

East Asian Financial Systems as a Challenge to Economics: Lessons from Taiwan

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In economics something has only to be called a "rigidity" for it to be recognized as bad. Rigidity means that market processes face some interruption, some obstacle, often of a bureaucratic or political kind. So when economists writing about Taiwan's financial system make frequent use of the word,¹ they are signaling that something is wrong. They have refrained, in general, from trying to relate the rigidity of the financial system to Taiwan's spectacularly successful industrialization, which is arguably the most successful (by the double criterion of income growth and equity) that the world has ever seen. Erik Lundberg is an exception. In the course of a long essay on Taiwan's monetary and fiscal policy, he states the relationship between the financial system and industrialization as follows: "In spite of these shortcomings . . . the financial system as a whole *must have* contained enough resilience and elasticity to meet the most urgent needs of a rapidly growing economy in a great transformation process."² It must have, indeed.

Tautologies can have their uses, but in this case Lundberg's serves only to discourage further thought. Here I shall argue that the rigidity of Taiwan's financial system has been a positive factor in its industrialization. Those features which constitute rigidity have helped

- to get financial savings into the banks;
- to keep real savings within the country for use by the country's own investors;

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- to encourage an active industrial policy, and
- to give the government a particularly powerful tool for effecting industrial policy; while
- the success at mobilizing savings has had a direct bearing on the character of that industrial policy.

The financial system and industrial policy are thus closely linked; which is surprising only in relation to much of the discussion about industrial-policy-in-general, which deals with the "real" economy as though the "real" could be kept distinct from the "nominal."

What is more, the financial systems of those other most successful cases of twentieth century capitalist development—Japan and South Korea—bear a close resemblance to Taiwan's, as also do their industrial policies. The financial system/industrial policy nexus described here for Taiwan applies to these other countries too, and there are good grounds for presuming that it is an important part of the explanation of the superior economic performance of all three. At any rate, all three are qualitatively distinct in their financial systems and industrial policies from those of Anglo-American-type economies, and (not unrelatedly) distinct also from what mainstream economics regards as desirable.

Investment and Savings

Over the period from 1965 to 1980, Taiwan's gross domestic capital formation ran at an average of 28.4 percent of GNP. This is one of the highest, perhaps *the* highest, rate of any country in the world over that extended period. South Korea (Korea hereafter), also a heavy investor, averaged 26.5 percent, about 2 percent less.³ In 1980, Taiwan's gross capital formation accounted for 35 percent of GDP (tied for first with Yugoslavia and Romania amongst the middle-income countries), which was significantly more than Korea's 31 percent.⁴

What makes Taiwan's performance even more extraordinary is that investment was financed entirely out of *domestic* savings; the share of domestic savings in GNP over 1965 to 1980 was 28.7 percent, slightly more than the share of investment. In Korea, by contrast, only 70 percent of investment came from domestic savings, the rest mostly from aid and loans.

Savings increased from about 5 percent of national income in the first half of the 1950s to over 30 percent by the late 1970s. By 1975, net savings to net national product had exceeded Japan's—25.3 percent against 22.7 percent—and henceforth Taiwan has had about the highest savings ratio in the world. Taiwan's 30.5 percent average between 1970 and 1979 may be compared with Korea's 17.5, Japan's 26.3, the Philippines' 18.1, and the United States' 7.6 percent.⁵

Because of this vast amount of savings, Taiwan's rapid growth has been accompanied by much less inflation and less foreign borrowing than is

common in Third World countries. In particular, Taiwan has had less inflation than Korea, which in turn has had less inflation than any of the major Latin American countries.

Surprisingly little has been written about the reasons for Taiwan's high and rising level of savings. Two studies, one by Sun and Liang, the other by Scitovsky, go through a whole list of standard economic explanations for savings behavior, and find most of them unconvincing for Taiwan.⁶ It seems that the growth rate of income does not explain very much, contrary to what post-Keynesian theories would predict; nor does income distribution; nor do interest rate changes; nor inflationary expectations. But these calculations are in terms of aggregative savings, and more can be learned by examining the components.

Savings can be divided into those of households, firms, and government (including public enterprises). The shares of each in Taiwan's total are shown in Table 1. The main point we need to take from the table is the large size of government savings. Over the period from 1970 to 1978, government savings have averaged 38 percent of net savings, as against 35 percent in Korea, 20 percent in Japan, 22 percent in the Philippines, and minus 14 percent in the United States.⁷ High government savings have helped to keep inflation low.

Government savings reflect a vigorous use of fiscal policy to mobilize surpluses. The Taiwan Government budget has regularly, since 1964, been in surplus; and so have public enterprises in the aggregate, since the early 1950s. We see from Table 1 a shift in emphasis from (compulsory) government saving in the 1950s towards (voluntary) private savings in the 1960s, and a shift back towards government savings during the 1970s. Agriculture provided a major source of forced financing in the 1950s, at the same time as the Government aggressively promoted agricultural development. Agricultural taxes took the form of land taxes and, more importantly, of hidden taxes by means of compulsory government purchases of rice at below-market prices, and by means of the rice-fertilizer barter scheme. The total tax burden on agriculture, including the hidden taxes, was significantly higher than for the nonagricultural sectors: for 1957-61, about 25 percent of farm income and 19 percent for nonagricultural income.⁸ Over the 1970s, however, agriculture has become a subsidized sector, as in many industrialized countries, and the tax burden has shifted to other sectors of the economy. It is clear, then, that a substantial amount of Taiwan's savings have been the result of government decisions about its own revenue and expenditure, and about public-enterprise pricing.

