Growth: its sources and consequences

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Chapter 3: Growth: Its Sources and Consequences

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1. Introduction

This chapter reviews economic growth, its causes and consequences in the Pacific-rim countries. The chapter is in three parts. The first part (Sections 2 - 8) is concerned with the question of fast economic growth in **a group of** East and South East Asian developing countries. It reviews the extraordinary economic progress of these nations during the last three or four decades and examines alternative explanations for this phenomena.[1]

In reflecting on East Asian economic expansion, the Chinese economy, because of the size of the country's population, deserves special consideration. The second part of this chapter (Section 9) is therefore concerned with fast economic growth in China over the last 15 years. The Chinese economy expanded at a rate of nearly 10% per annum in the 1980s, a shade above the Korean pace.

[1] The analysis of these sections is based on my previous papers, Singh (1994; 1995a; 1997b), to which the reader is referred for a further discussion of the issues, and for the sources of the data presented.

In the 1990s, the Chinese average annual growth rate has been even faster, nearly 2.5 percentage points greater than Korea's. The important point is that when South Korea grows at **nearly** 8% a year for fifteen years, it is an extraordinary achievement for the world to take note. But when China with a billion people achieves an even faster growth rate, it is not just extraordinary, but an epoch-making event.

The third part of this chapter (Section 10) is concerned with a rather different kind of economy on the other side of the Pacific, ie. the world's most advanced industrial country, the USA. During the last two decades, relative to other industrial countries, the US economy has, as we shall see, performed quite well in certain important dimensions. Specifically, its employment record is much better than that of Western Europe - the average annual unemployment rate in the US in the 1990s has been roughly a third less than that of the European Union countries. On the other hand, productivity growth, and hence growth of real wages, in the US has been much slower, both with respect to that country's own previous record and in relation to Western Europe and Japan. Real wages of manual workers have not increased in the US economy for the last 20 years. This part of the chapter will briefly examine some of the analytical issues raised by these strengths and weaknesses of the US economic record.

For reasons which will become clear in the following discussion, the bulk of this chapter is concerned with the extraordinary drama of Asian economic growth. The US story, although important in its own right, is not of such historic significance as is the **East and South East** Asian drama and therefore gets less attention here.

2. Fast economic growth in East and South East Asia: an international perspective

An outstanding feature of the world economy during the second half of the twentieth century has been the very fast economic growth achieved by a number of countries in East and South East Asia. It will be no exaggeration to say that the economic expansion of these countries over the last three or four decades is the most successful story of sustained industrialisation and economic development in the history of mankind, at least in the narrow sense of rising per capita incomes.

Japan set the example. Recall that Japan in 1950 produced less than 5 million tonnes of crude steel per annum and a little over 30 thousand motor vehicles of all types. The US output of steel at that time was nearly 90 million tonnes and it produced about 7 million automobiles per year. By the mid-1970s the Japanese had caught up with the US in the production of steel and replaced West Germany as the world's largest exporter of cars. By 1980 Japan overtook the US to become the largest producer of automobiles in the world.

The Japanese experience has by no means been unique. It was self-consciously emulated by countries like Korea and Taiwan, with results that are perhaps even more spectacular. In 1955, Korea was unequivocally industrially backward. Its net value of manufacturing output per head was US$8 compared with US$7 in India and US$60 in Mexico. Since then, Korea has managed to transform itself from being largely an agricultural society to the point where it is the second most important country in the world in electronic memory chip (DRAM) technology(**through its firm**

Samsung). By the year 2000, the country is expected to become the fourth largest car producer in the world. Nothing could be more symptomatic of the changing map of world industry when, reversing historic roles, a hitherto developing country like Korea becomes a chief foreign direct investor in the heart of the industrial West, ie. the UK. The Korean giant LG Group recently decided to install a factory in Wales and invest US$2.6 billion. This is apparently the largest single investment in the European Union from outside the member states.

To put East Asian economic development in a comparative international perspective, Table 1 provides information on overall economic growth over the last three decades for different regions of the world economy, as well as for selected developing and developed countries. In this table the World Bank's definition of developing countries is used, ie. it is: "all low and middle income economies".

The following points which emerge from this table, as well as from other available information (**not contained in the tables presented** here), deserve attention:

(i) As Table 1 indicates, in the last fifteen years, the developing East Asia has been by far the most dynamic region of the world economy. Although the East Asian economies were growing very fast even in the previous fifteen years (1965-1980), the gap between their growth rates and those of other developing regions, such as Latin America, was relatively small (7.3% vs. 6% for Latin America). However, in the 1980s, economic growth collapsed in Latin America (from 6% per annum to

1.7% per annum) while there was a trend increase in East Asian economic growth to 7.9% per annum.

(ii). **The regional data in Table 1 is at a high level of aggregation. For example the East Asia Pacific region comprises twenty-seven countries, including large countries like China and Indonesia as well as small Pacific island countries such as the Solomon Islands and Tonga. There are however only a small number of these countries (but including some of the most populous ones), which have recorded sustained fast growth over the last three to four decades. These are the countries which have captured the world's imagination by virtue of their extraordinary economic success and are therefore the main object of analysis of this chapter. Table 2 reports the basic data on economic growth for these high performance economies - Hong Kong, Singapore, South Korea, Malaysia, Thailand, Indonesia, and China.**

(iii). It is customary and analytically useful to distinguish between two groups of countries within East Asia - specifically between the North East **Asian** (Japan, China, South Korea and Taiwan) and the South East Asian (Malaysia, Thailand, Indonesia) countries. South Korea and Taiwan, together with Singapore and Hong Kong, are also referred to as the first-tier "newly industrialising countries" (NICs). Malaysia, Thailand and Indonesia, where fast economic growth began a bit later, are referred to as the second-tier NICs. As we shall see below, **in the discussion in the following sections,** the second-tier NICs have followed different economic policies

in some important respects from those of the first-tier countries. It is significant, as may be observed from Table 2, that despite this, during the last decade, the second-tier countries have been just as successful as the first-tier ones.

