MARKETS AND ECONOMIC GROWTH IN EAST ASIA

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Economic growth depends primarily on three factors: the rate of physical capital accumulation, the rate of human capital accumulation, and a third somewhat amorphous factor, namely the rate of technological progress. That these three factors are important is generally agreed among the economists, although controversy still rages around the question of the relative contribution of each of them, and also whether it makes sense to separate their relative contributions into three independent and additive terms. While these issues are important, I shall ignore them as not being germane to the question at hand, which is to examine the role of markets in relation to economic growth.

Various markets affect economic growth through their influence in determining the rates of expansion of the three factors and in determining their effectiveness. Governments may then have occasion to intervene in these markets to enhance the rate of growth of these three fundamental factors, and to improve upon their effectiveness. In the past, the convention in economics has been to think of the roles of government and markets as substitutes, but it is perhaps more helpful to conceive of the two as complements, and this is the approach adopted in this paper.

The discussion below divides itself naturally into three parts by taking each of the factors in turn, and asking: what roles do markets (and governments) play in influencing their rates of increase and their effectiveness? I shall start with the rate of capital accumulation, even though

A. PHYSICAL CAPITAL ACCUMULATION

Pre-Crisis Story

Table 1 shows the rates of gross saving and investment during the pre-crisis period in selected Asian countries (in the period before the crisis), together with those in a few Latin American ones for comparison. The high rates of the Asian countries are well known, and come through in the table.

What mechanisms are responsible for such high saving and investment rates, Tackling saving first, not all countries depend on voluntary saving, channeled through various institutions, into the money and capital markets. The high rate of voluntary savings is helped by the relatively high real rates of interest, which only occasionally turn negative (World Bank 1993:112). Singapore is somewhat of an exception in that the high saving rate is boosted by compulsory contributions to a central provident fund, which at its peak in the 1980s were as high as 40 per cent of the payroll.

The form in which saving is kept is an interesting fact to bring up because that affects the development of the money and capital markets, and therefore of the way the investible funds are allocated. Hong Kong, Malaysia, Singapore and, to some extent, the

Philippines have somewhat more mature equity markets than the rest, probably on account of their common-law legal tradition (La Porta, et al. 1998). Of these, only Hong Kong and Singapore can be said to have balanced financial markets, with active equity markets providing an adequate counter-weight to the banks. Otherwise, banks and other deposit taking institutions are the dominant absorbers of financial saving.

Table 1

Gross Domestic Saving and Investment in Selected Countries of East Asia and Latin America

	Gross Domestic Saving	Gross Domestic Investment	Central Government Capital Expenditure	State-Owned Enterprises Investment
	% of GDP	% of GDP	% of GDP	% of gross domestic investment
	1990-96	1990-96	1996	1990-96
East Asia				
China	40.9	33.5	..	24.9
Hong Kong	35.0	28.9	..	..
Indonesia	32.0	32.4	6.0	15.7
Korea, Rep.	35.9	36.7	4.3	..
Malaysia	38.2	39.0	4.2	25.9
Philippines	15.4	22.5	2.2	9.9
Singapore	47.9	34.4	6.1	..
Taiwan	26.4	22.6	2.7	..
Thailand	36.1	40.5	5.9	10.4
Vietnam	15.7	24.2	..	..
Latin America				
Argentina	18.0	17.6	1.1	3.0
Brazil	20.8	19.9	1.0	8.6
Chile	26.2	23.5	0.4	6.1
Colombia	19.8	18.1	..	..
Mexico	22.7	18.2	1.9	10.5

The banks' dominant role in mobilizing savings implies also their dominant role in allocating investible funds. The fact that funds were thus centralized facilitated government intervention to direct' the flows of capital to particular sectors and activities.

Here East Asian countries separate themselves into two groups. In the first group, most clearly in Korea and Taiwan, and therefore designated the Northeastern group, their governments took an active role in how banks allocate the funds. Here, the governments used their control over the banks as active instruments in coordinating and indeed directing investments. Although the means used vary somewhat in these two countries, the system entailed targeting to specific industries and indeed, in the case of Korea, to specific firms.[1] This of course has implications not only for the workings of the money and capital markets, but also for the goods markets. I shall discuss the goods markets in Section C of this paper.

In the second Southeastern group of countries, most clearly in Thailand and the Philippines, the bank were given considerable latitude in allocating their investible funds, subject to the .usual prudential controls. It is not surprising therefore that in these countries, banks became part of large private financial and industrial conglomerates. Although, Malaysia belongs to this group, the government took a somewhat more active role, but with the emphasis being more to achieve an ethnic balance in its economy than to achieve industrial objectives. Also, the more arm's length approach in these countries did not mean that intervention in the goods markets were absent. In fact, the unwillingness or the inability to control the direction of investments through the banking system has led governments in Southeast Asia to put more emphasis on other measures, particularly tariffs and investment promotion.