But government savings may have partly substituted for private savings; private savings might have been higher had government savings been less. Even so, private savings have still been extraordinarily high, at almost 20 percent of GNP over the 1970-79 period. If the rate of household saving is expressed as a proportion of consumers' disposable income, and the

Table 1. Sources of Net National Savings in Taiwan (%)

	Household & Non-Profit Institutions	Private Corporations	Government & Public Enterprises
1956-60	37.6	10.4	52.0
1966-70	57.5	9.6	32.8
1976-79	49.9	8.4	41.7

Source: Chen Sun and Ming-yih Liang, "Savings in Taiwan, 1953-1980," in K. T. Li and T. S. Yu, eds., *Experiences and Lessons of Economic Development in Taiwan: Conference Proceedings* (Taipei: Institute of Economics, Academia Sinica, 1982), p. 414.

figure for Taiwan compared to that for Korea, the difference is tremendous: 17.6 percent for Taiwan between 1965 and 1980, 7.6 percent for Korea.²

Why have household savings been so important in Taiwan? The underdeveloped state of the social security system probably has a lot to do with it. Savings are high because people save for old age or sickness. Only civil servants, soldiers, and teachers are entitled to a retirement pension, and then only a small fraction of their full working income; most of them prefer to take the lump sum option. Firms are obliged to pay a lump sum on a worker's retirement (but the smaller manufacturing or service companies tend to evade the obligation). Annual bonuses are usually paid, commonly one to two months' full wage or salary, adjusted upwards or downwards according to the firm's profitability that year and the individual's work performance. The practice of annual and retirement bonuses helps savings because a worker who receives a lump sum payment rather than small installments is likely to save a larger proportion of it. A medical insurance scheme has wide coverage of the work force, but includes only the cost of treatment, not income foregone. For those without means of support there is a "poor law" safety net, but the size of the benefit is tiny and conditions of eligibility severe; a strong stigma is attached to being a recipient. Thus, in the absence of more than rudimentary pension and social security arrangements, individuals must rely on family income pooling, or save. For house purchase, a very large down payment is required (commonly over 50 percent). Unlike the United States and Britain, mortgage repayments are not tax deductible. Little public housing is available. Only a few big companies help employees buy houses. Education is free for the first nine years. But at the university level about half the places are in private colleges, with steep fees and few scholarships. (The private colleges tend to be at the low end of the prestige and quality scale, the public colleges at the upper end). The hope that at least one child will go to university is remarkably widespread. It drives savings aimed at being able to support a child through university, should he or she be accepted.

These features of the social security and education systems in Taiwan help to explain the high level of household savings. But much the same features exist in South Korea, where household savings are much lower. Sun and Liang end their study of savings in Taiwan by suggesting that the "frugality" sanctioned by Chinese culture may be an important influence on savings behavior—which is probably true and may be relevant to the Taiwan/Korea difference, but hardly gets us far. Scitovsky, for his part, arrives at the conclusion that the much higher rate of household saving in Taiwan compared to Korea may be the cumulative result of several differences: the slightly faster growth of Taiwan's GNP; the slightly faster increase in the proportion of the labor force receiving part of its income in the form of bonuses (but in both countries, the annual bonuses amount to only one or two months' wages, so they are less important than in Japan); the greater proportion of the population saving to establish independent businesses (as indicated by the much faster expansion in the number of businesses, and their smaller average size); the greater proportion of the population saving to enlarge the more numerous already-established small businesses; a greater need to save for old age (if Taiwan's greater affluence has gone with a more marked shift from extended to nuclear family forms); and greater willingness to save in financial form because of higher real interest rates on deposits and, for the same reason, greater willingness to keep real savings within the country. All these explanations are plausible, Scitovsky concludes. He would be the first to say that the subject needs more research. It is extraordinary how little attention the matter has received, given that Taiwan has for nearly a decade had one of the highest rates of saving in the world.

Government policies have also directly helped savings, though neither Sun and Liang, nor Scitovsky, discuss their impact. As in Japan, savings in post-office accounts pay no tax on interest earned, and post-office interest rates are set higher than commercial bank rates. Commercial bank interest rates are taxable only if the payments exceed a certain very high ceiling. Broadly speaking, then, interest on most bank deposits is exempt from tax, and has been since 1961. (Dividend payments, on the other hand, are mostly not tax exempt.) These measures have presumably helped to get savings into the banking system, and may perhaps have helped to increase the rate of real savings. While the Government has not discouraged the use of savings for house purchase, neither has it encouraged it; and it has sought to discourage multiple house ownership, by preventing banks from lending for second house purchase and by taxing second houses much more severely than owner-occupied houses.

But it is for its interest rate policy that Taiwan is best known.¹⁰ Taiwan was the first underdeveloped country to introduce a high real interest rate policy, primarily as a means of fighting inflation. Between 1949 and 1953, prices rose by more than 600 percent. The Government, moved to action

**Table 2. Monetization of the Economy, Taiwan
Compared To Other Countries: M_2 /GNP**

Countries	1955	1965	1975	1976-79
Taiwan	13	30	57	67
Korea	10	12	30	32
Japan	60	79	68	
Philippines	19	25	17	

Source: IMF, *International Financial Statistics*, various issues; for Japan, Erik Lundberg, "Fiscal and Monetary Policies," in W. Galenson, ed., *Economic Growth and Structural Change in Taiwan: The Postwar Experience of the Republic of China* (Ithaca, NY: Cornell University Press, 1979).

Note: M_2 refers to currency plus bank deposits. The 1976-79 figures use GDP.

by fear that its very survival would be jeopardized if such price rises continued, introduced very high interest rates on bank deposits, against the conventional wisdom of the time which favored low interest rates as a means to promote investment. With savers still able to earn a positive real interest on their deposits, financial savings flooded into the banking system. The policy of high real rates of interest on deposits has been stuck to for 30 years, with the exception of some years during the 1970s. South Korea followed a similar monetary policy starting 15 years later, in 1965; but stuck to it for only six years, until 1971. From then onwards, the real rate of interest on savings deposits in Korea has fluctuated wildly, frequently being near zero.¹¹ Just how important Taiwan's high real interest rate through the banking system has been for increasing real (as distinct from financial) savings is a matter of dispute. Sun and Liang conclude that "interest rates do not explain why the savings ratio should be so high in Taiwan"; whereas Scitovsky suggests that "the steady, seven-fold rise of the personal saving rate in Taiwan, from 3% of the disposable income in 1952 to 21% in 1980, may well have been due largely to the continued attractiveness of savings deposits as a means of assuring oneself of an independent and comfortable old age."¹² A dense network of banking offices (one bank office per 10,000 people in 1980) may also have helped.

A final word about foreign savings. These were very important in the 1950s, when foreign savings accounted for 40 percent of total savings, mostly in the form of U.S. aid. Since the mid-1960s, however, foreign savings have been a very small part of the total.

The Financial Sector

Taiwan's fast growth and its rapidly rising savings ratio were accompanied by a remarkable monetization of the economy. Table 2 shows how much faster was this financial deepening than in several other countries, using

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the ratio of M_2 to GNP as an index. Another indicator is the rise in M_2 deflated by the wholesale price index, which represents the real lending capacity of the monetary system: this grew 12 times between 1961 and 1970, making possible a huge expansion in the base from which credit expansion could proceed.