However, it is also important to note that although the recent economic record of these two groups is indeed similar, **detailed data over a longer period (not presented in tables 1 & 2)** reveals an appreciable performance gap between the groups. The exact result will depend on which periods and which countries have been considered, but over the last three decades or so the annual per capita GDP growth rates of Japan and the first-tier NICs have, on average, been roughly 2 percentage points higher than those of the second-tier NICs. The cumulative impact of this growth gap over 30 years is significant. For example, Malaysia's per capita income in 1961 was almost three times that of Korea's and almost twice that of Taiwan, (Malaysia then included Singapore, so purely "Malaysian" income would have been somewhat lower). It remained higher than the Korean per capita income until 1981, but in 1993 was less than half that of Korea, and about one-third that of Taiwan (UNCTAD, 1996).

(iv). The **North** East and **the** South East Asian **NICs** have not only had an excellent record of long term economic growth, but they have also had much lower inflation rates than those of countries in other developing regions, particularly Latin America. The World Bank statistics show that the average annual inflation rate of East Asian

and Pacific countries during 1980-1993 was 7.1% compared with the developing country average of 72.8%, and 245% for Latin American and Caribbean countries.

The Asian countries' excellent record of economic growth and relative price stability has certainly translated into impressive increases in the average standards of living, reductions in poverty, increasing real wages and rising employment:

- The International Labour Organisation (ILO) provides evidence that during the 1980s, in fast-growing East and South East Asia, the former labour surplus economies such as Taiwan, Korea, Singapore and Malaysia found themselves confronted with labour shortages. There was a significant immigration of labour into these countries from neighbouring low-income nations. In these dynamic economies manufacturing employment rose at a rate of over 6% per annum during this decade whilst, at the same time, real earnings increased at an average rate of 5% per annum.

- With respect to poverty, available evidence for the 1980s for individual fast-growing NICs suggests sizeable reductions in its incidence. Thus in China the incidence of absolute poverty fell from 28% of the population in 1980 to 10% in 1990; in Indonesia the corresponding reduction was from 29% to 15%; in the Republic of

Korea from 10% to 5%, and in Malaysia from 9% to 2%.

- A remarkable feature of **the development of the North** East and the South East Asian **NICs** during the relevant period has been that not only has the rate of growth been very high, but income distribution has become more rather than less equal. However, this conclusion that inequality has declined may hold in relation to incomes, but not necessarily for wealth.

The above highly positive record **of the East and South East Asian NICs** stands in striking contrast to that of Latin America and Sub-Saharan Africa in the recent period. For example, with regard to Latin America, ILO reports that during the 1980s, there was a steady fall in modern sector employment, with paid employment falling at a rate of 0.1% per annum. This reversed the trend of the previous three decades when steady economic growth had led to a significant expansion of modern-sector employment. In most Latin American countries, the average real wage fell during the 1980s, recovering in only a few countries towards the end of the decade. Minimum wage fell on average by 24 per cent in real terms across the region, while average earnings in the informal sector declined by 42 per cent.

3. Why did North East and South East Asian NICs grow so fast?

The central analytical and policy question raised by the East Asian **NICs** economic experience is of

course, what are the causes of the fast economic growth in these countries?

There is no agreement on this question. Indeed, there is a continuing controversy in which the main protagonists are the World Bank with some orthodox economists on one side, and a number of academic economists, not all of whom are heterodox, on the other. This debate is important for two reasons. First, the World Bank professes to base its policy recommendations for countries around the globe on what it regards as the lessons to be drawn from the experience of these highly successful East Asian countries. Secondly, from an analytical point of view, the debate is clearly of central importance, precisely because of the fast growth of these economies over a sustained period. Thus, the resolution of this debate would inevitably have an important bearing on the economists' general ideas on growth and development.

With the publication of the World Bank's important study, **The East Asian Miracle** in 1993 (hereafter referred to as the East Asian Miracle) there has been some useful narrowing of differences between the two sides. However, there remains a wide gulf on a range of significant issues as will become clear below.

Two Seminal World Bank Studies:

The Development Challenge and the East Asian Miracle

World Bank (1991) [hereafter referred to as "Development Challenge"] and World Bank (1993) [hereafter referred to as "East Asian Miracle"] are seminal works which provide a comprehensive account of the Bank economists' thinking on development problems and their conclusion on public policy. The 1991 study, Development Challenge is important because, in the words of the then President of the World Bank, Barber Conable, it "synthesises and interprets the lessons of 40 years of development experience" by Bank economists. The significance of the 1993 study, East Asian Miracle, lies in the fact that the Bank economists invariably justify their policy advice to developing countries around the world by reference to the experience of the sustained fast growth of the East Asian economies. However, the two studies complement each other and need to be studied together. The first provides the Bank's general analytical framework and its broad market-oriented approach to development issues. The second, whilst acknowledging heavy government intervention in East Asia, argues nevertheless that the experience of these countries is still compatible with the 1991 Report's recommendation of a market-friendly approach, and therefore does not necessitate any significant departures in the Bank's policy advice. This argument is, however, highly controversial as will become evident in the course of this chapter.

4.1 The TFP approach to economic growth

In view of the fact, as suggested above, that the World Bank's views on the subject have wide practical policy significance for developing countries, it will be useful to start this discussion with a careful examination of the Bank's economists' analyses of East Asian economic growth. The theoretical foundation of these analyses is the so called Total Factor Productivity (TFP) approach to economic growth. In this approach, which is based on the growth accounting framework of conventional economics, economic growth is decomposed into three components: (i) that due to the growth of labour input, (ii) that due to the growth of capital input, and (iii) that due to an increase in the productivity of both capital and labour. The latter is referred to as the growth in the TFP of labour and capital. This can, in theory, arise from a variety of factors, including, importantly, technical progress, economies of scale, and an improvement in the quality of the inputs.