The more activist approach towards capital allocation adopted by the Northeast Asians countries did not seem to affect growth in the pre-crisis period adversely, as would have been predicted by market advocates. Rather, the opposite seems to hold true, although the Southeastern Asians did not fare too badly either, with the exception of the Philippines.

Much of the lending and the growth that took place in these countries had something of a self-fulfilling character. The lending was high, because the growth rate was high. With high growth rates, mistakes in the banks' or the government's estimation of returns will be smothered by market expansion.[2] Consequently, firms within such a system did not have to face a direct market test for performance, although as we shall see, in the case of Korea at least, the government itself imposed another (possibly sterner) test, namely export performance.

Self-fulfilling growth needs not imply that the whole system was built on a house of cards, and that when the collapse finally came, all the economies would have to go back to square one. Having grown at the rate of more than 6 per cent per year for several decades, the drop in income of about 10 per cent or less in 1998[3], means that most of the gains achieved until a few years prior to the onset of the crisis is still being successfully defended. Murphy et al., (1989) suggest that where there are lumpy investment opportunities, an atmosphere of euphoria can lead to self-fulfilling growth. The problem with East Asia was of course that the euphoria got out of hand in the 1990s.

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[1] For Korea, see Park (1991) and for Taiwan see Wade (1990:165-172).
[2] Errors here may mean those arising out of moral hazard as well, although it need not be confined to them.
[3] Except in the case of Indonesia, where the drop was 15 percent.

Post-crisis Moral

For both for the Northeast Asian and Southeast Asian systems, the bank-based allocation of investible funds were predicated upon certain conditions. At the very least, for the banks to have the power to allocate, each borrowing firm could not be allowed too much of a choice by its lead bank. This was the situation that ruled until about 1990, when the East Asian countries started to liberalize their financial markets. As a consequence, the pre-existing structure began to unravel. In economies that had been very tightly capital-constrained, firms now found the new options opened up by liberalization very attractive, and went on a borrowing spree. And it has to be confessed, there was, at least in a few countries, a significant degree of looting (in the sense of Akerlof and Romer (1993)) as well. New entrants into the financial markets, particularly among foreigners, found the lending to the fast-growing Asian markets highly attractive as well. The result was the Asian bubble, whose primary fuel was foreign capital inflow.

It is possible, no doubt, to conceive of a scenario in which free capital movements following the dictates of the market will perform an efficient function. The one thing that the international market certainly cannot be accused of doing is what it accuses the Asians of doing, namely that it lends to firms and individuals on the basis of connections. (Here, an exception has to be made with respect to the Japanese banks who lent primarily to subsidiaries of the Japanese firms).

Nevertheless, as has become abundantly clear, the international capital market served the Asian economies very poorly, and the decision by Asian governments to link their domestic market to it was a mistake. From the point of view of the Asians, the drawback of the international market was this: each Asian market typically was a small part of the individual investor's portfolio, therefore any small percentage-point change within his or her total portfolio was a very big change for the Asian side of the market. And because of the unimportance of the Asian market within the portfolio, the investor would not find it worthwhile to expend resources to obtain the best information on the fundamentals of the economy, but will follow the signals of others. Consequently, they tended to act in concert. This combined volatility and herd instinct on the part of the international investors played the dominant role in bringing the Asian economies down in 1997.[4]

The volatility of international capital market added to the basic vulnerability of the Asian style bank-based financial system, which relies on short-term deposits to finance what in the end become long-term investments. The devastation of the financial systems in Indonesia, Korea and Thailand was almost complete. Other countries escaped this fate. Malaysia in particular avoided it by imposing capital controls against an outward flow of capital, which performs the function of, but is not quite, a debt moratorium. Despite dire predictions and threats of punishment by international investors, the Malaysians seemed none the worse for it. Indeed, one year after it took the action, there was a near universal praise for the action taken by them, not least from the international investors, whose sole criterion, naturally enough, was success.

[4] The argument concerning volatility and herd instinct is drawn from Calvo and Mendoza (1996).