However, financial deepening went with little diversification of the financial system. The financial system remains dominated by the banks. Non-bank financial institutions (such as investment and trust companies, bill finance companies, insurance companies, and the like) accounted for only 5 percent of the assets of Taiwan's major financial institutions by 1980.¹¹ Or, in terms of financial claims outstanding at the end of 1979, non-bank financial institutions represented only 7 percent; government bonds, corporate bonds, and commercial paper outstanding represented another 6 percent; corporate stock, 13 percent; while claims on the banking system accounted for three-quarters of the total.¹² The limited development of non-bank financial institutions *could* reflect a difficulty in competing against highly competitive commercial banks, just as a relatively large non-bank financial sector could reflect government-imposed handicaps on commercial banks. In Taiwan's case, however, the limited development of the non-bank sector reflects strict government controls over it, with the aim of preserving the dominant position of the (not highly competitive) banks. So in this case, the small size of the non-bank sector *is* a useful indicator of the "illiberal" nature of the financial system. Only since the second half of the 1970s has the Government allowed an expansion in the non-bank sector—partly so that it could better control the non-bank financial institutions which were springing up anyway.

Taiwan's firms are typically highly "leveraged" in the sense that they depend more on borrowing and less on equity capital. (The Stock Exchange, started in 1962, remains rudimentary as a source of finance; by 1980 only 102 companies were listed. Again, the Government has been less than anxious to promote it.) According to official figures, the ratio of corporate-sector debt to equity was between 160 and 180 in most years between 1971 and 1980; which compares with figures of only 50-90 for the U.K. and the U.S. But Taiwan's ratio is much lower than Korea's, whose corresponding figure was 310-380.¹³ However the "true" Korean figure is probably much lower than its official value, especially because of complications introduced by Korea's much higher inflation rate and higher permitted rates of accelerated depreciation. One estimate puts the real Korean figure in the same order of magnitude as Taiwan's official figure.¹⁴ Japan's figure over the 1950s to the 1970s has been of the same order of magnitude as Korea's. We can safely conclude that in all three countries, financing choices have been weighed heavily in favor of debt rather than equity.¹⁵

In Taiwan and Korea there are two main sources of (domestic) debt finance. One is through banks and the other is through the "curb" market.

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The curb market is an unregulated, semi-legal credit market in which loan suppliers and demanders can transact freely at uncontrolled interest rates. Between 1976 and 1981, it is estimated for Taiwan that *private* business borrowed only about 60 percent of total borrowings from banks and most of the remainder from the curb market; while *public* enterprises got 96 percent of borrowings from the banks. Small private businesses would have got less than 60 percent from the banks, large businesses more. Overall, it is estimated for Taiwan that some 20 to 30 percent of total borrowings over the 1970s have come from the curb market.¹⁸ Despite Taiwan's high real bank interest rates (high by international standards), curb market rates have been roughly *twice* as high as bank loan rates during the 1970s and, during the 1950s, three times as high.¹⁹ One cannot reach straightforward conclusions about the extent to which bank interest rates are in "disequilibrium" from the size of the discrepancy between the bank rate and the curb market rate, however, because collateral requirements are more stringent for bank loans, increasing their real cost, and compensating balances are often required for bank loans, again increasing the real cost. The curb market tends to be used for riskier investments, which would in itself make for an equilibrium discrepancy.

For Korea, estimates of the size of the curb market vary greatly, from around 10-20 percent of total loans to "40 percent at the most." Its interest rates have been many times higher than those on so-called "policy loans" through the banking system (loans for government-designated priority purposes), which have amounted to roughly half of total bank loans over the 1970s.²⁰ As for Japan, the nearest thing to a curb market is the market for *gensaki* bonds, in which a company issues a security and agrees to repurchase at a certain date and price (at an implicit rate of interest normally above the bank rate of interest). Until the late 1970s, the Japanese Government frowned on *gensaki*, treating the market as semi-legal, because it offered an escape from monetary and interest rate controls at times of credit restriction. The quantitative significance of this market is unclear, but it is certainly smaller than the curb markets in Taiwan and Korea.²¹

Businesses in all three countries depend heavily on banks for their finance. In Taiwan, the banks are still today virtually all government-owned. (The four private banks in Taiwan had only five percent of deposits and branches of all the commercial banks in 1980, and the biggest of the four is only nominally private.)²² Government ownership goes with close government control, which the very small number of banks makes much easier. (Only seven banks accounted for almost 90 percent of total deposits of domestic banks in 1980.)²³ The senior staff are appointed by the Government; the chairmen are mostly ex-Ministry of Finance or Central Bank officials rather than professional bankers. The Government sets the structure of interest rates and sets tight limits on how much can be lent to any one borrower and on the purchase of company stocks. The Government

also sets salary scales and regulates the annual bonuses that are allowed to be paid to staff. These controls are supplemented by stringent reporting requirements. All banks must report all their transactions to the Central Bank *weekly*; all foreign exchange transactions must be reported *daily*.

Only since as recently as 1979 has there been even a limited foreign exchange market in Taiwan. Until then all foreign exchange earnings had to be surrendered to the Central Bank. Even now speculation in foreign exchange is prohibited; hence, all foreign currency transactions must be backed by trade contracts or accounted for by evidence of invisible transactions (remittance of royalties, interest, and so on). Capital transfers still require the Central Bank's approval. Chinese money, it has been said, is the most nervous in the world, the merest hint of domestic or international difficulties often being sufficient to stampede money into North American havens.²⁴ These controls are partly to discourage such capital flight.

Foreign banks were excluded altogether until 1958. In that year, a Japanese bank was permitted, which remained the only foreign bank until 1965. Even by 1972, only six banks had been permitted to open an office, only one office each. So, foreign banks operating in Taiwan had very little role in the great export boom. (By the end of 1980, a total of 26 foreign banks had opened a branch or representative office.) Still today, foreign banks are required to report *all* transactions *daily* to the Central Bank. They are allowed only very limited access to local deposits. They face a daily limit on foreign currency lending per bank and per customer. They are not allowed to take equity in Taiwanese companies. In effect, they are allowed only into those pockets of business which the locals cannot do well, in return for lending money to the country's international borrowers.