This framework was initially used by economist for estimating empirically the sources of economic growth for advanced economies. It was typically **found** that only a small part of a country's economic growth can be explained in terms of increases in the supply of labour or capital inputs, and that most of the remainder (as much as 80%, for example, for the US economy) is due to an improvement in the productivity per unit of labour and capital. It is, however, important to note for our later discussion that in such empirical exercises, the total factor productivity of capital and labour is not measured directly. It is instead estimated indirectly as the "residual" growth; it is the difference between the actual growth rate, and that due to the expansion of the labour and the capital inputs. This residual is then broadly attributed (often by qualitative analysis) to the factors

of the kind mentioned earlier. Since it is difficult to measure technical progress economists have great difficulty in saying precisely, in quantitative terms, what proportion of TFP growth is, for example, due to technical progress, and what proportion is due to an improvement in the quality of labour and capital. In view of this, the TFP or the "residual" growth rate is sometimes referred to as a "coefficient of ignorance", in that economists have not yet found a way of ascribing it exactly to the various factors which may be involved.

Sources of economic growth, the production function approach

The production function links production (Y) to inputs of capital (K), labour (L) and technical progress (A).

Thus $Y = AF(K,L)$ **(1)**

The specific production function, called the Cobb-Douglas production function after the names of Professors Cobb and Douglas who widely used it in the 1930s, takes the following form:

$Y = AK^{-} L^{(1-\alpha)}$ **where, the exponent α lies between 0 and 1.**

The Cobb-Douglas production function has the property of constant returns to scale, that is, a given proportionate increase in capital and labour respectively leads to the same proportionate increase in output. From the point of view of economic theory, this function also has the property that if the factors K and L are paid their marginal products as they would under perfect competition, α will be the share of capital in total output and (1-α) that

of labour. Moreover, the payment of factors according to this scheme will be equal to the total product. This result follows from manipulation of the production function at (2).

Further manipulation of equation (2) involves taking logs on both sides and deriving the following expression;

$$\text{Log } Y = \text{Log } A + \alpha \text{ Log } K + (1-\alpha) \text{ Log } L \qquad (3)$$

differentiating with respect to time (denoted by t) we obtain,

$$1/Y \cdot dY/dt = 1/A \cdot dA/dt + \alpha \cdot 1/K \cdot dK/dt + (1-\alpha)\, 1/L \cdot dL/dt \qquad (4)$$

This may be expressed as;

$$Y = A + \alpha K + (1-\alpha)L \qquad (5)$$

Where,

Y, A, K, L, denote the instantaneous proportionate growth rates of the respective variables.

Equation (5) is the basis of the decomposition of the growth of output into that due to the growth of capital, that due to the growth of the labour force and that due to technical progress, given here by,

$$A = dA/A \cdot 1/dt$$

The equation implies that output will increase, on account of technical progress even if there is no increase in the inputs K and L.

The Total Factor Productivity of growth is given by,

$A = Y - \alpha K - (1-\alpha)L$

i.e., it is a measure of the total growth of output which cannot be accounted for by the growth due to the combined effect of the growth of either the labour input or the capital input. The combined effect is measured as a weighted average of the inputs of labour and capital together where the weight (α) of the capital input is the share of capital in total output, and the corresponding weight of labour ($1-\alpha$) is the share of labour in total output.

This approach to sources of economic growth has serious limitations. Briefly, first, it is entirely a "supply side" analysis of economic growth. Secondly, it assumes full employment and full utilisation of resources, so that, equation (5) suggests that output will rise simply due to an increase in labour force. This proposition is however only realistic if the increased labour force was able to find jobs and were not unemployed. The TFP theory also ignores the fact that capital and labour may not contribute to economic growth in the simple additive fashion implied by equation (5). There may be interactions between capital, labour and technical progress which may suggest, for example, that employment can only increase if there is an increase in capital stock, or that technical progress can only take place if there is an increase in the supply of capital goods. The TFP approach ignores all such interactions. For a lucid discussion of the subject, the reader may consult Nelson (1981).

Be that as it may, the World Bank economists' basic thesis is that economic growth is determined essentially by the growth of TFP. Those countries which have a higher TFP growth will also have a

higher overall economic growth and vice versa. Bank economists further assert that changes in TFP are determined mainly by economic policy - the degree of openness of an economy, the extent of competition in the domestic product and factor markets, and investment in physical and human capital (education), particularly the latter. The underlying chain of causation is that competition and education promote technical progress, and therefore TFP growth, and hence economic expansion. "Free mobility of people, capital, and technology" and "free entry and exit of firms" are regarded as being particularly conducive to the spread of knowledge and technical change.

Comparing East Asia with other regions shows that, unadjusted for quality, its rate of growth of labour input has not been greater than that elsewhere. It has however had a much faster growth of capital input. **The latter** is reflected in the comparative savings-investment records of a group of nine Asian and nine Latin American countries given in Tables **3** and **4**. The comparison with Latin America is particularly interesting because in the 1950's and 1960's, it was the Latin American countries which saved more than the Asian countries. However, in the 1990's, the median Asian economy saved and invested nearly 30% of GDP compared with a figure of about 20% for the Latin American countries. It is notable that between 1955 and 1965, the average domestic savings in Korea were only 3.3% of GDP; this compares with a figure of over 35% for the 1990's. The data show that of the six East Asian economies listed in Tables **2** and **3**, five of them (the Phillipines being an exception) have been able to attain exceptionally high savings and investment rates over the last 15 years, and some (for example, Korea) over a longer period.

Parenthetically, some readers may be puzzled by the fact there is a discrepency between saving and investment figures in table 3 and 4; why for example, the Korean domestic savings rate between 1955-1965 was only 3.3% of GDP(Table 3), while the corresponding investment rate was 14.3% (Table 4). How does one explain the difference since ex post savings should be equal to investment by the national income accounting identity? Strictly speaking, such an identity holds only for a closed economy. In an open economy the accounting identity takes the following form:

$$Y = C + I + X - M$$

where Y is national income

C is consumption expenditure

I is investment expenditure

X and M are expenditures on exports and imports respectively

$$Y - C = S = I + X - M$$

$$I - S = M - X$$

If investment is greater than savings, this implies that the country is running a current account deficit which is being financed by net capital inflows on the capital account through, for example, foreign aid, private investment or other capital flows

The answer to the Korean puzzle above is therefore straightforward: during the earlier period 1955-1965 Korean domestic savings were being supplemented by a large injection of foreign capital inflows to bridge the current account deficit implied by the excess of investment over savings in that period. These inflows came mainly from the United States in the form of economic and military aid. As the Korean economy became more developed and richer, more and more of the country's total investment was financed by domestic savings. Indeed, by the 1980s Korean investment as a proportion of GDP was smaller than domestic savings (see the Korean investment and saving figures in Table 3 and 4). What this suggests is that in the period 1980-1989, Korea was running a current account surplus and was therefore most likely a net investor abroad.