The mistake of opening the capital markets aside, other flaws within the domestic market were revealed by the crisis. Here the difference between the Northeastern and the Southeastern Asians again comes to play. Because the Korean government had always played a very active role in directing lending by banks, it naturally took an equally proactive role in resolving the corporate debt problem that came in the wake of the crisis. In particular, the government quickly assumed more of the risks arising from the uncertain future of the private corporations by guaranteeing the international banks' loans to the corporations. By contrast, the Thai government was unwilling to do so, and paid the price in terms of a much slower rate of debt resolution, and therefore a slower and weaker recovery from the crisis.[5]

In fact, the Thai government stressed a more market-oriented approach to debt resolution. In doing so, it had to tackle some fundamental problems in its legal mechanisms. Its bankruptcy law was antiquated, relying primarily on liquidation as a means of debt resolution. Protection from creditors was only brought in last year. Similarly its foreclosure procedure was extremely slow, with creditors able to obtain their claims only after a delay of three to five years. This last point is important, because Thai banks' lending has typically been based on collateral, partly because the accounts of most companies do not permit credible financial analysis. Incidentally, the same problem has been plaguing the equity market, perhaps with even greater force.

All these reforms are necessary, but are by themselves insufficient to permit rapid recovery from the destruction of the old financial system. As of this writing, it is not possible to descry the outlines of a financial system for a saving-rich, but heavily indebted and equity-starved economy such as Thailand.

Assessment of the role of capital markets in economic growth

The traditional bank-based financial system had great strengths, as evidenced by decades of very high growth together with stability. The bubble in the mid-1990s and the collapse in 1997 were, in my view, largely if not entirely attributable to the premature exposure of that financial system to the international capital market. In retrospect, the international investors contributed very little positive to the domestic economy, either in terms of efficiency or development. An interesting question that the economics profession should address itself to is: when; under what conditions and to what extent should an economy links itself to the international capital market.

This is not to say that the traditional financial system is without flaws. It has many weaknesses, and these weaknesses will be emphasized in an economy where consistently high growth rates, year in year out, can no longer be taken for granted. The current emphasis - dare one call it the American bias - among international institutions is on corporate governance and transparency. While not denying the desirability of such specific measures, there is further an implied assumption that a system of capital allocation based on the market (specifically the equity market) should be pursued.

[5] I am ignoring the case of Indonesia, because the problems there are so complex and fast changing that it would be impossible to do them justice in this paper.

Yet, two industrial economies, Germany and Japan, have made a success of a bank-based system of capital allocation for most of their history. That these two countries are now reconsidering their adherence to their system, should not detract us from the fact that when they were at the same stage of development as the Asian countries, they had considerable success with their system. Indeed, even as late as the 1980s, their performance was greatly admired in the Anglo-Saxon countries, as evidenced by the huge literature on the relative performance of the Japanese and American economies then.

In saying that these two countries had a bank-based system at the same stage of development as the Asian countries, I mean precisely that at that stage, they were technologically follower countries. It is to the set of issues relating to the followership to which I shall address myself in the next two sections.

B. INVESTMENT IN HUMAN CAPITAL

It is now part of conventional wisdom that the secret of East Asian success, particularly the Northeastern half, lies primarily in the governments' consistently high investment in schooling. On the impact of schooling, there is little disagreement in the literature. Two salient points are broadly accepted, firstly, schooling enhances productivity and therefore economic growth significantly, and secondly, very few would advocate the use of untrammeled market forces in determining the level and direction of investments in schooling. There is, to be sure, a large role to be played by private actors at various levels of schooling, but without exception, all countries in the world give the paramount role to the State in education.

It is in the post-schooling stage of human capital investment that the role played by the labor market in particular is significant, and it is on this issue that I shall concentrate. But the role played by that market has to be considered in tandem with the technological stage of development, a subject which belongs to the next section. Anticipating what will be covered at length there, most Asian countries, perhaps with the exception of Korea and Taiwan, are at a stage where learning-by-doing is an important part of productivity increase.

Asian countries practice a wide variety of policies and programs to induce firms to provide more on-the-job training. Korea and Singapore appear to be the two countries that have consciously designed training programs, which involved the employers. These training programs are important inasmuch as the rapid growth would tend to change the economic structure considerably. Nevertheless, these training programs did not appear to have been successful, in the sense that employers felt compelled to pay for the training,[6] suggesting that the expected productivity gain did not compensate for the costs.

One feature affecting the provision of on-the-job training by employers is the degree of worker turnover. Surprisingly, given the broad similarities with Japan in many of their factor market structures; worker turnover appears to be quite high in East Asian countries. Chowdhury and Islam (1993:154) provide some evidence on the Korea,

[6] Both Korea and Singapore require their employers to provide a certain amount of training to their workers, although they may pay a levy in lieu of such training.

