10 The slowdown

The inevitable reversal in the trend rate of growth

During the early 1970s the golden age of convergence ended. While the empirical symptoms of this watershed are manifold the story is most strikingly expressed in terms of growth rates for the Western European countries and Japan. Between 1950 and 1973 the average growth rate in income per capita for twelve Western European countries – those listed in Panel A of Table 7.1 – was 3.8 percent; for Japan the corresponding growth rate was 8.0 percent. Over the next two decades, 1973–92, the average growth rate in income per capita was 1.8 percent; for Japan, 3.0 percent.

Japan continued to grow faster than the Western European countries during 1973–92. Still, its growth was truly within the Western European range. According to convergence theory countries with the lowest initial levels of per capita income should grow faster than those enjoying higher per person incomes. The three Western European countries with per capita incomes in 1973 close to Japan's level are Finland, Italy and Norway. Both Italy and Norway experienced per capita income growth as close to, or closer to Japan's, than to the average for the twelve countries. Indeed Norway's growth rate – 2.9 percent- was nearly as high as Japan's growth rate. Convergence theory suggests one important reason why the slowdown occurred: as the converging countries approached the levels of the leading country, the United States, in terms of capital/labor ratios, levels of technology and organization, economic structure and scale economies, their growth slowed.

Let us consider each element of this account in a bit more detail, focusing upon Japan's case. From Table A.1 we can see that the Japanese capital/output ratio grew rapidly during miracle growth, reaching American levels by the late 1970s. Indeed after the early 1980s the Japanese ratio soared to dizzying heights far above that of the United States. As more and more capital is accumulated and the marginal productivity of capital falls, the incremental contribution to output flowing from more private and public capital – from more factories, more robots, more trucks and high speed trains, more roads and airports, more hydroelectric lines – declines. The rate of return that investors in companies – banks, owners of stocks and bonds – can reasonably anticipate garnering from the savings they plough into savings account and into equities, drops. This is an inexorable

consequence of accumulation. The Swann-Solow model neatly captures this argument. In Figure 1.5 A of Chapter 1 the point is illustrated graphically with the flattening off of the labor productivity curve with rising levels of per worker capital. Indeed it is plausible that Japanese capital accumulation had become excessive by the mid-1980s. While the ratio of investment to national income did drop after the early 1970s – after all the relatively high rate of return on new capital acquisition was a major rationale for high rates of investment during miracle growth so that a falloff in the rate of return should temper investment – it remained high by the standards of the Western European countries and the United States. Japan was steadfastly falling victim to its spectacularly high savings rate.

The second source of slowdown was the exhausting of technological catch-up potential. According to Panel B.2 of Table 8.1, advances in knowledge constituted a major source of growth in miracle growth Japan. As Japanese firms within particular industries closed the gap between themselves and the international leaders in that industry – whether the leader is located the United States, Germany, the United Kingdom, or Sweden – the gains to total factor productivity from ferreting out best practice technique and imitating it dry up. Again this point can be illustrated with the Swann-Solow model. The pace of the upward drift in the labor productivity/capital–labor curve slows down for a nation as its firms switch from being followers to being leaders, developing the technologies of the future within their research laboratories.

Two other sources of the slowdown can be gleaned from the Denison and Chung estimates appearing in Table 8.1. Gains from improved resource allocation were drained away during miracle growth as most of the farming population abandoned agricultural pursuits to take up jobs in the burgeoning industrial and service sectors. By the early 1970s the proportion of the population making a living primarily from agricultural pursuits had fallen to such low levels that further gains from structural change were all but completely exhausted. As the proportion of the self-employed labor force dwindled, less and less gain could be expected from shifts into salaried occupations. As the economy grew to gargantuan size, less and less could be expected from scale economies. Generating growth from improvements in output per unit of input was being steadily eroded as Japan converged toward American levels.

By the same token, improvements in the quality of factor inputs illustrated in Panel B.1 of Table 8.1 were also vanishing. As more and more individuals went on to tertiary schooling – to two-year junior college or four-year university – the returns to schooling dropped, discouraging the marginal applicants to higher education, those lacking the drive to excel in the examination competition, from attempting to gain advanced educations. The rate of growth of the advancement rate to high school and tertiary schooling declined. As for the capital stock it is true that high rates of accumulation kept the average vintage of the stock young, hence more likely to be compatible with the latest technologies. Working against this advantage was the fact that the pace of technological progress was slowing down. In short less and less was to be expected in terms of growth potential from improvements in the quality of capital and labor.

While the slowdown in Western Europe and Japan can be readily analyzed in terms of the Swann-Solow model and the Denison and Chung growth accounting decompositions, it would be misleading to limit our account of the slowdown to the within nation factors pinpointed by those frameworks. After the early 1970s the international economic order began to change in fundamental ways: the Bretton Woods system collapsed; oil prices began to skyrocket; finally the United States, reeling from deficits in its international trade account (imports exceeding imports) began to draw away from the leadership role in promoting tariff reduction and a relatively free and open trade regime through multilateral institutions like the General Agreement on Tariffs and Trade (later becoming the World Trade Organization) it had embraced during the golden age of convergence, moving gradually toward a regime of strategically linking limited protectionism and market opening demands through bilateral as opposed to multilateral negotiation. All of these changes impacted Japan.

The United States, like England before it, was unable to remain the linchpin of the international monetary system as more and more countries caught up with it. By the late 1960s European countries became increasingly restive with a United States dollar based gold standard, refusing to absorb dollars at fixed exchange rates, refusing to buy into the upward drift in American inflation rates attributable in part to the way the Vietnam War was being financed. In 1971, President Richard Nixon bowed to the inevitable, severing the connection between the United States and gold, precipitating devaluation of the dollar. Shortly thereafter, Japan abandoned the Dodge Line, allowing the yen to adjust up somewhat relative to the United States dollar (see Panel B of Table A.4). In theory appreciation of the yen relative to the dollar made Japanese exports to its major markets – especially to the United States – more expensive, hence less attractive to foreign purchasers.

The second shock to the international economic order came from the expansion of demand for petroleum worldwide, from countries converging towards American levels of income per capita in Western Europe, from the nations of Latin America and Eastern Europe that grew rapidly in terms of total income but did not necessarily converge toward American per capita income levels, and of course from Japan itself. Taking advantage of this upward thrust in demand, petroleum exporters – having formed a cartel, the Organization of Petroleum Exporting Countries, well aware of the fact that their reserves would be gradually but inexorably depleted in the future – engaged in strategic management of sales of crude in order to extract higher prices for their precious resource. Since the price of oil affects the price of most goods and services – oil being used as grease for machines, as fuel for trucks used to transport commodities – the oil shocks of the early 1973–74 period set off inflationary tendencies throughout the industrial world, worsening the trade balances in those countries importing more oil than they exported. From Panel A of Table A.4 it is apparent that Japan was no exception. The consumer price index jumped by an annual rate of 11.5 percent during 1971–75.