The empirical analysis reported by World Bank economists in the East Asian Miracle shows that the high rates of investment in East Asian countries have made an important contribution to their overall fast economic growth. However, this analysis also suggests that investments in these countries were more efficiently utilised, and hence were more productive than elsewhere. The study's estimates of the TFP growth rates indicate that these were considerably higher in the 'Miracle' countries than in other developing economies.

4.2 Market-friendly strategy of development and economic openness

As pointed out earlier, the next step in the World Bank economists' analysis is to suggest that these comparatively high growth rates of TFP of East Asian countries were largely due to superior

economic policies which have been followed in these countries. Specifically, these economists call attention to two related aspects of economic policy. First, they argue that these countries implemented a so-called "market-friendly" strategy of development. "Market-friendly" is a vague term which can mean all things to all people and can also be a mere tautology. However, to their credit, the Bank's economists defined the concept fairly precisely in **the Development Challenge [See box, page]**. Government interventions are regarded as being market-friendly if they meet the following criteria:

"a). *Intervene reluctantly*. Let markets work unless it is demonstrably better to step in... [It] is usually a mistake for the state to carry out physical production, or to protect the domestic production of a good that can be imported more cheaply and whose local production offers few spillover benefits.[2]

b). *Apply checks and balances*. Put interventions continually to the discipline of international and domestic markets.

c). *Intervene openly.* Make interventions simple, transparent and subject to rules rather than official discretion".

Overall, the State's role in economic development in this 'market-friendly' strategy is regarded as being best limited to providing the social, legal and economic infrastructure, and to creating a suitable climate for private enterprise to flourish. In other words, the role of a market-friendly government in this conception is essentially that of **"**a night watchman**"**. **(ie. a government which**

[2]**Spillover benefits: there are indirect benefits to the economy as a whole which arise from the local production of the goods whose imports are being restricted. Such benefit may include the stimulation of production of related goods, training of work force, etc.**

only provides the broard framework for the private sector to operate in, but does not actually interfere in its activities).

The second related set of policies to which the World Bank economists ascribe the superiority of TFP growth of the East Asian economies is their greater openness and close integration with the world economy. Together with vigorous competition in the domestic markets, it is suggested that openness to international competition and foreign direct investment have forced East Asian corporations to be efficient; it has also enabled them to reap the full benefits of foreign technology.

5. The TFP approach: Alternative estimates and interpretations.

The foregoing analysis of Bank economists have been subject to serious criticisms both empirically and theoretically. A number of academic economists have produced empirical estimates of TFP growth in East Asia which contradict World Bank's findings. In an important contribution, the US economist Alwyn Young has presented **extremely interesting international evidence on TFP growth for a sample of over one hundred countries. Young's study shows that over the period 1960-1985 the four leading East Asian NICs (Taiwan, Hong-Kong, Singapore and South Korea) were among the top five in the world league in terms of growth of output per capita. However, as table 5 indicates, in terms of TFP growth which Young calculated for the same group of over 100 countries, but over a somewhat shorter time period 1970-85, the NIC's performance was no longer so spectacular. [Table 5, for reasons of space, presents data only**

for the top 68 countries rather than the full sample of 118]. The table indicates that in the TFP league, Hong Kong ranked sixth, Taiwan twentyfirst, South Korea twentyfourth and Singapore sixtythird. The table shows that Bangladesh, a poor developing country with a large population and low growth prospects, ranked higher than either Taiwan or South Korea in terms of TFP growth. Bangladesh was ninetyfifth on Young's list of 118 countries in relation to per capita growth of GDP.

Other studies suggest that, for somewhat different periods than above, Korea and Taiwan had almost zero TFP growth. In other words, in terms of the TFP methodology, most, if not all, of the extraordinarily high economic growth of many East Asian countries can simply be explained by the fast expansion of factor inputs, including inter alia capital inputs arising from very high rates of capital accumulation (Rodrik, 1995). In that sense, it is suggested that there is no miracle about East Asia - it is basically a question of high rates of investment.

However, an interesting interpretation of these new empirical findings on TFP growth in East Asia is provided by another US economist Paul Krugman (1994). He argues, on the basis of these results, that the high growth rates of the East Asian Miracle economies are not sustainable. This, in his view, is for the following reasons. It is unrealistic to expect that countries which are already investing **35%-**40% of their GDP will be able to raise their rate of investment much higher still. Krugman goes on to point out that these countries similarly already have highly educated and high quality labour forces, which limits the scope for further improvement in these spheres as well. In these circumstances, without technical progress eventual decreasing returns to investment will set in

and limit the growth potential of these economies.

Krugman's interpretation can however be challenged on a number of grounds. First, it has been pointed out that even within the confines of the growth accounting framework (employed by Krugman himself), there is considerable scope for improving the quality of labour input in East Asia. Educational levels in many East Asian countries are still considerably lower than those in advanced countries. Therefore, it will be a long time before decreasing returns of the kind Krugman is referring to set in.

Secondly, however, a more powerful critique of the Krugman interpretation is provided by those economists who do not accept the growth accounting framework and instead put forward an alternative non-neoclassical approach to economic growth. These economists suggest that the effects of technical progress cannot be separated from those of the expansion of capital input. This is because it is argued that technical progress can only take place through the introduction of new machines, ie through an increase in capital inputs. Even replacement investment is associated in this view with technical progress, because when an old machine is replaced by a new one the latter is likely to be technologically more advanced and not simply a new copy of the old one. Therefore, in this analysis, there is no reason for decreasing returns to occur since the higher the rate of investment, the greater would be the turnover of machines and the greater would be the technical progress. This in turn would also lead to greater learning by doing and, through a process of cumulative causation, should result in a virtuous circle of greater competitiveness and faster economic growth. According to non-neoclassical analysis, therefore, the high growth rates of the

exemplar East Asian countries were mostly, if not entirely, due to their very high rates of capital accumulation.