Whereas South Korea denationalized most of its banks between 1980 and 1983, there has not even been public discussion of such a move in Taiwan. Hofheinz and Calder are wrong to say of *South Korea* that "no other non-Communist Eastasian nation has such a substantial public presence in its financial system."²⁵ Moreover, the Taiwan Government has a major presence even in parts of the non-bank financial sector, owning or part-owning insurance and bill finance companies. Furthermore, the ruling Nationalist party is said to have close links with the commission that runs the Stock Exchange.

In 1982-83, several moves were made to liberalize the financial system: first steps towards an offshore banking unit; a unit trust scheme for allowing foreign capital to take equity positions indirectly in Taiwanese companies; a venture capital scheme; a market for bankers' acceptances; permission from the military to allow financial data to leave the country by high-speed computer transmission (this had long been resisted because it is difficult to monitor the content of what is sent by this method); and several other related schemes. In 1983, the Ministry of Finance announced that foreign banks could accept time deposits for up to six months in local currency,

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on condition that the amount of deposits accepted not exceed 12.5 times the amount of capitalization already remitted into the country by the bank. "The decision is seen as a milestone in liberalizing restrictions on foreign banks operating in the Republic of China," said a semi-official newspaper.²⁶ The intention is to make Taiwan the future business center of East Asia, once Hong Kong reverts to the mainland. As always, the moves are being made gradually, so that a retreat can readily be made if the consequences of any particular change seem to be too costly.

The structure and control of the banking system in Korea is very similar. From 1961, when the Government repossessed those shares of the commercial banks in private hands, until 1980, the Government had virtually complete control over the entire financial system, excepting the curb market. As in Taiwan, the fact that the banks were few in number made control easier to enforce. Government control extended to low-level personnel policy, salary reviews, budgets, credit ceilings for individual banks, control of operating funds, and control over interest rates. Even today, after denationalization, the Government still sets interest rates, and the banks still depend heavily on government (Bank of Korea) for operating funds, making them responsive to unofficial guidance. Even though the percentage of bank operating funds supplied by the Government has fallen sharply in recent years (to 12 percent in 1983), the spread which the Government allows on loans rediscounted from the Bank of Korea is so large compared to the spread allowed on ordinary loans that more than half of total bank profits on lending are derived from this small percentage of total lending. So it would be incorrect to infer that the fall in the percentage of funds supplied by the Government indicates liberalization. The Government has mandated very narrow spreads between deposit rates and loan rates so as to reconcile the need to keep interest rates on deposits high enough to attract savings while keeping interest rates on some loans low enough to give a powerful incentive for investment in designated sectors. The very narrow profit margins means that the banks are more dependent than otherwise on government goodwill. Taiwan's banks, by contrast, are much more profitable, because the Government has allowed higher real rates on loans. On the other hand, the formal non-bank financial sector is larger in Korea than in Taiwan, partly because the non-bank financial institutions have been able to offer higher rates on deposits than the banks.

The post-denationalization methods of bank control in Korea closely resemble those long used in Japan, where the banks have been mostly privately owned. There too, the Government still fixes interest rates and is able to control bank lending through the so-called "overloan" provision. Constantly wanting to extend their lending by more than their deposit base would permit, Japan's banks have been able to do so by borrowing from the Central Bank. But as in Korea and Taiwan, borrowing from the Central

Bank is a privilege, not a right, with conditions attached as to how the loans should be used. Like the other two cases, the banking system in Japan is dominated by a very small number of banks, making unofficial control easier to exercise. Even though Japan's banking system is the most "liberal" of the three, it has yet been described as "among the most centralized and controllable in the world."²⁷

The Advantages of Rigidity

There are four principal reasons why close central control of the financial system—by command more than by inducement—has been advantageous in Taiwan, Korea, and Japan.

Control at the Border—The first reason is that central control allows tighter control over the flow of finance in and out of the country, and this has several kinds of advantages. Control at the border

- gives the government more control over the balance of payments;
- gives it a way of reinforcing tariffs and quantitative restrictions as instruments of selective protection; and
- gives it more influence over the cost of financial capital to domestic borrowers.

The first two have been more important in Japan and Korea than in Taiwan.

In Japan, from the mid-1930s to the late-1960s, all foreign exchange earned from exports was concentrated into a Government account and disbursed in line with a government-created and supervised foreign exchange budget. This budget was one of the Government's main tools for restructuring the economy before the Second World War and again after the war.²⁸ The object was to make sure that the composition of imports was determined *not* solely by domestic demand in relation to international prices but also by government-determined priorities.

In Korea, too, central control over foreign exchange has been similarly used. With a chronic balance of payments deficit to manage, the Government has used control over foreign exchange to help discourage the use of this scarce resource for importing non-essentials. More particularly, foreign exchange control has been used as a second pressure point to bolster the effect of tariffs and quantitative restrictions. Would-be importers of products competitive with the new sectors which the Government wishes to encourage have been made to jump two hurdles, not just one; for permission to import a certain item does not imply permission to use foreign exchange for that purpose—the second permission has to be obtained quite separately. Indeed, Korea's Foreign Exchange Demand and Supply Plan has been a major instrument of government steering of the economy,²⁹ just as Japan's counterpart, the Foreign Exchange and Foreign Trade Control Law, has been.

Taiwan has also concentrated most foreign exchange in the hands of

the Government, to which application for use has to be made. How this control was used prior to the mid- to late-1960s, when foreign exchange was short, is not clear. But since that time, with a balance of payments surplus in most years, the need to bolster trade controls has been less than in Korea and pre-1970 Japan. So once permission to import an item is given, that permission in itself carries an entitlement to the required foreign exchange.

All three Governments have been concerned about the use of border control to influence the domestic cost of capital. By restraining the outflow of finance, the Governments have limited the opportunities of savers to invest abroad, helping to hold down the cost of funds to borrowers. By centrally controlling the inflow, the Governments have diminished the influence of foreign lenders and foreign lending rates. The possibilities of capital flight set a limit on how far out of line the domestic cost of capital can be kept from the international cost; but still, the remaining room for maneuver has been important for the Governments' overall policy control of their economies. It has become especially important over the 1970s, as a well-integrated international finance market has taken shape. Now, with international capital and financial flows running at about \$40 trillion and international trade at \$2 trillion, financial flows are dominating the international economic system, swamping international trade as a factor influencing the value of national currencies and changing relative prices in ways unrelated to underlying changes in supply conditions.³⁰ In these conditions, the effectiveness of domestic monetary and fiscal policies depends all the more on control at the border.