The reluctance of the administration in the United States to allow the American economy to absorb more goods from abroad than it exported indefinitely took five main forms during the post-1970 period: encouraging devaluation of the

dollar relative to other key currencies (Germany's and Japan's in particular); imposing sanctions on countries accused of dumping goods in the American market; negotiating industry specific voluntary export restraints with countries exporting to the United States; putting pressure on countries like Japan that enjoyed massive bilateral trade surpluses with the United States to open up their markets to American goods and to American investment; and promoting an enrichment of the menu of goods tradable on international markets through the twin avenues of multilateral and bilateral negotiations, promoting globalization of services like banking, computer software, and most recently e-commerce.

A dramatic reworking of the aggregate economic balance

Beginning with the early 1970s Japan's aggregate economic balance underwent a decisive structure shift. Private investment rates fell short of private savings rates; the government began to run deficits on its fiscal account, expending in excess of the revenue it took in through taxation, tariffs and user fees; and the economy began to run surpluses on its trade account, exporting more than it imported. Table A.6 in the Appendix illustrates a number of these points.

That investment fell short of savings was due to two factors: a decline in the expected return on capital that depressed somewhat business enthusiasm for acquiring new plant and equipment; and a steady falloff in the proportion of aggregate demand stemming from consumption (see the figures in Table A.6). Much – but not all – of the gap between savings and investment was now accounted for by government negative saving, the government's fiscal balance shifting into the red as the Dodge Line of balanced budgets was effectively jettisoned. Why did government begin running unbalanced budgets, financing its deficits with bonds? As Lincoln (1988) convincingly demonstrates the reason does not lie in an expansion of government spending, for instance on a "cradle-to-grave" style welfare state erected along Scandinavian lines. Rather it lies in the fact that tax intake growth began to lag behind relatively modest expenditure increase (by European standards welfare related spending in Japan remain muted throughout the 1970s). During miracle growth, government had consistently underestimated income growth rates. After the early 1970s it began to consistently overestimate income growth rates, the Ministry of Finance bureaucracy being used to piling up revenue increases year after year.

As Table A.6 shows, government spending jumped significantly from the low and declining levels experienced during the miracle growth decade 1976–85. Then it began to decline somewhat. Why? Alarmed by the growth of government deficits, by a rise in the proportion of government expenditure in total national income, and especially by concerns that welfare state programs were growing rapidly and were projected to explode as the population aged, the business community represented by Keidanren lobbied through the Liberal Democratic Party to establish a Commission for Administrative Reform, *rinchō* in Japanese. Working with an agenda that administrative reform should be achieved without further increasing taxes, the commission issued a series of reports over 1981–83.

Its recommendations included cutting the number of government employees, reining in social security benefits, cutting public works investments, and privatizing three government corporations including Japan National Railways and Nippon Telegraph and Telephone. By the mid-1980s most of these recommendations had actually been implemented.

What was the ideological and analytical basis for the *rinchō* administrative reform movement, for the energy and resources Keidanren put into pushing the reform agenda? The self interest of the business community was obvious. Japanese corporate taxes were and are relatively high in comparison to personal income taxes.This is because personal income taxes enjoy generous deductions from income earned, depressing the marginal income tax rates that households are obligated to use in paying their household taxes. The business community was naturally concerned that future tax increases might come at its expense, raising the costs of producing output, making Japanese products more expensive on international markets. Setting this concern aside there was strong opposition to governmental expansion of the welfare state on ideological grounds. This was long standing. Throughout the period since Japan's industrialization commenced most of its business community opposing government meddling with the paternalistic arrangements arrived at by employers and employers in the welfare field. Vocal corporate objection to passage of the Factory Law of 1911 was rooted in this logic. According to the logic of this theory Japanese style welfare is best left to firms to implement, not placed in the hands of government that is too bureaucratic, too rule driven, too willing to overlook realities on the ground.

A second line of concern motivating Keidanren to act was new, not old. It arose from problems encountered in Western Europe and North America with welfare state policies. We can understand these problems in terms of the efficiency wage and aggregate demand/supply frameworks introduced in Chapter 1 (we can follow the logic of the argument using Figures 1.3 and 1.4 E in the Appendix to Chapter 1). Suppose a combination of government unemployment insurance and welfare program supports generates a standard of living floor higher than that than an individual can expect to generate from employment in a small or medium sized company (but not in a well paying large enterprise). In the diagram illustrating the efficiency wage principle (Figure 1.3) the government's support level "wage" – call it $\mathbf{w_g}$ – is less than the efficiency wage $\mathbf{w_e}$ but greater than the market wage $\mathbf{w_m}$. If this is the case the incentives are clear. Individuals not successful in the queue for a well paying efficiency wage are likely to opt for the government's support level wage over the small and medium sized firm wage $\mathbf{w_m}$. Unemployment grows at the expense of employment in small and medium sized firms, shifting in the natural rate level of national income (in Figure 1.4 E $\mathbf{Y_f}$ shifts in, "full employment" actually now means most but not all members of the labor force are actually working). The work ethic is eroded. Taxes have to be raised to pay for the programs. Big firms – those dominating Keidanren – may lose subcontractors as small firms encounter increasing difficulty recruiting workers.

In short, ideological concerns rooted in attitudes of business leaders going back to Meiji if not before were wedded to a general sense of unease with Keynesian

deficit spending cum the welfare state in the Keidanren inspired *rinchō* campaign. How sweeping was the victory of the *rinchō* movement? In terms of its stated goals dimensions the answer is clear. It was a resounding success. But the goals were formulated with political constraints in mind. The electoral base of the Liberal Democratic Party being eroded by structural change – the shift out of agriculture, rapid urbanization – was a hard cold reality that the administrative reform movement had to take into account. Do not cut into the pork barrel projects – the infrastructure construction outlays – dear to the hearts of rural voters. Do not so tie the hands of the Ministry of Welfare that it cannot implement some welfare initiatives like a national pension program, especially when newspapers and television are focusing with growing enthusiasm on the rapid aging of the population, handing over to the opposition to the Liberal Democratic Party a set of issues that they can exploit in elections.

Returning to the aggregate economic balance, government deficits absorbed most of the savings not channeled into domestic investment but not all of the excess. Some of the margin of savings over domestic uses of savings became capital export, flowing out of Japan into foreign lands. Japan gradually emerged as the world's major creditor country, Tokyo joining London and New York as one of the key financial centers.

Unlike American investment abroad that tended to take the form of foreign direct investment, the Japanese outflow of capital mainly involved purchasing foreign securities, government bonds and the like, especially in the United States, the United Kingdom and on the European continent. To be sure Japanese companies began to set up subsidiaries. In countries like the United States companies set up plants in order to get around voluntary export restraints or domestic content regulations or to take advantage of free trade agreements like the North America Free Trade Agreement. In Southeast Asia and later on in China, Japanese companies in labor-intensive industries like textiles began setting up production facilities with the aim of cutting labor costs. As the yen appreciated on international markets, Japanese wages rose relative to wages in the less industrial regions of Asia.

Why was the flow of capital coming out of Japan heavily focused on purchase of securities rather than on foreign direct investment? The most obvious candidate is the rate of return on securities earned at home and abroad. If American securities earn nominal returns of 10 percent (because savings rates are low in the United States) and Japanese securities 3 percent (because savings rates are high) the incentives seem clear. But are they? As we know from Panel B of Table A.4 the yen appreciated against the dollar through most of the 1970s. When the dollar falls relative to the yen – say by 5 percent in a given year – the return on an American dollar dominated asset earned by a Japanese investor falls by that rate. If American securities earn 7 percent in nominal terms and Japanese securities 3 percent and the rate of yen appreciation over the relevant period for the investment is 5 percent, a Japanese investor is better off sticking to Japanese securities.