Taiwan, Hong Kong and Singapore, but the same observations can certainly be made with respect to other countries. It is worth pointing out that Japan itself, usually considered as the archetypal founder of Asian-style paternalistic labor markets with a high degree of employment stability, also experienced high worker turnover in the earlier stages of its development. Koji Taira (1970) points out that what is considered as quintessentially Japanese system with low worker turnover only emerged in the immediate post-World War II era.

Thus, despite the undoubted contribution that investment in human capital has made to East Asian economic growth, the markets have only played a subsidiary role. Even the labor market did not show any outstanding feature, different from other countries at the same stage of development (including Japan before the Second World War). Nor did it exhibit any uniquely Asian characteristic or behavior that would add to the explanation of economic growth.

C. THE MARKET'S INFLUENCE ON TECHNOLOGICAL CHANGE

That technological change, in some sense, is the prime engine of economic growth is no longer a matter of controversy. The all-encompassing nature of the concept however allows considerable latitude in the treatment of the subject in the literature. Furthermore, unlike our discussions on capital and labor, there is no easily identifiable "market for technology",[7] hence the use of the word "the market" in the title to this section is intended to convey the abstract nature of the beast.

From a theoretical perspective, technology poses two problems for the market economy in East Asia. First, the East Asian countries (except Korea, Singapore and Taiwan, and then only recently) are followers in technology and not leaders, so that there must be means to import them. Second, even for followers, it is partly a public good, so that normally, there is little incentive to incur costs to obtain the technology, unless there is some means of capturing the benefits. Yet, if it were a purely public good, there would be little problem conceptually. The state will have to provide for it, as is indeed done widely in agriculture, which has this character. Industrial technology on the other hand, is partly private and can be captured by private firms. Nevertheless, without state intervention, the incentive to acquire new technology would be less than optimal. The question that has to be addressed is how should the state intervene, without smothering the profit motive that is the well-spring of technological advance.

As pointed out by Evenson and Westphal (1995), acquisition of technology is not merely a matter of obtaining blue-prints or other forms of codified knowledge, either by purchase or by licensing. If that were the case, it is easy to conceive of relatively simple markets developing in such blue-prints. In addition to this kind of knowledge, there are what these authors call tacit knowledge, and circumstantial sensitivity. These implies that codified blue-print knowledge has to be supplemented by considerable work to learn and adapt to the existing circumstances.

[7] In advance industrial economies, the provision of intellectual property rights permits a market for technology to develop. Intellectual property protection does not, however, contribute significantly to the development of technology in East Asia, and will therefore be ignored in this paper.

Despite the difficulties that all developing countries face in acquiring technology, East Asian countries, particularly the first tier (Korea, Singapore and Taiwan), have nonetheless successfully acquired new technology, so that the distance separating them from the most advanced countries have narrowed considerably during the last three decades. It is important to find out what means they employed to narrow that gap. In the discussion that follows, I shall concentrate on the example of Korea, which deployed the State power in many markets (capital, education, and goods) to achieve its primary aim of the acquisition of the more advanced technology, and seems to have a coherent approach to the problem.

First, and foremost, Korea, as well as the more advanced East Asian countries, has invested heavily in education, particularly in the production of scientists and engineers. Without these, it is hard to see other policies succeeding.

Second, Korea had had, since 1962, what is misleadingly called an "industrial policy". I would have preferred the term "technology policy", as the aim was not quite to promote specific sectors of industry. Admittedly, in some cases, consideration was given to the usefulness of particularly industries, particularly to national security. However, more important, the aim was to acquire capability in specific technologies, which were deemed appropriate for that stage of development of Korean human resources. Once that decision was made, the state then deployed all the instruments at its disposal to have the industries using that technology come into existence. The instruments deployed were many. First, the government could allocate the required capital, since it effectively control the banking system. Second, until the mid 1980s, foreign exchange was very scarce, and the government controlled that too. Competing imports were also tightly regulated.

Notice the instruments cited thus far are not very different from those used in other heavily protected countries, such as India for example. But the government's provision of privileges and protection was never unconditional. It demanded performance on the part of those at the receiving end of these benefits. What put the Koreans apart from the rest of countries attempting to industrialize is that the protection and privileges was not to an industry, but to a particular firm or set of firms which were assigned to take the lead role. These firms can then engage in the task of technology acquisition (including from abroad) very much with commercial interests in mind. For, and this was an innovation at the time, the government demanded as a quid pro quo that these firms meet a performance test. For most tradable products, the performance was measured by the volume of exports.

It is therefore, I believe, a mistake to conceive of Korean policies as an export promotion strategy. Exports do matter, but they are not the end, they are the means. Actually, they are merely the measure of the effectiveness with which the goal of acquiring technology has been met.