In conclusion, returning to the TFP analysis, it is important to observe that even if measured TFP for a country like South Korea is zero, it certainly does not mean that the country has literally made no "technical progress" in the common usage of the term. This would clearly be an absurd conclusion for a country which has, within a short period of 30 years, progressed from largely exporting agricultural **and textiles** products to exporting motor cars and advanced computer chips. All that the zero TFP result tells us is that the country's economic growth is entirely due to the increased use of inputs, rather than due to a greater efficiency in their use of inputs. Equating greater efficiency in this sense with "technical progress" is significant and meaningful only within the framework of the TFP model. **To re-iterate, one could argue that the TFP approach does not properly measure the contribution of technology to economic growth since much technology is embodied in capital goods. In that sense the contribution of capital per se is overrated in that it includes the effects of technological improvements as well. But as noted in the box on TFP earlier, critics are also right to suggest that the TFP approach understates the contribution of capital relative to labour by ignoring the fact that an increased supply of labour by itself does not lead to more growth of output, unless there was also growth of capital stock. As Joan Robinson pointed out, capital is not malleable in the real world and therefore a given amount of capital cannot be stretched to provide productive employment.**

6: Did East Asian NICs follow a "market friendly" strategy?

Apart from the TFP analysis, other aspects of the World Bank's theses concerning East Asian development have also been subject to stringent criticism. The Bank economists' claim, that East Asian countries (including Japan during 1950 to 1973, when it was more like a developing country but also enjoyed very fast growth) followed a market friendly strategy, has met widespread scepticism. The World Bank's critics have raised the question of whether these countries did follow the Bank's "market friendly" prescriptions in the precise sense outlined earlier: Did these governments intervene in the markets 'reluctantly': did they for example leave the prices and production priorities to be determined by the market forces and simply provide the necessary infrastructure for private enterprise to flourish? How 'transparent' was the government intervention in industry? To achieve their colossal economic success, how closely did these countries integrate with the world economy?

Unless otherwise specified, the following discussion, for reasons of space, is confined to the two leading East Asian tiger economies of Korea and Taiwan, as well as Japan during the period 1950 to 1973. There is overwhelming evidence to show that the governments did not intervene either (a) reluctantly or (b) transparently in any of these economies. Specifically, during their periods of fast economic growth, the governments in all three reference countries used a wide array of interventionist instruments including many of the following:[3]

[3] See for example Amsden (1989) and Wade (1990).

- import controls;
- control over foreign exchange allocations;
- provision of subsidised credit, often at negative real interest rates, to favoured firms and industries;
- control over multi-national investment and foreign equity ownership;
- heavy subsidisation and 'coercion' of exports, particularly in Korea;
- a highly active state technology policy;
- restrictions on domestic competition and government encouragement of a variety of cartel arrangements in the product markets;
- promotion of conglomerate enterprises through mergers and other government measures (again particularly in Korea);
- wide use of 'administrative guidance', indicating non-transparency of government interventions.

In other words, the governments in Japan, South Korea and Taiwan did all the things which the 'market-friendly' strategy for development is not supposed to do. Above all, all three countries followed an 'industrial strategy' - a set of policies to deliberately change the market prices and production priorities - which is explicitly ruled out by this approach. The World Bank economists acknowledge that there was significant state intervention in each of these countries, but argue that "these economies refute the case for thorough-going dirigisme **(state intervention in the economy)** as convincingly as they refute the case for 'laissez-faire'". **Critical** economists agree that the experience of these countries is certainly an argument against laissez-faire; nor does it provide any support for "command" planning of production of the Soviet-type, which in effect supplants the market altogether. However, for mixed economy developing countries with effective governments, these economists suggest that the post-War East Asian economic history is unequivocally an argument for adopting an industrial strategy, for guiding the market, and not following the hands-off 'market-friendly' approach recommended by the World Bank.

7. "Openness" and East Asian economic development.

There is a great deal of evidence which also does not support the World Bank claim that these exemplar East Asian countries either sought or implemented a close integration with the world economy. Consider the following:

- As a result of its explosive economic growth at a rate of nearly 10 per cent per

annum during the 1950's and '60's, by the end of that period Japan had graduated to the status of an OECD country, ie. it had become a member of the developed country club. Unlike developing countries which under GATT were able to provide infant industry protection[4], OECD member countries were obliged to abolish such restrictions against freer trade. Nevertheless, as late as 1979, manufactured imports amounted to only 2.4% of the Japanese GDP; the corresponding percentages in Britain and other countries of the EEC was five to six times larger. Even in the US, which traditionally because of its continental size has a relatively closed economy, the volume of imported manufactured goods in the late 1970's was proportionally almost twice as large as in Japan. Clearly, during the 1960's and 1970's (and even more so in the 1950's) the Japanese economy operated under a regime of draconian import controls, whether practised formally or informally.

- South Korea, during the last decade, has become a major producer and exporter of cars. It is expected to become the fourth largest car producer in the world by the year 2000. Even now, it has sizeable exports to the US and Western Europe. And yet, in 1995, Korea still imported only 4,000 cars from abroad. Essentially, the Korean government has heavily protected its car industry for the last thirty years.

[4] **Infant industry protection: this refers to restrictions on imports of products which a developing country has just begun to produce domestically. Since, compared with the older and larger competing firms from abroad, the domestic industry is likely to be at a lower or an "infant" level of development, it will be at a competetive disadvantage in relation to those foreign firms. In these circumstances orthodox theory acknowledges the case for protection for a relatively limited period of time. To permit the infant industry to "grow up" so as to be able to compete on more equal terms**

- Instead of welcoming foreign direct investment, the fact is that both Japan and South Korea (but not Taiwan) discouraged it, particularly during their respective periods of fast industrialisation. It is not that the Japanese and South Korean governments were averse to obtaining technology from abroad. Quite the contrary. Rather, these governments evidently took the view that it was cheaper and more conducive to national development to "import" foreign technology through means other than FDI, eg. licensing.