To be sure, investors operate on expectations, not known outcomes. Perhaps Japanese investors allowed access to foreign markets – insurance companies, exporting corporations, banks, and finance specialists – were simply trying to hedge against movements in the yen up or down (note that the yen did fall against the dollar over the period 1981–85). By keeping their assets in two denominations, calibrated in terms of the crucial dollar (the dollar remaining the key international currency despite the abandonment of the Bretton Woods system) and the yen, investors could protect themselves to some extent against appreciations or depreciations of the yen. Diversifying into European currency denominated assets was a further step along the road to reducing risk by diversifying financial portfolios.

An additional possibility is that Japanese companies did not believe that their system of production was easily exported to foreign lands. True, managers could go to the United States, to England, to Thailand, to the Philippines, to China to supervise workers who were mostly non-Japanese. But could these workers be motivated to work the way Japanese in Japan were motivated to work? Could the production system function smoothly in the absence of the domestic bureaucratic hand of administrative guidance providing arenas for cooperation between competing companies within the manufacturing sector? An alternative theory is that Japanese investors distrusted their own financial system, feeling that the banks were inefficient, or alternatively that administrative guidance in the financial field was woefully misguided, promoting moral hazard through a coordinating/facilitating model in which regulated and regulators mutually interacted, banks encouraging the Ministry of Finance to regulate in a way that appeared to shore up their activities.

From an aggregate economic balance point of view, capital export is the inverse – the negative – of the trade balance. As can be seen from Table A.6, Japan began to consistently run a trade surplus after the late 1960s. In principle, the surplus of savings over the combined sum of government deficit and domestic investment equals the trade balance. The national income not absorbed in the sum of consumption, investment and net government savings (negative when the government runs a deficit on its fiscal account) takes the form of net exports. In this sense Japan emerged as the mirror opposite of the United States during the period 1970–90. True, both countries were running negative balances on their government fiscal accounts. But Japan exported capital, its investment falling short of its savings; the United States imported capital, its investment exceeding its savings. Substantial shares of Japan's trade surplus flowed into the American capital market, snapping up a hefty share of the bonds being issued by the American government to fund its budget deficit, in effect making up for the low level of American savings, staving off the tendency for American government deficits to choke off domestic American investment demand through the crowding out effect (see Figure 1.4 C in Chapter 1). Growing capital market integration increasingly caused the destinies of the two great economic giants to intertwine, forcing their political leaders to find common ground in attempting to manage their economies, keeping the two locomotives of economic expansion running on a common timetable as it were.

Japan's emergence as a net exporter in no way means that export demand was driving its economic growth after the miracle growth. Appearing in Panel B of

Table A.6 are percentage contributions to aggregate demand expansion over successive five-year periods. Over the period 1971–95, net export demand tended to depress growth in gross domestic expenditure, not increase it (1981–85 is the sole exception to this rule). There are negative signs for most terms under the ΔNX column from around 1971/75 until 1991/95. That net exports did not play an important role – either during or after miracle growth – is actually not surprising. In order to export goods, Japanese firms must import raw materials and energy – natural gas, petroleum, and coal – from abroad. Net exports are not a large share of the post-1955 Japanese economy whether they are positive or negative. They cannot be a major shaper of Japan's aggregate demand growth. That said, export demand was very important to Japan's big ten internationally known "name brand" companies, companies like Sony, Toyota, Nissan, Honda, Mitsubishi, Toshiba, all monopolistic competitors. Sales of these particular companies depended heavily upon courting foreign consumers. It is crucial to differentiate between the aggregate situation and individual firm circumstances in regard to exports. Had the big ten companies been unable to export as they did, Japan's aggregate trade balance would have been modestly negative, not modestly positive.

Aging in a changing labor market

When a country's population passes through the demographic transition it becomes older and older. This is an inevitable consequence in a population closed to immigration of shifting from low life expectancy to high life expectancy; from a high gross reproduction rate to a low gross reproduction rate (cf. Panel B of Table A.2). It is a theorem of formal demography that the fall in fertility overshadows the rise in life expectancy in accounting for this tendency. That Japan's gross reproduction rate fell below a value of one during the 1970s meant that aging would be relatively rapid.

That Japan's population was almost completely closed to net immigration is apparent from a comparison of Japan's population growth rate with its natural rate of increase, the two rates shown in Panel A of Table A.2. That the population was relatively young during the miracle growth years and has been aging rapidly since is clear from the figures given in Panel B of Table A.5. A population aging as Japan has been after the 1970s confronts two major economic challenges: at the social, public, level how to support its elderly in retirement; at the corporate level how to cope with a labor force in which the ratio of older, veteran, workers to younger fresh entrant workers is increasing. Not surprisingly given the opposition of the administrative reform movement to the growth of Japan's welfare state and given the preference of the government for facilitating/coordinating approaches, responses by government – the public authority – and the private sector were actually deeply intertwined.

Perhaps the most pressing issue posed by rapid aging of the population was how to handle mandatory retirement in the corporate sector. During the 1950s and early 1960s mandatory retirement was typically set at age 55, a policy introduced

for white-collar workers during the interwar period. During the 1920s life expectancy at birth for males was around 55 so the policy made sense for both companies and employees. As life expectancies soared during the 1950s and 1960s it made less sense for workers. Most of them moved to another company – typically to a small or less prestigious enterprise – upon retirement.

From the corporate viewpoint relatively early mandatory retirement made sense. Under *nenkō* rules wages tended to rise with age and seniority. Promotions tended to be automatic. Younger workers tended to contribute more to a firm's bottom line than they took out in wages; older workers tended to cost more than they contributed. By the late 1960s – as miracle growth was winding down and many large firms were experiencing slower and slower growth in their internal labor markets – alarm bells started going off. Declining sectors like iron and steel and shipbuilding were becoming so concerned about the problem that they diversified into wildly different fields like amusement park management, hiving off redundant older workers into these new ventures. Something needed to be done to dampen the headlong increase in wage bills. Hiking mandatory retirement ages would only make matters worse.

From the government's viewpoint not raising mandatory retirement ages posed equally intractable problems. Was the treasury going to be raided and depleted by government funded pension programs that a Liberal Democratic Party concerned about its slipping voter base might be constrained to legislate? Not surprisingly government ministries were pressuring corporations to increase mandatory retirement ages, threatening to promote legislation designed to do precisely that if the companies did not respond "voluntarily". Begging off the immediate introduction of mandatory legislation, the Nikkeiren and Keidanren business federations agreed to implement hikes to mandatory retirement ages as part of a set of reforms designed to restructure internal labor markets. Through a set of protracted negotiations between the Nikkeiren business federation and the union centers, mainly taking place under the *shuntō* umbrella, tradeoffs were worked out. Firms agreed to increase mandatory retirement ages to age 60. In exchange unions agreed to be flexible. They agreed to moderate "base-up" wage increases so that exporting companies could continue to export successfully even as the yen appreciated. They agreed to make the export oriented automobile sector the "top-batter" in wage negotiations. Most important they agreed to let management modify the *nenkō* rules, and they agreed to let management experiment with forced transfers of workers to other companies, especially to sub-contractors.