In terms of these various advantages of border control one can understand the strict controls over all the operations of foreign banks in all three countries, and over all foreign transactions of domestic banks.

Reducing Financial Instability—The second reason is more complicated. If a government seriously wishes to promote *rapid* growth and investment, it will have to take steps which encourage firms to *borrow* heavily. It cannot afford to await the slow growth of firms' own profits, out of which they could finance rapid reinvestment, or the development of a stock exchange; investment must grow faster than the growth of equity permits. So where the government is promoting rapid investment, firms will show high debt/equity ratios. But where debt/equity ratios are high, there is an ever-present danger of financial instability in the national economy, meaning: bankruptcies, withdrawal of savings, a fall in real investment—and so a fall in growth. A government must intervene extensively in an economy with high debt/equity ratios if it wishes to prevent financial instability and promote growth. And this is what we find in Taiwan, Japan, and Korea: all three have high debt/equity ratios, and predictably, all three have tightly controlled financial systems. Let us pursue further the reasons why high debt/equity ratios force extensive government financial controls.

Repayments on debt are fixed and certain. Repayments on equity can

be delayed and vary with future earnings. Future earnings are uncertain and variable. Where debt/equity ratios are high, there will be periods when cash flows on debt cannot be met out of current earnings. Therefore one would expect to find at any one time a high proportion of firms (compared to low debt/equity economies) which cannot meet interest payments out of current income; they are technically illiquid and may even be insolvent. Consequently, one would also expect to find a relatively high proportion of "non-performing" assets in the loan portfolios of the banking system; some of its constituent banks may even be technically insolvent. So lenders (savers) will worry that borrowers (investors) will default. Risk-averse savers might withdraw their deposits from the banks as a precaution, leading to a shrinking of the base for lending and even to the bankruptcy of some banks. Borrowers will worry that interest charges will absorb all earnings, leaving nothing for profits (while a lower debt/equity ratio might have left them with something). Borrowers may also worry that lenders will force them to sell off their assets in order to meet their fixed interest payments, probably at a price below the long-term market value of the assets (because of the costs of liquidating in a hurry), and so will be cautious about borrowing. Thus, the gearing ratio will be limited, below the point where the marginal efficiency of capital schedule intersects the interest rate. The supply and demand for loanable funds will be less than if these risks were eased; thus, the rate of investment and growth will be less than otherwise.

The government of a developmental state⁴¹ cannot afford to let temporary liquidity problems close major banks or firms. There is thus a powerful incentive for the government to intervene as a lender of last resort for the banking system: to assure the banks that if they get into trouble (for reasons other than incompetence or corruption), the government will help. But instead of waiting passively for the "last resort" to arrive, the government will be tempted to intervene in other ways before the last resort is reached.

The intention of this intervention is to socialize the risks of private loss—to shift onto the government some of the risks of loss to which private lenders and producers with high debt/equity ratios are exposed. This is especially so for risks that are *highly correlated*—risks to which most firms in the economy or in major sectors are exposed. So it applies especially to such matters as interest rate changes, or economy-wide recession, or changes in major export markets, or political risks. Thus, the impetus for government to shoulder some of the risks of investment and saving in an economy with high debt/equity ratios is especially strong in *trade-dependent economies* (like Taiwan and Korea) and in *polities under external or internal threat* (again like Taiwan and Korea).

The impetus is even stronger when the economy is investing heavily in *large lump projects* with a 10-15 year gestation period. These are likely to

have to be financed in large part by borrowing, with very high debt/equity ratios as a consequence, because private equity capital would not be forthcoming to make the investment unless the prospective *private* financial returns were very high. The prospective private returns could be made high enough, in a closed economy, by means of a higher-than-world-market price, but the price might have to be very much higher, generating other well-known costs. In an open economy, the project would always be a price-taker, the return would be even more risky, and private equity capital would be even less likely to invest adequately. By borrowing, such projects can get enough capital—provided the government is shouldering some of the risk. But also, if the government takes steps to encourage a leveraging up (a higher debt/equity ratio), this in itself makes the return on the equity part higher, giving private equity investors more incentive to invest in the project even in the face of *low* prospective returns on the overall (debt plus equity) investment (provided that the real cost of debt is less than the “low” return on investment). Taiwan, Japan, and Korea have been investing heavily in such lumpy projects for many years.

Much the same argument applies to the case of investment for export production, when the exports are *relatively undifferentiated manufactures sold in highly competitive markets*. Here the country has no power over prices, and the returns per unit of sales and per unit of capital are likely to be low. With low prospective profits, investment by private entrepreneurs (without socialized risk) will be checked; and reinvestment out of realized profits will be small. If, however, the government lifts some of the risk by spreading it over the whole of the export basket, private investment in any one line of production will be higher than otherwise. And this may well be socially very desirable: rapid reinvestment will lead to a rapidly rising wage bill (if technology is labor-intensive); and if savings out of income are high, firms can finance further investment not only out of (low) realized profit but also by borrowing the intermediated savings—with high debt/equity ratios as the consequence. This is the basic logic of the debt-intensive export drives of all three countries (Japan with reference to pre-1970).

In the general case, intervention to socialize risks may be of several kinds: lender of last-resort facilities; deposit insurance; subsidies to banks imperiled by loan losses; product and credit subsidies to firms in financial difficulties; government shareholding in banks and large lump projects; or outright government ownership of the banks (as in Taiwan and as in Korea until the 1980s); plus, of course, government control of interest rates, to dampen firms' exposure to market fluctuations in this important source of correlated risk.

However once government intervenes to socialize risk there are then two major problems. One is that firms have incentives to behave irresponsibly—without due commercial caution—knowing that the banks or the

government will bail them out (the so-called "moral hazard" problem). The government has to tread a thin line between, on the one hand, shouldering enough risk—which, if not lifted from private decision makers, would have socially undesirable consequences—and, on the other hand, shouldering too much risk—so as to create a moral hazard problem, with *its* socially undesirable consequences. In general, one would expect the financial system to shoulder more of the highly correlated risks and less of the uncorrelated risks. Even in this type of system, the government would be prepared to let some banks and major firms go bankrupt from time to time, when the reasons for bankruptcy are due to uncorrelated causes (e.g. excessive investments in real estate). The intention is to teach the others a lesson, so that honesty and responsibility are maintained.

