in this last half of twentieth century.” (Ichimura 1998, p. v)

The neoclassical growth theories, be it of the original (Solow-Cass-Koopmans) variety or of the new variety, are generally not geared to capture broad historical processes. Both these types of models have been devised to describe growth processes of the developed industrial countries in the post World War II period. The new growth theories (NGT), to the extent that these purport to describe the technology generating process of the technologically frontier countries, do not have much relevance for explaining East Asian growth, which is primarily a case of growth through technological catch-up and diffusion rather than of growth through technology generation.

Paradoxically, the original neoclassical growth theory (NCGT) that leaves out technological progress as exogenous can provide a useful perspective on East Asian growth. The diminishing returns to capital feature of this model suggest that growth will slow down as capital accumulation proceeds. In reality new technologies are generally embodied in new capital goods, and hence capital-accumulation by newly industrializing countries can also proxy for the process of technological diffusion. Previous observers, such as Gerschenkron and many recent researchers have suggested that opportunities for benefiting from technological diffusion diminish as catching-up countries themselves get nearer to the technological frontier. Thus diminishing returns to capital accumulation of NCGT in the context of NIEs can also reflect diminishing “advantages of backwardness.” Thus we have the paradoxical result that NCGT can be relevant for understanding growth through diffusion of technology when it left technological progress as exogenous, while NGT, which purports to model technology generation, cannot.

References

- Acemoglu, Daron, Simon Johnson, and James A. Robinson (2001), “The Colonial Origins of Comparative Development,” *American Economic Review*, Vol. 91, No. 5 (December), pp 1369-1401
- Adams, Gerard F. and I-M Davis (1994), “The Role of Policy in Economic Development: Comparisons of the East and Southeast Asian and Latin American Experience,” *Asian-Pacific Economic Literature*, Vol. 8, No. 1 (May), pp. 9-26
- Akamatsu, Kaname (1961), “A Theory of Unbalanced Growth in the World Economy,” *Weltwirtschaftliches Archiv*, Hamburg, No. 86
- Akamatsu, Kaname (1962), “A Historical Pattern of Economic Growth in Developing Countries,” *The Developing Economies*, (March-August), pp. 1-25.
- Althusser, Louis and Etienne Balibar (1971), *Reading Capital* (translated by Ben Brewster), New York: Pantheon Books.
- Barro, Robert (1991), “Economic Growth in a Cross-section of Countries,” *Quarterly Journal of Economics*, Vol. 106, No. 2 (May), pp. 407-43
- Dollar, David (1992), “Outward-Oriented Developing Economies Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976-1985,” *Economic Development and Cultural Change*, Vol. 39(April), pp. 523-541

- Dutt, Romesh C. (1969), *The Economic History of India, Vol. 1 (Under Early British Rule: From the Rise of the British Power in 1757 to the Accession of Queen Victoria in 1837)*, London: Routledge and Kegan Paul
- Easterly, William (1995), "Explaining Miracles: Growth Regressions Meet the Gang of Four," pp. 267-90, in Takatoshi Ito and Anne Krueger (eds.), *Growth Theories in Light of the East Asian Miracle*, Chicago, The University of Chicago Press for National Bureau of Economic Research (NBER)
- Easterly, William, Michael Kremer, Lant Pritchett, and Lawrence Summers (1993), "Good Policy or Good Luck? Country Growth Performance and Temporary Shocks," *Journal of Monetary Economics*, Vol. 32, No. 3 (September), pp. 459-83
- Geschenkron, Alexander (1952), "Economic Backwardness in Historical Perspective," in Bert F. Hoselitz (ed.), *The Progress in Underdeveloped Areas*, Chicago: Chicago University Press.
- Hansen, Gary and Edward C. Prescott (2002), "Malthus to Solow," *American Economic Review*, Vol. 92, No. 4 (September), pp. 1205-17
- Hughes, H. (1988), *Achieving Industrialization in East Asia*, Cambridge: Cambridge University Press.
- Ichimura, Shinichi (1998), *Political Economy of Japanese and Asian Development*, Tokyo: Springer-Verlag.
- Islam, Nazrul (2003), "What Have We Learnt from the Convergence Debate? A Survey of the Convergence Literature," *Journal of Economic Surveys*, Vol. 17, No. 3 (July), pp. 309-62
- Islam, Nazrul (2004), "New Growth Theories: What is In There for Developing Countries?" *Journal of Developing Areas*, Fall (forthcoming)
- Kim, Jong-Il and Lawrence J. Lau (1993), "The Sources of Growth of the East Asian Newly Industrialized Countries," *Journal of Japanese and International Economies*, Vol. 8, No. 3 (September), pp. 235-71
- Krueger, Anne O. (1995), *Trade Policies and Developing Nations*, Washington, DC: Brookings
- Krugman, Paul (1991), *Geography and Trade*, Cambridge: MIT Press
- Krugman, Paul (1994), "The Myth of East Asia's Miracle," *Foreign Affairs*, Vol. 73, No. 6 (Fall), pp. 62-78
- Mackie, J.A.C. (1992), "Overseas Chinese Entrepreneurship," *Asian-Pacific Economic Literature*, Vol. 6, No. 1, pp. 41-64
- Morishima, Michio (1982), *Why Has Japan 'Succeeded'? Western Technology and the Japanese Ethos*, Cambridge: Cambridge University Press
- Nelson, Richard R. (1968), "A 'Diffusion' Model of International Productivity Differences in Manufacturing Industry," *American Economic Review*, Vol. 58, No. 5 (December), pp. 1219-48
- Powelson, John P. (1997), *Centuries of Economic Endeavor: Parallel Paths in Japan and Europe and Their Contrast with the Third World*, Ann Arbor: The University of Michigan Press.
- Reischauer, Edwin O. and John K. Fairbank (1960), *East Asia: The Great Tradition*, Harvard University Press, Cambridge, MA
- Romer, Paul M. (1990), "Endogenous Technological Change," *Journal of Political Economy*, Vol. 98, No. 5, pt. 2, pp. S71-S102

- Wade, Robert (1990), *Governing the Market: Economic Theory and the Role of the Government in East Asian Industrialization*, Princeton, NJ: Princeton University Press
- World Bank (1993), *The East Asian Miracle: Economic Growth and Public Policy*, New York: Oxford University Press
- Young, Alwyn (1992), "A Tale of Two Cities: Factor Accumulation and Technical Change in Hong Kong and Singapore," *NBER Macroeconomics Annual*, Cambridge: MIT Press
- Young, Alwyn (1995), "Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience," *Quarterly Journal of Economics*, Vol. 110, No. 3 (August), pp. 641-680.