Under the negotiated agreements, companies began vigorously promoting a functional status system (*shokunō shikaku seidō* in Japanese) as a replacement. Under this system workers are paid according to

1 family and individual needs;
2 age, education and seniority;
3 performance rating determined by the company's personnel office;
4 status (*shikaku*), the rank – like corporal or sergeant in a military organization – attaching to a worker regardless of his or her work assignment; and
5 occupation.

Items (1) – (3) were found in the classical *nenkō* system. The crux of the innovation involved bringing in items (4) and (5), making specific occupational assignments and status key to worker evaluation.

Under the revised system, a freshly inducted "standard worker" enters an internal labor market from the educational sector, experiencing automatic promotions for a number of years. However after a specified number of years, the employee reaches a "break point." To move up further in status the employee enters into competition for promotion, contending with his or her colleagues for further advancement. The personnel department of the company limits the number of slots available at the higher grade in order to slow wage growth attached to promoting junior workers, in order to select the most hard working and productive for fast tracking, sending a signal to the unsuccessful that they are likely to advance fairly slowly in the future. A battery of tests – reminiscent of those used in the educational system – a host of interviews with personnel office representatives, and a comprehensive review of performance to date, served to winnow out the more productive from the less productive, to separate out the wheat from the chaff so to speak.

To further weed out deadwood older employers, the business federations pushed the idea of forced transfers of selected workers in their negotiations with the union centers. Under a typical transfer program (*shukkō* in Japanese), there are two main options. In the more favorable (from the worker's point of view) of the two options, a standard worker's personnel file is kept in the firm that he or she entered upon graduation from an educational institution (his or her home enterprise). If he or she is transferred to a firm paying lower wages than he or she would naturally receive in the home enterprise, the firm sending out the worker agrees to pay the transferred worker the difference between the two wages. However, the home company makes it clear all future promotions are out of the question so that difference between the two wages does not grow appreciably in the future. In the less advantageous form of transfer (again looking at the matter from the worker's point of view), the personnel file of the employee moves together with him or her to the new company. The likely outcome of this transfer is a fall in earnings.

That these innovations staved off wage growth with age, flattening the age–wage profile, is apparent from Panels B.1 and B.2 in Table 8.4. The movement to bring retirement ages more in line with life expectancies than they had been in the past rendered the typical internal labor market a harsher, more competitive, more dog-eat-dog environment. Is it surprising that young Japanese became increasingly cynical about the virtues of the so-called "three jewels" of the labor market contract?

While the governmental sector solved some of its problems by working with the tools of administrative guidance in a facilitating/coordinating manner, brandishing the cudgel of mandatory legislation as a last resort, to encourage companies to raise mandatory ages, it still had to deal with the growing number of workers and their dependents reaching age 60. As the media beat the drums of the aging problem, the Liberal Democratic Party felt compelled to act, the progressive parties to the left emboldened by the growing attention being given to the aging problem. Adding to the drive to introduce and manage a national government sponsored pension program was the logic of bureaucratic "catch-up",

rationally shopping among foreign models developed elsewhere. Japanese ministries – especially in the welfare and labor fields – look abroad for models. In welfare, this meant looking to Western Europe in particular. The Western European countries were gradually experimenting with the Third Way, a comprehensive set of welfare programs providing their publics with a "cradle-to-grave" safety net, jacking up income taxes in order to pay for the redistribution programs. By comparison, the United States was far less innovative, far more committed to equality of opportunity but not equality of outcome.

Drawing upon a wide ranging menu of foreign models, working under the umbrella of the National Pension Law of 1959 (passed by the Diet at a time when the Japanese population was relatively youthful) the Ministry of Welfare began overseeing two major programs, the Employee Pension System for employees working in enterprises ranging from the smallest to the largest companies (under the opportunities mandated by the system benefits for employees in larger firms generally exceeded those for employees in smaller firms) and the National Pension System for farmers, shopkeepers, and some self-employed. Under the rules set out under the two systems some of the self-employed were covered under the Employee Pension System that tended to be more generous than the National Pension System.

As Campbell (1992) shows, the resources handled under the two programs grew appreciably throughout the 1970s and early 1980s. Their growth was reined in to an extent in the mid-1980s when concerns over future drains on the fiscal resources of the government – concerns highlighted by the administrative reform movement – increasingly shaped debate over policy making. An example of how these concerns impacted policy is the pension reform of 1985 that was designed to rein in the growth of government outlays directed toward pensions for the retired and elderly. Still, despite its image as a country lacking vigorous government sponsored welfare programs Japan had actually become a welfare state, albeit not one embracing the "cradle-to-grave" model of Western Europe, by the 1970s. The myth about welfare in Japan is that family and company matter more in Japan than government. It is a myth.Through the last half of the twentieth century Japan has managed the transition from a relatively young to a relatively old population. Adjustments have been required. Welfare programs have drained away fiscal resources that once were used for infrastructure or for subsidizing export oriented companies. Corporations have revamped their internal labor markets. Savings rates have fallen.

But what does the future portend? Like most of Western Europe predictions suggest that by 2030 the proportion of Japan's population over age 65 will exceed 25 percent. Aging is an inexorable consequence of low gross reproduction rates and high life expectancies. All countries that have passed through the demographic transition will grow older. In this respect Japan's likely demographic future is similar to that of Italy where the proportion over age 65 is projected to exceed 27 percent by 2030. How will the problems of providing pensions and setting retirement ages be handled in such an environment?

One way to stave off – or rather to mitigate a bit – some of the effects of aging on government managed pension programs is to promote immigration, particularly

of young working age adults. Japan has a long history of being relatively closed to immigration. True, during the period when its Empire was growing by leaps and bounds, some immigration did occur. Koreans came into Japan proper after 1910 for instance. But stung by discrimination – in the aftermath of the great Kantō earthquake, Japanese attacked Koreans in Tokyo – their numbers were limited.

Beginning in the late 1980s small and medium sized enterprises facing shortages of recruits for jobs viewed as dirty and onerous by young Japanese brought up in a relatively affluent homes bristling with a growing number of consumer durables lobbied the government for a relaxation of its stringent constraints on immigration. The policy response smacked of *nihonjinron*. It was largely limited to encouraging the immigration of descendants of Japanese emigrants, the *nikkeijin* living in societies with per capita incomes below that of Japan to take up these positions. The biggest target for this program was the *nikkeijin* population living in Brazil. Perhaps it was felt that Brazilian Japanese could be more easily assimilated into Japan than other peoples. Perhaps the logic of the program was rooted in the view that young adults growing up in households where Japanese values and Japanese cultural traditions were practiced could more easily fit into Japan than Taiwanese, Filipinos, and Indonesians. If this was the view it proved to be a myth. As Tsuda (2003) were truly strangers in their ethnic homeland. They spoke Portuguese, they danced the samba, and they rooted for Brazilian soccer teams.