The second major problem is that once risk is lifted in this way, allocation of financial capital *by the market* is less effective. By making risks more nearly equal, and by curtailing the opportunities for capturing the bonanzas associated with equity investment, the government creates the need for a central guidance agency to supplement market signals. Firms and banks can then know that if they invest in the signaled priority sectors, their risks will be lower than otherwise. Taiwan, Japan, and Korea all have one or more pilot agencies, provided with an impressive armory of weapons by which to guide the market: Japan's MITI is the classic example; similar functions are carried out in Taiwan by the Council for Economic Planning and Development, and the Industrial Development Bureau; in Korea, by the Economic Planning Board, the Ministry of Commerce and Industry, and the economic secretariat of the Blue House. There are no equivalents in Anglo-American-type economies.

Guided Sectoral Mobility—So government efforts to promote rapid investment and growth will generate high debt/equity ratios, and high debt/equity ratios pose great dangers of growth-disrupting financial instability. The government has therefore to intervene extensively in the financial system so as to socialize risks. Beyond this, in an economy where reliance is on bank rather than share capital, the government can quickly shift the entire economy by a slight change in credit policy. Credit policy becomes a powerful tool for guiding the allocation of investment between sectors. Even small changes in the discount rate, or small changes in concessional credit availability between sectors, can have a dramatic effect on resource allocation—much greater than in the less highly leveraged Anglo-American economies. This matters especially because the government of a developmental state will not be concerned simply to promote rapid growth *in aggregate*. It will base its policy of rapid growth on a strategy of selective development of "key" sectors, sectors which by their links to the rest of the economy can affect the entire economy's growth. Note that this does not entail much "picking the winners," as the phrase is understood in the West. Selective promotion of key sectors in a country

not at the world technology frontier is quite a different and more feasible matter than for a country on the frontier. The judgement of which sectors to promote can be made by examining trends in demand and technology in more advanced countries—as the Japanese, Koreans, and Taiwanese have most assiduously been doing.

High debt/equity ratios mean, then, that the government can have a powerful influence on the *sectoral* allocation of resources and specifically can ensure that the allocation keeps moving towards industries higher up the product cycle. Mason and his associates conclude for Korea, “The most potent instruments for implementing economic policy have undoubtedly been control of bank credit and access to foreign borrowers.”¹² Taiwan has used selective credit allocation less vigorously as an instrument of industrial policy than Korea, but more vigorously than many other developing countries and more vigorously than economies of the Anglo-American type. Also, in such a controlled financial system, the government can restrict the use of investable resources for mergers, speculation, paper entrepreneurship, and consumer borrowing (an important point in the Latin American comparison). Savings have a better chance of being translated into productive investment. All three countries have used control over the banking system to restrict borrowing for purposes not related to productive investment.

This then is the third main impetus to central control of the financial system: to allow government to steer resources in a deliberately selective way away from paper entrepreneurship and consumer borrowing into productive investment; and, within the latter, into industries important for the entire economy's growth. The second and third reasons thus combine as follows: the more vigorously the government tries to promote both aggregate investment and investment-in-selected-sectors, the higher debt/equity ratios will be. The higher are debt/equity ratios, the more the government must intervene to reduce the risk of financial instability, the more it must therefore supplement market signals with its own signals, and the more powerful is credit policy as an instrument for steering industry in line with those signals. It may also be that selective tax breaks, even if not large in quantitative terms (e.g. a reduction of corporate income tax from 25 percent to a maximum of 22 percent, on production of certain specified priority products), or generous accelerated depreciation allowances, may have a greater effect—and so be more powerful as a policy instrument—in highly leveraged compared to less highly leveraged economies. The reason is that highly leveraged firms will be more anxious to reduce their risks. Government designation of priority products means that the risks of producing those products will be more heavily socialized by government than the risks of producing non-priority products. Taiwan has an elaborate scheme of selective tax incentives for the production of specified products.

Political Support—The fourth advantage of a closely controlled financial system is more directly political. Industrial policy requires a political basis: the choice between strategies is not just a matter of potentially superior economic outcomes, but also of what can be implemented. Control over the financial system has been used in all three countries to build up the social coalitions needed to support the government's objectives. Jones and SaKong conclude for Korea, "Government control of the banks is thus the single most important economic factor explaining the distinctly subordinate position of the private sector."⁴⁴ Mason and associates likewise find that "the credit instruments . . . served to maintain control over, and cooperation from, the business community. All Korean businessmen, including the most powerful, have been aware of the need to stay on good terms with the Government to assure continuing access to credit and to avoid harassment from the tax officials."⁴⁵ So when the Yolsan conglomerate added to President Park's difficulties by (reportedly) flirting with the main opposition leader in 1979, the president used his ability to control credit to bankrupt the company, taking several small banks with it (an admittedly extreme case).⁴⁶ In Taiwan and Japan, too, credit allocation has been used to support big firms or trade associations favorable to the government, and occasionally to penalize those known to be against it. This has helped to prevent constant opposition to industrial policy, which has facilitated its implementation.

These are four kinds of advantages of a tightly controlled financial system. But recall, finally, that in Taiwan, as also in South Korea, the rigidities of the financial system are softened by the existence of a less formal, semi-legal curb market for credit, where within broad constraints free market forces prevail and where interest rates are higher than in the formal financial system. This curb market should be seen as not just an add-on, but as an integral part of the whole. The effectiveness of the whole financial system is likely to be the result of a *combination* between the controlled financial sector and the uncontrolled sector; a combination in which the "liberalized" sector is the smaller and subordinate part, mainstream economics notwithstanding.

Thus the logic of a controlled financial system (with flexible edges) is similar in all three countries. But beyond this, the *degree of success at mobilizing domestic savings* has an important bearing on the character of industrial policy. Taiwan and Japan have been much more successful in this respect than Korea. As between Taiwan and Korea, this helps to explain why Taiwan's industrial policy has been lighter in touch, remaining more in the realm of guidance and persuasion, and why Korea's has been more aggressive. Given the abundant flow of savings in Taiwan, the key sectors could be promoted without severe rationing of other sectors, and with less reliance than in Korea on inflation as a means of transferring resources from lenders to borrowers. However, Japan's industrial policy

of the 1950s and 1960s was nearly as aggressive as Korea's, despite the higher level of savings. The reason is at least partly that much less of the Japanese economy has been directly exposed to the international market than Taiwan's or Korea's, on account of its much larger overall size. With a more closed economy, the potential for aggressive market-modulating policies is greater than in a more exposed economy, where the power of international market forces is greater.