What if the firm assigned to take the lead role failed to pass the test? The government then had at its means many effective instruments at its disposal to punish the firm for its failure, such as withdrawing of credit and foreign exchange allocation. And it has been known to do so.

It can be seen that this interpretation of the Korean strategy differs from the practice of other developing countries, including those in Southeast Asia. These have relied almost exclusively on import protection. Voluminous research indicates that this instrument is not very effective and can be very costly to the economies. This is largely because the industry (and it always is a whole industry that is protected and not a specific firm or firms) is not subject to the stern test imposed by the Korean government.

The Korean case indicates that the workings of various markets were subordinated to the over-riding aim of promoting technological development. But it also requires a very special kind of governmental apparatus. For the government to act in this highly discriminating and discerning fashion, it has to have a highly sophisticated - and honest - public service, both at the political and the civil service levels. The Korean public service has not been known to be immune to charges of corruption. Nevertheless, the two decades spanning the 1960s and the 1970s which saw the apogee of its technology policy also saw its economy moved from strength to strength, despite the corruption.

For the other countries that are unable or unwilling to use the full panoply of instruments deployed by the Korean government, the problem of technological acquisition remains problematic. Taiwan, which pursues a more "liberal" economic regime, nevertheless succeeded in achieving the same aim, indeed, can be said to even outperform Korea. But even Taiwan pursued discriminatory policies when it comes to the allocation of bank loans (Wade 1990:165-172). Singapore also has an activist government when it came to technology acquisition, but has looked more to foreign investors as conduits of technology than Korea and Taiwan.

Other than in these three countries, governments have not pursued an aggressive technology policy. They have indeed pursued industrial policies proper, by providing various tax incentives (known generally as investment promotion), and tariff protection. These policies are marked by the lack of penalties for poor performance. In any case the governments do not have the instruments at hand to impose such penalties.

Lest it be thought that a technology policy is a sine qua non for economic growth, Hong Kong is always a useful counter-example. That economy has grown and its citizens have achieved the highest standard living among Asians outside of Japan, with very little government intervention (except in the provision of housing subsidy).

D. CONCLUSION

I have explored in this paper the role of various markets in promoting or detracting from economic growth. Close attention has been paid to the financial markets in particular. In an expanding economy, resources used for investment in productive capacity can determine the future structure of the economy. The predominant role of the banks in nearly all East Asian financial markets allows them, or those who control them, to exert a major influence on economic growth. Asian countries differ considerably in the way banks are controlled and directed, and goes a long way toward explaining the different structures and performance of their economies. In particular, in a few countries, notably Korea, banks have been used to pursue a highly dirigiste economy, and to promote the acquisition of new technology. The attractiveness of the market lies in the

discipline it imposes on entrepreneurs. Korea has shown, uniquely, that the state could impose a discipline of equal severity.

Because of the centrality of the financial system in explaining past developments in Asia, the crisis is expected to have a severe impact on many facets of the Asian economies. As of this writing, no clear strategy has emerged on the question of the kind of financial system needed for the future.

REFERENCES

Calvo, Guillermo and Enrique G. Mendoza (1996). "Mexico's Balance of Payments Crisis: A Chronicle of a Death Foretold", Journal of International Economics, 41, 235-264.

Chowdhury, Anis and Iyanatul Islam (1993). The Newly Industrialising Economies of East Asia. London, Routledge. .

Evenson, Robert E. and Larry E. Westphal (1995). "Technological Change and Technology Strategy", Chapter 37 of J. Behrman and T:N. Srinivasan (eds.), Handbook of Development Economics, Volume III. Elsevier, 2211-2299.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert W. Vishny (1998). "Law and Finance", Journal of Political Economy, 106(6), December, 1113-1155.

Murphy, Kevin M., Andrei Shleifer and Robert W. Vishny (1989). "Industrialization and the Big Push", Journal of Political Economy, 97(5), October, 1003-1026.

Park, Yung Chul (1991). "The Development of Financial Institutions and the Role of Government in Credit Allocation", in Lee-Jay Cho and Yoon Hyung Kim (eds.) Economic Development in the Republic of Korea: A Policy Perspective. Honolulu HI, East-West Center, 45-72.

Taira, Koji (1970). Economic Development and the Labor Market in Japan. New York NY, Columbia University Press.

Wade, Robert (1990). Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization. Princeton NJ, Princeton University Press.

World Bank (1993). The East Asian Miracle. A World Bank Policy Research Report. New York, Oxford University Press.