- A useful measure of "price distortion" for an economy is the extent to which its relative domestic prices differ from the international relative prices for the same products. On this measure, the estimates of which are presented by the World Bank economists in the East Asian Miracle itself, it turns out that Japan, Korea and Taiwan were among the most distorted economies. Relative domestic prices conformed less to international relative prices in these countries than in Brazil, India, Mexico, and Venezuela. Most of the latter countries are often held up by the Bretton Woods institutions as prime examples of countries which do not "get the prices right".

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with foreign rivals.

8. East Asian experience: alternative perspectives

The analysis of sections 5 to 7 has indicated that the various World Bank theses on fast economic growth in East Asia are deeply flawed, both empirically, as well as analytically. How can this phenomenon then be explained?

8.1 Government-Business interactions, the financial system and successful coordination

There is a fair degree of agreement that the key to fast economic growth in East Asia lies in the very high rates of savings and investments attained by these economies. Savings and investments are the subjects of a separate chapter in this book, where these issues will be discussed in detail. However, for the sake of completeness of the argument, it is necessary here to note:

a) that these high savings and investments were carried out largely by the private sector, particularly in Japan and Korea;

b) they were not a spontaneous outcome of the working of the free market, but were policy-induced.

Research shows that the close relationship between the government and business and their interactions, together with the "long-termist" qualities of the financial system existing in these countries, played a key role in this process. For example, in Japan the government not only

provided fiscal incentives to the corporate sector, but also implemented protection, had lax enforcement of anti-trust laws[5] as well as practised financial repression.[6] All this led to greater rents[7] and profits for the private corporate sector than would otherwise have been the case. However, the government also ensured through other policies that these greater corporate profits were not simply consumed or paid as dividends to shareholders, but were in fact reinvested. The government's role was also crucial in raising and maintaining at a high level the corporate propensity to invest, primarily by addressing the problem of coordination failures which are ubiquitous in the real world of incomplete and imperfect markets. The US economist, Dani Rodrick (1994), particularly emphasises the role of the government in this sphere in ensuring high rates of investment in the East Asian economies. The coordination problem was extremely important during Japan's high growth phase, as what in effect MITI did in that period was to orchestrate investment and technological races among oligopolistic firms in favoured industries. Such races were carefully controlled as, otherwise, excess capacity might have been created which would have adversely affected the future corporate inducement to invest.

In Korea, the role of the government was even more pronounced in all these spheres. Here the government was not just a coordinator of investment decisions, but in fact a co-partner with the private sector. Research shows how government policies and government business interactions resulted in extraordinarily fast upgrading of the industrial structure of that country. The

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[5] **Anti-trust laws: These are laws to prevent excessive concentration of industry by a small number of large firms.**

[6] **Financial repression: Refers to the rates of interest being deliberately kept at an artificially low level, particularly for firms and industries favoured by government industrial policy.**

[7] **Rents: Profits arising from monopolistic position of the firm over and above what they would be if there was perfect competiton.**

government's complete control over the financial system for much of this period was pivotal in this process.

8.2 The optimal degree of openness

Turning to the question of openness, the Indian economist, the late Professor Chakravarty, and the present author have suggested in **Chakravarty and Singh (1988)** that the fast growing East Asian countries did not seek close integration with the world economy (as the World Bank economists would have us believe) but implemented, rather, what may be called 'strategic integration'. In other words, Japan, Korea and Taiwan were open to the international economy only up to the point that it was in their interest to be so in order to maximise national economic growth.

Chakravarty and Singh **(1988)** argue that "openness" is a multi-dimensional concept: apart from trade, a country can be "open" or not so open with respect to financial and capital markets, in relation to technology, science, culture, education, and inward and outward migration. Moreover, a country can choose to be open in some directions [say trade] but not so open in others such as foreign direct investment or financial markets. Their analysis suggests that there is no unique optimum form or degree of openness which holds true for all countries at all times.

Indeed, as orthodox economic analysis now recognises, in the real world of economies of scale, learning by doing and imperfect competition, even free trade, is not necessarily optimal for a country. In the Chakravarty and Singh analysis, a number of factors affect the desirable degree and

nature of openness: the world configuration, the past history of the economy, its state of development, among others. The timing and sequence of opening are also critical. They point out that there may be serious irreversible losses if the wrong kind of openness is attempted or the timing and sequence are incorrect.

The East Asian experience of "strategic" rather than "close" integration with the world economy is only comprehensible within this kind of theoretical framework. Thus, in terms of these concepts, countries like Japan and Korea chose to be open with respect to exports and closed in relation to imports. Similarly, they were open with respect to the interchange of scientific and technical knowledge, but not so open with respect to foreign direct investment. They were also, for much of their fast growth periods, not open to free international capital flows.

It is also useful to consider the experience of the second-tier NICs - Indonesia, Malaysia, Thailand - within the Chakravarty and Singh framework. As noted earlier, in these South-East Asian economies, foreign direct investment has played a far more important role than it did in Japan or South Korea. One interpretation of this phenomenon is that as a consequence of the fast development of the East Asian countries, the second-tier NICs are faced with a different historical situation, which makes the optimal degree of openness different for these countries. In this new situation, it is advantageous for the South East Asian NICs to attract industries which are no longer economic in the first-tier countries because of the growth of their real wages - as suggested by the so-called "flying geese" model of Asian economic development.

9. China: the plan and the market and fast economic growth[8]

As indicated earlier, the extraordinary economic growth achieved by China during the last 15 years is an epoch-making event. How has such fast growth come about?

It is tempting to say, and is often asserted by orthodox economists, that the Chinese experience shows the virtues of the free market in unleashing entrepreneurship and rapid wealth creation. Such a story may meet the ideological predilections of the orthodox economists, as well as the international financial institutions, but is unfortunately greatly at variance with facts. Although the Chinese Communist Party over the last two decades has progressively introduced markets and allowed a modest degree of private enterprise, China is very far from being a free market economy:

1. China does not have nationally integrated product markets compared, for example, with a country like India. Apart from the relatively poorer transport structure, Chinese provinces and municipal authorities are prone to impose restrictions on free movement of goods to protect local industry. This leads to imperfections and to the fragmentation of product markets.