Conclusion

Taiwan, Japan, and Korea have financial systems far from the liberal type: with tight controls over interest rates, limited choice of financial instruments, limited fungibility, controlled foreign financial transactions, and a good guidance agency. If their financial systems did not have such features, the governments would have had difficulty in controlling money supply and the cost of capital (difficulty in softening the influence of foreign market fluctuations and foreign lenders); difficulty preventing growth-disrupting financial instability; and difficulty in following a strategy of selective development of key sectors designed to shift resources into industries higher up the product cycle. The fact that savers in Taiwan, Japan, and Korea have had few options other than to put their savings into a bank, and that the banks have limited autonomy and are few in number (though with many branches), means that the financial system *can*, potentially, be used in a subtle way to help effect a national industrial policy. The fact of high debt/equity ratios propels extensive government control over the financial system, which means that market signals *must* be supplemented by government signals as to which sectors are to receive priority lending. And the fact of high debt/equity ratios means that private business decision-makers are extremely sensitive to credit policy, which becomes a much more effective tool for steering resources into and out of sectors than in more liberal financial systems. By the same token, it also means that the government can build supportive social coalitions by using monetary controls, which facilitates implementation of industrial policy.

So there do seem to be some advantages to financial "rigidity" which mainstream economics largely ignores.³⁶ The fact that Taiwan and South Korea have a better development record since 1960 than, say, Thailand or Malaysia, both of which have had more liberal financial systems, is consistent with the argument.

However it is also true that compared to many other capitalist developing countries, the financial systems of East Asia have been *more* market-conforming, less market-displacing, in important respects. This is true of the comparison with Turkey over much of the post-war period, and (more ambiguously) of the Philippines, India, and several Latin American countries as well. As one indication, a sizable part of total concessional credit has been channelled to *exporters* against evidence of export orders in hand. So

almost by definition, this part of concessional credit has gone to industries that are internationally competitive rather than to industries that without aid could not compete. This has helped to avoid one of the dangers of concessional credit, that it diverts resources into projects that are not viable in the long run. On the other hand, it is also true that another sizable part of concessional credit has been used for the major import-substituting projects of the 1970s in Taiwan and Korea (petrochemicals, steel, shipbuilding, nuclear power, heavy machinery, etc.), even though profitability and competitiveness were less certain. But concessional lending was only one element in a complex strategy for making these new industries eventually internationally competitive without subsidies. As a second indication, the administered cost of financial capital in the East Asian systems has been kept *closer* to the international price of capital than in many other developing countries, even the concessional part of it. (It is important to remember that the cost of Korea's "policy" loans was not in fact as low as the notoriously low rates suggest, because of requirements for collateral, compensating balances, and advanced interest payments.) Yet the East Asian cases also show that domestic costs of credit in line with international costs cannot be used as a straightforward indicator of a "liberal" financial system. For high bank interest rates have the effect of attracting financial savings into the banking system—where in East Asia they are then able to be controlled by government.

In terms of mainstream economics, it is paradoxical that the East Asian financial systems have *both* more control and more market-determination than those of many other countries. The reason why the financial controls do not produce the disasters that mainstream economics predicts is that the public-sector-in-general is more effective in these countries than in many others: more effective in promoting a competitively-oriented will to produce. So my argument does not conclude that most other developing countries should attempt to institute the same pattern of financial controls as in East Asia. The same controls in many other countries, with less effective public sectors, could be confidently expected to have the adverse consequences that mainstream economics predicts, with no noticeable beneficial ones. It is perhaps tempting to say that Taiwan, Korea, and Japan are special cases, to be treated separately from all the rest. But the European middlecomers—Germany, France, Russia—had financial systems not entirely different from those of the East Asian three. And in any case, if the conceptual apparatus of economics can only handle the financial systems of the most successful cases of late development in an apologetic way, this is a very curious state of affairs. Somehow the discipline has to come to grips with the essentially political conditions which (together with some more obvious human capital conditions) have allowed the potential benefits of a controlled financial system to be realized in some cases, but would be less facilitating in many others. In the meantime, a certain caution

about the *universal* desirability of financial liberalization for developing countries is in order.³⁷ The East Asian experience suggests that illiberal financial systems *can* work well, and the theory needs to be modified to show how this is possible.

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1. For example, Erik Lundberg, "Fiscal and Monetary Policies," in W. Galenson, ed., *Economic Growth and Structural Change in Taiwan: The Postwar Experience of the Republic of China* (Ithaca, NY: Cornell University Press, 1979); Anton Galli, *Taiwan: Economic Facts and Trends* (Munich: Ifo Institut für Wirtschaftsforschung, Weltforum Verlag, 1980); S. C. Tsiang, "Monetary Policy of Taiwan," in K. T. Li and T. S. Yu, eds., *Experiences and Lessons of Economic Development in Taiwan: Conference Proceedings* (Taipei: Institute of Economics, Academia Sinica, 1982); S. C. Tsiang, "Exchange Rate, Interest Rate, and Economic Development: The Experience of Taiwan," in L. Klein, M. Nerlove, and S. Tsiang, eds., *Quantitative Economics and Development* (New York, NY: Academic Press, 1980).
2. Lundberg, *Ibid.*, p. 280 [emphasis added].
3. Tibor Scitovsky, "Economic Development in Taiwan and South Korea," *Food Research Institute Studies*, 19(3) (1985): 242.
4. A. K. Sen, "Development—Which Way?" *Economic Journal*, 93 (December 1983): 749. In terms of gross capital formation to gross national expenditure, Japan reached 30 percent in the late 1950s, when Taiwan's figure was about 16 percent; by the mid 1970s, Taiwan's had reached 30 percent, some 15 years later.
5. Chen Sun and Ming-yih Liang, "Savings in Taiwan, 1953–1980," in Li and Yu, eds., *Experiences and Lessons of Economic Development in Taiwan*, op. cit., p. 404.
6. Sun and Liang, op. cit.; Scitovsky, op. cit.
7. International comparisons of government savings suffer from differences in definition as to what is included and what excluded. In South Korea most public enterprises are included, but some are excluded for no obvious reason, their savings being put with corporate sector savings. I do not know whether there are similar problems for Taiwan.
8. Chow, in Lundberg, op. cit., p. 304.
9. Scitovsky, op. cit., p. 243.
10. Tsiang (1980, 1982), op. cit.; Lundberg, op. cit.
11. The real cost of a bank loan in Taiwan in the mid-1960s was 12-13 percent, the nominal cost around 14-15 percent. The nominal cost in Japan was then around 6 percent, in the U.S. around 5 percent. In Korea, the nominal rate was about 26 percent, the real cost of "ordinary" loans was 17 percent, while the real cost of "policy" loans was very low or even negative (such loans accounted for about half of total official loans). The cost of export loans, one type of policy loan, was minus 2 percent. Korea Exchange Bank, *Monthly Review*, various issues, for Korea. But see the discussion below on the difficulties of inferring costs from rates.
12. Sun and Liang, op. cit., p. 412; Scitovsky, op. cit., p. 246.
13. C. Liang and M. Skully, "Financial Institutions and Markets in Taiwan," in M. Skully, ed., *Financial Markets and Institutions in the Far East: A Study of China, Hong-Kong, Japan, South Korea and Taiwan*, (London: Macmillans), p. 174.
14. *Ibid.*, p. 189.
15. Scitovsky, op. cit., Chart 1.
16. World Bank, *Korea's Development in a Global Context* (Washington, D.C., June 1984), p. 238, n. 8.