Over its long history since 1600 Japan has been relatively closed. Opening up – economically, demographically, and politically – has been a process fraught with difficulties for a country that existed in a virtual state of autarky between the 1650s and the 1850s. Miracle growth largely took place in closed capital markets. Import and export ratios were relatively low. Entire sectors – banking and insurance, agriculture, wholesaling and retailing – were almost completely insulated from the outside world through the golden age of convergence. But as Japan entered the 1970s, its exports eating up a growing share of the American consumer market, this state of affairs was about to change.

Key terms and concepts in Chapter 10

Capital/output ratio
Devaluation of the U.S. dollar and the collapse of the Bretton Woods system
Aggregate economic balance and the gap between savings and investment
Rinchō
Keidanren
Shokunō shikaku seidō
Shukkō
Third Way
National Pension Law
Brazilian *nikkeijin*

11 The bubble economy

A Japanese system?

During the 1970s and early 1980s the nature of Japan's economic success loomed larger and larger on the international stage. In one sense this simply reflected the fact that Japan's national income had reached gigantic size. Japanese goods showed up everywhere. Even with a low ratio of imports and exports to GDP, the sheer volume of Japanese goods sold abroad, and the sheer volume of Japanese purchases of raw materials – of coal, iron ore, nickel, zinc, petroleum, potash, timber, and rubber – grew by leaps and bounds during miracle growth, reaching massive levels by the early 1970s.

Consider automobiles. New Japanese cars made huge inroads in North American and European markets, in part because they were fuel efficient and small, in part because they embodied quality in their components, their excellent repair records garnering praise in consumer magazines. Used Japanese cars – sold by Japanese drivers wishing to avoid the *shaken* – appeared all over Southeast Asia, even in New Zealand. Taxi cab drivers in Bangkok were churning the streets with Toyotas and Hondas.

There was a second reason why the subject of Japan's economy became a matter of burgeoning interest to Americans and Europeans: trade deficits. In the United States in particular the bilateral trade imbalance between itself and Japan became an increasingly potent political topic. Since the 1960s the American government establishment responsible for trade negotiations (the office of the United States Trade Representative office, Congressional committees appointed to look into trade related matters) tends to focus on that country enjoying the largest bilateral trade surplus with the United States. Spurred on by political demands on the part of industries that felt besieged by imports from Japan – the American iron and steel industry pressed for a trigger-price mechanism designed to drive up prices of imports of Japanese steel on the American market, the American automobile industry lobbied for the negotiation of voluntary export restrictions that would restrict the volume of cars brought in from Japan – Congress appointed a committee of American economists with expertise on Japan to better learn about Japanese exporting companies, to better understand how American companies could make inroads into the Japanese consumer market.

In the case of the United States some of the concern was about global leadership, both technological and economic. In the late 19th century the

of young working age adults. Japan has a long history of being relatively closed to immigration. True, during the period when its Empire was growing by leaps and bounds, some immigration did occur. Koreans came into Japan proper after 1910 for instance. But stung by discrimination – in the aftermath of the great Kantō earthquake, Japanese attacked Koreans in Tokyo – their numbers were limited.

Beginning in the late 1980s small and medium sized enterprises facing shortages of recruits for jobs viewed as dirty and onerous by young Japanese brought up in a relatively affluent homes bristling with a growing number of consumer durables lobbied the government for a relaxation of its stringent constraints on immigration. The policy response smacked of *nihonjinron*. It was largely limited to encouraging the immigration of descendants of Japanese emigrants, the *nikkeijin* living in societies with per capita incomes below that of Japan to take up these positions. The biggest target for this program was the *nikkeijin* population living in Brazil. Perhaps it was felt that Brazilian Japanese could be more easily assimilated into Japan than other peoples. Perhaps the logic of the program was rooted in the view that young adults growing up in households where Japanese values and Japanese cultural traditions were practiced could more easily fit into Japan than Taiwanese, Filipinos, and Indonesians. If this was the view it proved to be a myth. As Tsuda (2003) were truly strangers in their ethnic homeland. They spoke Portuguese, they danced the samba, and they rooted for Brazilian soccer teams.

Over its long history since 1600 Japan has been relatively closed. Opening up – economically, demographically, and politically – has been a process fraught with difficulties for a country that existed in a virtual state of autarky between the 1650s and the 1850s. Miracle growth largely took place in closed capital markets. Import and export ratios were relatively low. Entire sectors – banking and insurance, agriculture, wholesaling and retailing – were almost completely insulated from the outside world through the golden age of convergence. But as Japan entered the 1970s, its exports eating up a growing share of the American consumer market, this state of affairs was about to change.

Key terms and concepts in Chapter 10

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Devaluation of the U.S. dollar and the collapse of the Bretton Woods system
Aggregate economic balance and the gap between savings and investment
Rinchō
Keidanren
Shokunō shikaku seidō
Shukkō
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Carl Mosk (2008)
"Japanese Economic Development

11 The bubble economy

A Japanese system?

During the 1970s and early 1980s the nature of Japan's economic success loomed larger and larger on the international stage. In one sense this simply reflected the fact that Japan's national income had reached gigantic size. Japanese goods showed up everywhere. Even with a low ratio of imports and exports to GDP, the sheer volume of Japanese goods sold abroad, and the sheer volume of Japanese purchases of raw materials – of coal, iron ore, nickel, zinc, petroleum, potash, timber, and rubber – grew by leaps and bounds during miracle growth, reaching massive levels by the early 1970s.

Consider automobiles. New Japanese cars made huge inroads in North American and European markets, in part because they were fuel efficient and small, in part because they embodied quality in their components, their excellent repair records garnering praise in consumer magazines. Used Japanese cars – sold by Japanese drivers wishing to avoid the *shaken* – appeared all over Southeast Asia, even in New Zealand. Taxi cab drivers in Bangkok were churning the streets with Toyotas and Hondas.

There was a second reason why the subject of Japan's economy became a matter of burgeoning interest to Americans and Europeans: trade deficits. In the United States in particular the bilateral trade imbalance between itself and Japan became an increasingly potent political topic. Since the 1960s the American government establishment responsible for trade negotiations (the office of the United States Trade Representative office, Congressional committees appointed to look into trade related matters) tends to focus on that country enjoying the largest bilateral trade surplus with the United States. Spurred on by political demands on the part of industries that felt besieged by imports from Japan – the American iron and steel industry pressed for a trigger-price mechanism designed to drive up prices of imports of Japanese steel on the American market, the American automobile industry lobbied for the negotiation of voluntary export restrictions that would restrict the volume of cars brought in from Japan – Congress appointed a committee of American economists with expertise on Japan to better learn about Japanese exporting companies, to better understand how American companies could make inroads into the Japanese consumer market.

In the case of the United States some of the concern was about global leadership, both technological and economic. In the late 19th century the

United States supplanted England as the global technological leader. After World War II it emerged as the political leader committed to promoting international trade through its support for multilateral organizations like the General Agreement on Tariffs and Trade, the World Bank, the United Nations. In addition it underwrote international currency markets with the Bretton Woods system. Some of the concern in the United States about Japan's rapid growth and its gargantuan economic size reflected anxiety that Japan was now taking over global leadership from the United States. Linear projections suggesting that Japan's economy would soon become the biggest in the world bolstered the view that Japan was rapidly becoming an economic "superstate", a cornucopia for commercial and industrial innovations, the world's largest capital market to boot.