2. Although China is attempting to establish capital markets, at the present stage of development these can only be described as embryonic. Investment allocation is

[8] This section is based on my paper, Singh (1996).

essentially done by government controlled banks and the planning authorities, rather than by the free market.

3. China does not yet have free or competitive labour markets. People are still, by and large, allocated to jobs by government departments rather than by the market.

4. Although since 1978 China has been following a so-called "open door" policy in its economic dealings with the rest of the world, and has benefited enormously from this, its economy is very far from being closely integrated with the world economy. The country maintains a whole plethora of restrictions on imports and on the free movements of capital. China in recent years has been a major recipient of foreign direct investment, but such investment is nevertheless subject to government controls and restrictions at the national, the provincial, and the local levels.

All this raises the question that if competitive markets are crucial to economic growth, as the Bretton Woods' institutions[9] continually assert, then how come the Chinese economy has had this extraordinary economic growth for a long sustained period with markets which are highly imperfect, segmented, or do not exist at all? Equally anomalously for conventional economics, a clear definition of property rights and private ownership of productive assets is thought to be critical for economic efficiency, for technical progress and for wealth creation. Yet in China 90% of

[9] **Bretton Woods institutions: These are the international financial institutions, specifically the International Monetary Fund and the World Bank, established at the end of WWII in Bretton Woods, New Hampshire.**

industrial capital is in State hands, and most land is still collectively owned. As **The Economist (28 November, 1992, p.16)** ruefully remarked, the story would be much simpler to tell if only the highly successful Chinese small scale enterprises - the so-called TVEs (township and village enterprises) - were privately owned. However, by and large, they are not, their assets being owned by the towns and the villages.

It could of course always be argued that the Chinese growth rate would have been even faster had they had free and competitive markets and private ownership of means of production. This is, however, highly unlikely in view of the fact that for a large country the Chinese economy has recorded historically unprecedented growth rates in the reference period. What the Chinese story tells us so far is that a country can perfectly well grow extremely fast without having free and competitive markets and private ownership of productive assets.

What then accounts for China's extraordinary economic performance during the last 15 years? Research suggests that an important factor has been the very high degree of decentralisation which the Chinese have carried out as a part of the economic reform programme. This has transferred most production decisions from the central ministries in Beijing to the provincial and local levels. Such decentralisation may have some unfavourable side-effects, such as market fragmentation, mentioned earlier, but on the whole it has been a powerful force in promoting economic efficiency, in motivating people and releasing their creative energies.

Moreover, it must be emphasised that although the Chinese economic performance is anomalous

from the perspective of the World Bank's competitive markets paradigm, it accords very well with the actual experience of the other East Asian countries as outlined in the previous sections. Starting from an extreme position where the 'plan' totally dominated the market, the Chinese are attempting to achieve, like the other highly successful East Asian NICs, that desirable combination of the "plan" and the market which is most conducive to rapid industrialisation. Similarly, like these other economies, the Chinese are seeking strategic, rather than close, integration with the world economy.

10. The US Economy: achieving full employment with rising real wages[10]

As noted in the Introduction, the US, the world's most advanced economy, has performed very well in important dimensions during the last 10 years. The rate of unemployment is low, as is inflation, and the economy is expanding at a trend rate of growth of 3% per annum. This may appear small beer as compared with the contemporary East Asian rates of economic growth, but this pace is nevertheless faster than that of either Western Europe or Japan. A priori, economic growth in the world's most advanced economy may be expected to be slower than in others, mainly because it is at the technological frontier. Therefore, unlike the less advanced countries which can copy the leader's technology, the leading country is obliged to carry out the more difficult task of further technological development by itself. In that sense, the slower growth in the US compared to China or Korea does not necessarily reflect any economic inefficiency. By the same token, the faster US growth, compared to that of Western Europe or Japan during the last decade, is highly creditable.

[10] This section is based on my papers, Singh (1995b; 1997a; 1997c), to which the reader is

Nevertheless, there are chinks in the US armour. First, although the rate of unemployment is low, there is still considerable involuntary unemployment. As the US economist, Lester Thurow, notes:

> "There are 8.1 million American workers in temporary jobs, 2 million who work 'on call' and 8.3 million self-employed 'independent contractors' (many of whom are down-sized professionals who have very few clients but call themselves self-employed consultants because they are too proud to admit that they are unemployed). Most of these more than 18 million people are looking for more work and better jobs. Together these contingent workers account for 14 per cent of the workforce." (Thurow, 1992)

Secondly, and importantly, the American economy has not been delivering the increases in real wages[11] which American workers have traditionally come to expect. Until recently real wages of each generation of American workers have historically been twice as high as those of the previous generation. This process seems to have stopped in 1973, since when real wages, particularly of manual workers, have fallen rather than increased. The average real wage for non-supervisory workers in the US declined at a rate of 0.3% per annum in the 1970's, 1.0% per annum in the 1980s and 0.3% per annum between 1990 and 1994. In the 1960's, in contrast, the corresponding average real wage rose at a rate of 1.4% per annum.

Thirdly, in addition to the huge under-employment and stationary or declining real wages, another unfavourable aspect of the labour market experience in the US in the recent period has been the

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referred for a fuller analysis.

growing inequality of wages. Wage dispersion had decreased in the US during the 1950's and 1960's, but wages have become much more unequal during the last two decades.

It is customary to suggest that the superior US performance, in terms of employment, is due to the greater wage price flexibility of the US economy, compared to European economies. However, the story must surely be more complicated than that in view of the fact that the US labour market is not only more flexible now in relation to the European economies, but it was also more flexible in the 1950's and 1960's. Yet Europe had more or less full employment in the earlier period, and that record was far superior to that of the US. The essential point here is that Europe outperformed the US at the time because the European economies were growing at twice their current rate, and at nearly one and a half times the then US rate. That enabled these economies not only to have fast employment growth, but also rising real wages.

Although the US growth rate in the 1950's and 1960's was slower than that of Western Europe, it was faster than its current rate. The higher growth rate of the earlier period enabled the country to have a not only as good as, if not a better, employment record than it does today, but more significantly it also enabled real wages to rise appreciably in that period (as was noted earlier).