17. Liang and Skully, op. cit., p. 188. But cf. Paul Chiu, "Performance of Financial Institutions in Taiwan," in Li and Yu, eds., *Experiences and Lessons*, op. cit., p. 431, who talks of the "high equity position" of Taiwan's private manufacturing enterprises, referring to a debt/equity ratio over the 1970s of, by his calculations, 160-165. He has in mind the comparison with Japan, where he takes the ratio to be of the order of 400. Chalmers Johnson, *MITI and the Japanese Miracle* (Stanford, CA: Stanford University Press, 1982), p. 203, suggests a much lower figure for Japan. International comparisons of debt/equity ratios are plagued by differences in adjustment of asset values for inflation. The figures given in the text are *not* inflation-adjusted (except for the modified Korean figure). Bankers in Taiwan tend to take a debt/equity ratio of two-to-one as a rule of thumb. The macro numbers are roughly in line with the official figures of between 160 and 180 percent. If one takes industrial corporate assets as equal to 100-110 percent of GNP, as is common in middle-income countries, M_2 as equal to 67 percent of GNP (Table 2), and M_2 as roughly equal corporate debt, this leaves 33-43 percent of GNP for equity. So a debt/equity ratio of 160 to 180 percent is not surprising, considering that part of M_2 is not allocated to the corporate sector. The same calculation for Korea would have to include its high foreign debt in relation to GDP, offsetting low M_2 /GDP).

18. J.D. Shea, "Financial Dualism and Industrial Development in Taiwan," conference on Industrial Development in Taiwan, Institute of Economics, Academia Sinica, March 1983 (Chinese only), p. 5; S. Ho, "Small-Scale Enterprises in Korea and Taiwan," World Bank Staff Working Paper No. 384, April 1980, Washington, D.C.; Chung Hua Institution for Economic Research; H. Sandeman, "An Island on Its Own," *The Economist*, July 31, 1982.

19. Lundberg, op. cit., p. 292, *Taiwan Statistical Data Book 1982*. In 1981 the curb market rate was about 35 percent per year, the bank rate on secured loans was about 15 percent. Curb market borrowings are not included in debt/equity figures; if they were, the real debt/equity ratio would be increased.

20. The curb market estimates for Korea come from Scitovsky, op. cit., p. 253, who gives the high figure, and from the "miscellaneous" column of loan uses in Korea Exchange Bank, *Monthly Review*, 16(7) (July 1982) from which one can calculate a *maximum* share of curb market loans as 17% in 1979, 23% in 1980, and 8% in 1981. A more sophisticated calculation in *The Banker* (Korean only), October 1982, p. 8, suggests a share for the curb market in 1980 of only 6%. My thanks to David Darton for help with these figures. The best discussion in English is in D. Cole and Y.C. Park, *Financial Development in Korea 1945-1978* (Cambridge, MA: Harvard University Press, 1983), Chap. 4.

21. Andreas Prindl, *Japanese Finance: A Guide to Banking in Japan* (New York, NY: John Wiley and Sons, 1981).

22. Liang and Skully, op. cit. The biggest of the four private banks was privatized in the wake of UN derecognition (1971), to enable Taiwan to have overseas branches of a domestic bank without running into the diplomatic problems posed by a "government" bank of a non-recognized country. China Airways is nominally private for the same reason.

23. *Ibid.*, p. 178.

24. Over-invoicing is a favorite way of evading exchange controls. A local buyer may pay a foreign firm US\$1 per unit, but on the invoice the price appears as \$1.04. The local buyer pays the foreign firm \$1.04, the foreign firm then deposits the difference in a bank account of the buyer's choice, generally in the U.S. or Canada, sometimes in Hong Kong. The amount of over-invoicing is often a matter of hard bargaining between local buyer and foreign firm. Foreign businessmen like to point out that some of the most outspokenly patriotic and moralistic public figures in Taiwan are themselves busy salting money away in overseas banks by such methods. Foreign firms operating in Taiwan themselves often over-invoice to a nominal head office in Hong Kong, which in reality may be little more than a post-office box number. The Customs Administration collects extraordinarily detailed information on overseas prices, partly so as to check over-invoicing.

25. Roy Hoftciz and Kent Calder, *The Eastasian Edge* (New York, NY: Basic Books, 1982), p. 129.
26. *China Post*, August 27, 1983.
27. On Korean financial controls see, for example, R. Luedde-Neurath, "State Intervention and Export-Oriented Development in South Korea," in G. White and R. Wade, eds., *Developmental States in East Asia*, mimeo, Institute of Development Studies, University of Sussex, 1985. The quote about Japan's banking system is from T. Pempel, "Japanese Foreign Economic Policy: The Domestic Bases for International Behavior," in P. Katzenstein, ed., *Between Power and Plenty: Foreign Economic Policies of Advanced Industrial States* (Madison, WI: University of Wisconsin Press, 1978), p. 152. See also Philip Wellons, "Competitiveness in the World Economy: The Role of the U.S. Financial System," in B. Scott and G. Lodge, eds., *U.S. Competitiveness in the World Economy* (Boston, MA: Harvard Business School Press, 1985).
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