Interest in Japan's successful development also blossomed in the developing world. In many ways South Korea and Taiwan, two of Japan's former colonial possessions, seemed to imitate Japanese economic policy making and Japanese economic performance. Industrial policy and *zaibatsu*-style combines (called *chaebol* in Korean) were especially important in South Korea's remarkable economic growth between the mid-1960s and the late 1980s. To policy makers in the nations of Southeast Asia, to Latin American regimes struggling with the problem of moving from import substitution to export promotion – along the lines of the flying geese model of trade – it seemed that Japan offered a better model of development than did the more market driven model associated with United States economic advance. Of course drawing this conclusion required that one buy into a particular theory of Japanese economic development, one in which political constraints and/or norms and values played an important role along with invisible hand market forces.

In short, Japan's remarkable success forced intellectuals and policy makers in both the advanced industrial world and in the developing world to ask a set of probing questions. What can be learned from the Japanese experience? Are there aspects of the Japanese economy that are transferable to other economies? How do foreign leaders cope with, negotiate with, Japan? Can they, should they, shape and change Japanese practices? How did Japan get to where it was in the early 1980s? How is it likely to change in the not so distant future?

To many foreign students of the Japanese the problem of Japan's global leadership posed disturbing thoughts itself. One concern was political corruption as exemplified in the political rise of Tanaka Kakuei, prime minister of Japan and author of a prominent treatise, a vision statement, about how Japan should revamp itself in the future. Tanaka's volume – published in English 1972 – entitled *Remodeling of the Japanese Archipelago* seemed to be a direct extension of the pork barrel logic he had used in rising to national power. A second concern was Japan's closed nature. The growing popularity of *nihonjinron* books in Japan exemplified an attitude of Japan as different – unique – impossible to imitate or really learn from.

A third concern was that Japan's economy was part of a system in which politics and policies, economic behavior, and social norms and values interacted.

Tanaka Kakuei, master of pork, and the "Remodeling of the Japanese Archipelago"

There is no better illustration of the importance of the three adages of politics in a democracy – "money is the mother's milk of politics", "all politics are local", and "power corrupts; absolute power corrupts absolutely" – than the career of Tanaka Kakuei, prime minister of Japan between 1971 and 1974.

Perfecting the art of pork barrel politics that had permitted him to consolidate his hold over the politics of rural Niigata prefecture, Tanaka Kakuei mastered the art of the shady real estate deal, adroitly using his money and his personal connections to build a powerful faction in the Liberal Democratic Party. Eventually grasping the reins of power with the prime minister's post, Tanaka accepted bribes amounting to $1.8 million from the Lockheed Corporation in exchange for his directing Japan's national airlines to purchase the Lockheed L-1011 aircraft. Arrested in 1976 for accepting the bribes, Tanaka was convicted in 1983 and sentenced to four years in prison. He died in 1993 with his appeal of the conviction lingering on the docket of Japan's Supreme Court.

Tanaka built his power base through the sponsorship of a group known as the Etsuzankai (the "Niigata Mountain Association"). The function of the group was to review local applications for government funded pork barrel projects, choosing a select group to promote in the Diet – like the Tadami River hydroelectric power project, the New Shimizu Tunnel, and a bullet train Shinkansen line that snaked its way out to Niigata – in exchange for contributions to the Etsuzankai. During the 1950s Tanaka would bring Etsuzankai members to Tokyo, sponsoring tours of the Diet and the Imperial Palace, wooing most on an individual basis in one-on-one meetings.

Through these dealings Tanaka became known as the godfather of Japanese politics, earning a shady gangster like reputation that his dabbling in shady land deals did nothing to dispel. Slated to become secretary general of the Liberal Democratic Party when Satō Eisaku became prime minister in 1965, Tanaka was forced to surrender his bid for the powerful position when the Black Mist scandal that centered upon Tanaka's dealings in the Tokyo land market broke.

Despite his compromised image for corruption, Tanaka's base in the Etsuzankai made him a formidable rival to Fukuda Takeo, who was Tanaka's chief rival for becoming the heir to Sato's faction in the Liberal Democratic Party. Testimony to Tanaka's staying power in the "Kaku-Fuku war" within the party, prime minister Satō appointed Tanaka minister of international trade and industry in 1967, turning the most powerful economic ministry during the miracle growth era over to the Niigata politician, signaling his appreciation for Tanaka's political skills by rewarding him with one of the chief posts in the cabinet.

Flaunting his influence over Japanese industrial policy Tanaka gained considerable leverage over American negotiators attempting to secure quotas, limits, on Japanese exports of certain products, meeting with many of them on an ongoing basis. Exploiting these connections with the American diplomatic corps posted to Tokyo, Tanaka played a major role in negotiating the reversion of Okinawa from American to Japanese rule, enhancing his image as a no-nonsense politician capable of dealing with American political pressure.

Assuming the position of prime minister in 1971, Tanaka sought to enunciate a vision for Japan, one that would provide direction for his government, one that would constitute his political legacy. In 1972 he published "Rettō kaizō ron" subsequently translated into English as "Building a New Japan: A Plan for Remodeling the Japanese Archipelago." In the volume Tanaka advocated setting up a central administrative body to handle land development, including the building of new Shinkansen bullet train lines designed to knit the nation's land markets closer together. He proposed construction of new high-rise danchi apartment buildings housing higher-quality units than those commonly built during the 1950s and 1960s. He also pushed for the promotion of key nodal cities that would serve as growth poles for regional economic expansion, thereby raising the income per capita levels in rural regions to those characteristic of the great metropolitan centers. He envisioned a new zoning approach, facilitating the conversion of the agricultural land that continued to pockmark urban landscapes to non-agricultural purposes, freeing up real estate for infrastructure construction. Finally Tanaka's fifth proposal was to tap the high level of national savings so that this thoroughgoing, radical, remodeling of Japan could be achieved.

Sadly for his legacy, Tanaka was unable to muster the political muscle or governmental access to the financial resources needed to realize his grand scheme. Instead of leaving a legacy graced by credit for the redirecting of regional Japanese economic development, Tanaka's legacy was dominated by scandal, influence trading and pork barrel politicking, his restless striving for power and money overcoming his patriotic love for Japan and for the welfare of the common Japanese citizen.

Note: Tanaka's volume was translated into English, published as Tanaka (1972).

There was a System, the Japanese System. The chief advocate for this view was von Wolferen (1989). He argued that holding and achieving power was paramount in Japan. For this very reason it was widely diffused: bureaucrats, political elites, corporate managers, and union federation leaders, all having some power. With

power came responsibility. To blunt the efforts of those enjoying less power to make claims on the powerful, to keep at bay attacks on one's power from other power seeking quarters, those with power attempted to hide, disguise, their prowess. The result was a System without a core. No one was in charge. No one holder of power could easily impact the behavior of other power centers. The Japanese state was doughnut-like, lacking a true center, power diffused around the ring.

This view suggested three disturbing conclusions. It would be difficult to negotiate with Japan because it would be impossible to find someone who was truly in charge. It would be difficult to learn from Japan since behavior in any one sector of the society was connected to behavior in every other sector, the System being in some kind of equilibrium. How could you pluck out one practice, one lesson, when everything was intertwined? It would be difficult to change the economic and political behavior of the System since it was in some kind of long-standing equilibrium. Indeed von Wolferen (1989) went as far as to argue that Japan had been this way since the 8th or 9th century. He did not rule out change. But he thought it would be difficult.