Clearly, to meet the historic aspirations of the American people, it is not enough to have high overall employment, but it is also essential to have growing real wages. This would require a trend increase in the rate of growth of the US economy to levels such as those attained in the 50's and

[11] Real wages: Money wages adjusted for inflation.

60's, when, as seen above, the economy was able to deliver on both these dimensions.

An important question which arises from the above analysis is whether the market forces left to themselves will be able to generate the required increase in the trend rate of economic growth. Since such fast growth has not materialised in the last two decades, the answer to this question may be presumed to be no. That then raises the issue of what kind of public interventions will help to achieve the desired objective, and whether or not such interventions would be acceptable in the American political culture.

11. Summary and Conclusion

This chapter has examined economic growth in East Asia, which has emerged as by far the most dynamic region of the world economy. Over the last four decades several East Asian countries have expanded for sustained periods at rates which are historically unprecedented. Alternative theories have been reviewed concerning the long-term growth processes in these countries, including China and Japan. The last part of the chapter has commented briefly on employment, real wages and economic growth in the world's most advanced industrial country on the other side of the Pacific - the US.

What lessons can be drawn from the analysis of sources of economic growth in the capitalist

East Asian NICs, as well as China and the US. The first point which emerges is that the East Asian countries have achieved extraordinarily high rates of overall growth, despite their comparatively poor performance in terms of growth of total factor productivity. Secondly, regarding proximate causes, we have seen that these high growth rates can be explained in terms of high rates of savings, investment and human capital formation. In that sense, it is right to suggest that the East Asian economic development is not a miracle - it is compatible with standard economic theory. Thirdly, however, the previous analysis indicated that although these high savings and investment rates were by and large implemented by the private sector in most east Asian countries (other than China, see below), nonetheless governement played a critical role. The government did not simply follow a hands off, market friendly approach in the World Bank sense, but rather played a crucial coordinating, as well as stimulating, role in this process. Further, contrary to the World Bank, the integration of the East Asian countries with the world economy has been strategic, rather than close.

With respect to these proximate sources of economic growth, the Chinese story is similar, despite its not being a free enterprise economy. Most Chinese land and industrial capital is not private but under collective ownership. China has introduced markets in the last 20 years, but most product, capital and labor markets are highly imperfect, segmented and incomplete. Moreover, notwithstanding the "open door" policy launched in 1978, the Chinese have also implemented a strategic rather than close integration with the world economy. Thus in all these respects, the Chinese experience is not compatible with the World Bank paradigm of competitive markets being a necessary condition for fast economic growth.

The Chinese experience is also similar to that of other East Asian NICs in another sense. In China also, the growth of factor inputs (specifically, high rates of human and physical capital formation) have been much more important than the growth of total factor productivity in accounting for its overall economic growth. Before Deng's reforms in 1978, China had a Stalinist command economy with a high degree of centralization of economic decision-making. Under Deng's reform, the Chinese have introduced markets and decentralisation, but they are attempting to find an optimal combination of the plan and the market which will best promote the country's economic growth.

There are two further conclusions which emerge from the analysis of TFP growth in the East Asian NICs which deserve to be highlighted. First, low TFP growth does not imply that a country has had no or slow technical progress in the ordinary meaning of these terms. That would be a silly conclusion for a country like Korea in the light of its extraordinary success in continually upgrading its export structure. Thirty years ago it was exporting mainly textiles. Today much the larger part of its exports come from cars, computer chips and other technologically advanced products. The second and related conclusion is that Krugman's inference that these countries will not be able to sustain these high growth rates is only valid within his own neoclassical theoretical framework. In a non-neoclassical analysis where technical progress is embodied in new capital goods as well as replacement capital, there is no

reason to expect that high rates of investment will necessarily lead to decreasing returns.

Before we conclude the discussion of East Asia and China, it is necessary to address the following puzzle which may have troubled many readers. The issue is why did the state succeed in East Asia so spectacularly when it failed elsewhere as in Latin America or Africa? This is a large question, but very briefly, the answer is that apart from the close relationship between the government and business in these countries, and the particular characteristics of their financial systems, there were two other factors which were extremely important. First, unlike many countries in Latin America or South Asia, although the East Asian countries implemented import controls, they also had export orientation. Indeed, export promotion and import controls in East Asia were organically linked. Import controls provided the Japanese and the Korean corporations, for instance, with high profits which enabled them to raise their rates of investment and to increase their share in the world markets. The corporations in these countries were obliged to promote exports by government policies which made it clear to any corporation that to get ahead, to get help from the state or to be able to get a licence to import foreign technology, it had to export. The second factor which was extremely important is implicit in the above discussion. Unlike developing countries elsewhere which also provided subsidies or imposed restrictions on imports, the East Asian governments imposed strict performance standards on the recipients of the government largesse. These standards often took the form of specific targets for exports or for technological upgrading.

Finally we turn to the US case which differs from the East Asian case in two important

dimensions which have been the focus of this chapter. First, unlike in east Asia, total factor productivity, in terms of conventional growth accounting, has been an important determinant of US economic growth (See earlier box). Secondly, the role of the state has been different, rather than being necessarily less extensive. The US government intervenes in the country's industrial development in a wide range of ways, for example, health and safety standards, antitrust laws, environmental control measures, government procurement, especially of military goods. Nevertheless, there is a qualitative difference between US interventions and, say, the Japanese interventions in relation to their respective economies. The latter are coordinated, primarily by MITI, and constitute an overall industrial policy, whereas in the US there is no such strategic coordination. During Japan's high growth phase, MITI could use its arsenal of coercive laws, including, specifically, control over the allocation of foreign exchange to bring about the desired coordination of industrial investments. However, since Japan's graduation to membership of the OECD (the rich country's club) around 1970, MITI has to rely much more on its persuasive powers, but nevertheless it continues to carry out its tasks of strategic coordination of Japanese industrial development in the light of evolving international competition.

This chapter has argued that although the US economy has performed well along some dimensions in the last decade compared with western Europe and Japan, it has been unable to meet the historic aspirations of its people. In order to provide both full employment and rising real wages to satisfy these aspirations, it is necessary to have a trend increase in the rate of growth of the US economy. **The chapter suggests that** market forces left to themselves are unlikely to generate the required

rates of growth.

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