An equally provocative account of Japan's disturbing place in the world was Schmiegelow and Schmiegelow (1989). The focus of their volume was on how Japan's performance challenged the very conceptual bases of Western social science. No Western models were up to the task of understanding how and why Japan performed as well as it did. Japan fit into every theoretical competing category in at least some ways, hence in none. It could not be pigeonholed. The key to their interpretation was that Japan was Schumpeterian in a novel way: policy making was innovative, emphasizing strategic pragmatism. Key Japanese innovations were administrative guidance, the promotion of implicit contracts linking public actors and corporations, negotiating potential conflicts between policy outcomes by establishing clear hierarchical ranking of policies, and the managing of markets in danger of being disrupted for instance by gluts of production or excessive growth.

Most social scientists were not willing to go this far. For instance Vogel (1979) argued that there were very specific aspects of Japan's society, polity and economy that could and should be emulated or at least learned from. From the

"Japan as Number One"

During its heyday in the 1950s and 1960s, there was a decided tendency in the literature on modernization, especially in that penned by American scholars, to assume that societies successfully achieving economic development were increasingly likely to mimic the society that was considered to be economically most advanced, namely the United States.

There is a target for modernization. The target is the United States. Modernization is basically a linear process, less developed nations all moving towards the same target.

Analogous is the interpretation of income per capita convergence in terms of sigma convergence: countries with income per capita levels falling short of the United States (assumed to be the technological and market leader) are assumed to grow until they catch up with the leader. By contrast beta convergence involves a shrinking of variance between nations. Some might converge downward, actually experiencing a fall off in income per capita; some might converge upward, their income per head expanding. Unlike sigma convergence, beta convergence does not assume that there is a leader, a target, toward which other nations are moving.

By the early 1970s, the emergence of Japan as a world beating economic dynamo was calling into question the simple linear development hypothesis implicit in much of the modernization doctrine. Particularly impressive was the growth rate of the Japanese economy, linear extrapolation suggesting that Japan's per capita income would surpass that of the United States within a matter of decades. For instance, during the period 1956–60 the relative level of Japanese income per capita compared to the United States set at a value of 100 was 29.9; by 1971–75 it was 66.1; and during the late 1970s it was 68.5. That Japanese politics and society seemed so radically different from that of the United States and yet Japan seemed to be on a growth trajectory to pass by the United States in economic affairs, called into question the very foundations of modernization theory.

This is the background for the publication of "Japan as Number One: Lessons for America" by Harvard University sociologist Ezra Vogel in 1979. In this volume Vogel turned his back on modernization theory, arguing that there are different flavors of democracy, different flavors for the welfare state, different flavors for industrial competitiveness, different flavors for learning, different flavors for governing. Even between two countries where the level of per capita income is similar, where the technologies applied in manufacturing are relatively identical there can be profound differences in social customs and political practices.

Vogel pinpointed seven features of Japanese society and polity that he believed made Japan radically different from the United States: group-oriented, as opposed to individual-oriented learning, reaching consensus being a salient feature of the Japanese landscape; meritocracy in a bureaucracy that exercises far greater leverage over policy than it does in the United States; multi-purposed group democracy, villages, firms and professional organizations in Japan being strongly held together by group solidarity and a commitment to everyone getting a "fair share" of the economic pie; "bottom up", as opposed to "top down", decision making in Japanese enterprises; the use of competitive examinations coupled with uniform national standards in shaping basic education in Japan; enterprise as opposed to state based welfare; and a high level of professionalism amongst Japanese police officers and public cooperation in identifying potential criminal behavior resulting in low crime rates per capita.

Taken as a whole, Vogel believed that these seven features of the Japanese environment made the Japanese formidable competitors to the United States, not only in economic matters, but also in developing technology and in providing global leadership to market oriented economies. Thus his title "Japan as Number One." He chose a deliberately provocative title as a wake up call to Americans.

In making his case for Japan as number one, Vogel was not only intent on wakening up Americans to the Japanese challenge to American leadership. He was also using his argument to encourage change within the United States, to force Americans to borrow from Japan, to become more like the Japanese. In effect he was saying that beta type convergence rather than sigma type convergence should be the rule of the day. Japan might become more like the United States and at the same time the United States might become/should become more like Japan.

While the audience Vogel seemed to address was American, the irony is that the book became a best seller in Japan. For a country obsessed with ranking, the fact that a Harvard professor – Harvard commonly considered the top ranked university in the world in the Japanese media – had proclaimed Japan to be number one was an event to be much celebrated. But this was in the late 1970s, when many Japanese were feeling immense confidence, even arrogance, over the performance of their economy. In the aftermath of the bursting of the bubble economy, in the wake of scandal after scandal among bureaucrats and politicians, in the aftermath of growth in antisocial behavior among teenagers, matters look quite different than they once did. Indeed, returning to income per capita as an admittedly imperfect indicator of performance, we see that Japan's relative level compared to the United States, 88.1 in 1991–95, had dropped to a level of 81.6 in 1996–2000. That Japan is no longer perceived as number one in the United States or in Japan seems to be widely accepted at the end of the twentieth century. More important is the possibility that there are no targets toward which societies are or perhaps should move. To put the matter somewhat differently: is conceptualizing national economic and social development in terms of a ranking scheme for nations desirable? Can we not argue that no society is number one, that particular societies enjoy impressive strengths in some areas and at the same time glaring weaknesses in other dimensions?

Note: Vogel's book was published in hardback by Harvard University Press and in a paperback edition as Vogel (1979).

economist's viewpoint, however, the most concerted attempt to argue that Japanese economic behavior was explicable in terms of Western social science concepts and transferable abroad was due to Aoki (1988). Aoki's key points concern the different ways hierarchies and information flows are managed in typical Japanese and in typical American companies (he calls the former the J-firm, the latter the A-firm). Armed with these arguments, Aoki concludes that a hybrid form is emerging, one that combines features of the two extreme opposite models of market oriented enterprises.

Aoki (1988) rests his analysis on theoretical arguments made about why firms exist anywhere and on empirical studies of job rotation in Japanese work groups notably the observation field work of Koike (1984). The basic argument is that when transactions costs are sufficiently expensive, firms – by definition organizations in which hierarchical command and control modes of behavior are normal – dominate over invisible hand market solutions. For instance, we have seen how putting-out gave way to factory production with the introduction of steam power and the orientation of manufacturers toward wide ranging mass markets. Specifically organizing production in firms provides the following benefits: by centralizing information about material requirements to meet production objectives, a hierarchy can economize on inventories stockpiled, on how materials are most efficiently utilized on the shop floor; by encouraging specialization and division of labor and repetition of tasks, firms drive down labor input costs per unit of output; by centralizing information, hierarchies can respond to changing demand for the output that they generate.

As Aoki (1988) notes, these arguments are typically used to justify the existence of the A-firm. In the typical A-firm, a small group of managers and engineers establish plans for production, laying out tasks to be performed on the shop floor, giving orders about how many components of a product are to manufactured in a given period, how many are stockpiled. Production decisions are highly centralized. By contrast in a typical A-firm evaluation of workers and assignment of wages is done in a decentralized manner. Shop stewards and union representatives work with detailed scales set through collective bargaining or at least posted by management for all to see.

The J-firm is the mirror opposite. Personnel decisions – wage determination – are highly centralized. They are made in the company personnel division that enjoys a wealth of information about each and every worker. But the production plan is implemented in a decentralized, non-hierarchical manner. Job rotation is common, workers changing work assignments on an ongoing basis, flexibly adjusting to changing market demand conditions, filling in for one another when someone is ill or disabled due to accident or injury.

In short, a duality principle applies. In the A-firm, personnel decisions are decentralized, production decisions centralized and hierarchically applied. In the J-firm, personnel decisions are centralized and hierarchically applied, production decisions decentralized. There are two distinct models of how information flows and hierarchies are established in capitalist firms.

Aoki (1988) argues that the J-firm type model is transferable. Indeed, steps taken in some American firms during the 1980s to reduce the number of distinct occupational codes – from hundreds to five or six – seemed to bear out his prediction. In advancing this line of analysis he criticizes the view of social theorists like Nakane who believe Japanese are prone to form small groups, frames into which they fit. He notes that keeping the small work group from spiraling off on its own, losing its connection to the rest of the factory, would be a real problem in the J-firm if Japanese workers were simply committed to working in small work teams.

What about negotiating with Japan? There is ample evidence that the political leaderships of the two nations could and did work together in an effort to correct the trade imbalance between the two countries that was generating waves of concern in Washington. Getting agreement between the central banks of the two nations was key to negotiating the Plaza accord that led to dramatic appreciation of the yen relative to the United States dollar. When this policy of manipulating

The Plaza Accord

The political friction over Japan's continuing ability to rack up bilateral trade surpluses with the United States became an ongoing drone, a rhythmic drumbeat, for American diplomacy with its great Pacific economic rival. It played a role in the negotiations over Okinawa's repatriation, in Nixon's decision to impose quotas on selected Japanese products, and it threatened to stabilize the mutual security treaty binding the militaries of the two countries together.

At the same time it roiled multilateral trade negotiations and the stability of the international exchange rate system. It would not be correct to attribute the decision of the executive branch in the United States to end the Bretton Woods system in 1971 by severing the connection between the United States dollar and gold solely to Japan's current account surpluses with its most important export market. Problems with the Bretton Woods system had developed earlier with the Western European countries, especially with Germany and France. Still, the decision to let the American dollar devalue in 1971 did have the effect of pushing the yen up from its Dodge Line value of 360 yen to a dollar.

The theory that adjustment in exchange rates will lead to adjustments in trade surpluses and trade deficits has been discussed earlier in this volume. If one's products become cheaper on international markets one expects to export more; if one's products become more expensive one exports to export less. Complicating this simple story are some important details that bear rehashing here.

First, inflation rates in countries trading with one another may be different. In this case the real exchange rate may not mimic movements in the

nominal exchange rate. Second, the J-curve holds, at least in the short run. When the currency of an exporting nation is pushed upward, the financial aspects of all import/export agreements already entered into change, but the quantities do not necessarily change. Suppose a Toyota dealer in San Francisco has already placed an order for one hundred Toyota trucks. If the yen appreciates before the vehicles are shipped the order still goes through but the dollar cost of completing the order actually goes up, making the bilateral trade deficit between the United States and Japan temporarily worse when it is denominated in dollars (in yen terms there is no change as long as the dealer sticks to its commitment to take the one hundred trucks). In the long run the dealership is likely to cut back on the volume of Toyota trucks that it brings in, thereby making the adjustment envisioned by the exchange rate theory of trade.

There is a third problem, peculiar to the country whose currency serves as the main linchpin of the global monetary system, most goods shipped internationally – crude oil, wheat, coal, zinc, and coffee beans – being priced out in units of its money supply (the United Kingdom in the period 1870 to 1914; the United States after 1945). In the post-1945 period, when the currency of a country appreciates relative to the United States dollar, the cost of importing raw materials falls in terms of its own currency. This was the situation that Japan found itself in as the yen began to appreciate upward relative to the dollar: the price of raw materials fell, counteracting to some extent the rise in its export prices attributable to yen appreciation. The price of a Japanese automobile reflects both production costs in Japan (labor, land, capital) and the costs of the imported raw materials used in its production. Thus yen appreciation was a two-edged sword.

A fourth factor involves restrictions on imports from other countries, either in the form of tariffs, or quotas, or other non-tariff barriers like those established by a regulatory agency in a country that sets product standards that apply to both domestic production and to imported items.

This was the background for the Plaza Accord of September 1985 – signed onto the central banks of France, West Germany, Japan, the United States and the United Kingdom – in New York. The goal of the accord was to devalue the dollar against the yen (then trading at 235 yen to the dollar) and the German Deutsche Mark by intervening in currency markets, selling dollars, buying yen and marks. The intervention was deemed successful in the sense that it did not produce panic in world financial markets, although speculation against the dollar did drive it below the level planned by the central banks. It was also deemed successful in reducing the United States trade deficit with Western Europe. However it did not appreciably impact Japan's bilateral trade surplus, at least as denominated in United States dollars, for the four reasons suggested above.

In part because the Plaza intervention did not correct the bilateral trade imbalance between the United States and Japan, and in part because the American position was based on a two-pronged theory of why the imbalance existed – the yen was undervalued; and domestic aggregate demand growth in Japan was too lackluster – American and Japanese negotiators continued to meet, trying to work out solutions to the bilateral problem. In 1986, the Baker–Miyazawa agreement was hammered out, Japan committing itself to stimulating its economy through a variety of means, thereby presumably increasing its demand for American goods and services. Again, in 1987, in the Louvre accord, negotiators for Japan agreed to "follow monetary and fiscal policies which will help it to expand domestic demand and thereby contribute to reducing the external surplus".

If the response of the trade imbalance between the two countries to the Plaza Accord seemed to be paradoxical, even more unexpected was the response to the Baker–Miyazawa and Louvre accords. By agreeing to expand its money supply (see Table A.4, concentrating on the figures for 1986–90), the Bank of Japan intervened in its domestic financial market, driving interest rates down in order to stimulate investment. In increasing the volume of yen outstanding it cheapened the value of the yen on international markets, thereby counteracting the impact of the Plaza Accord to some extent. In increasing the domestic money supply it also gave an additional upward kick to asset prices that were moving upward with the changing terms of trade, and hence with the United States dollar/yen exchange rate, for reasons discussed in the text of this chapter.

relative prices failed to correct the trade imbalance, the two governments worked together to hammer out agreements on structural issues that they believed would help address not only the trade imbalance but also other sources of political friction in the two countries associated with the trade imbalance. In the Strategic Impediment Initiative negotiations and talks that took place in the late 1980s, both countries demanded more open access to one another's markets. The United States was keen to break up the hold that the vertical *keiretsu* in the distribution system seemed to have, relaxing of the restrictions on department store square footage specified in the Large-Scale Retail Store Law, and speeding up of import clearance procedures. Japan was equally keen to see the United States clarify its anti-dumping measures, making them more transparent; end language based discrimination in the way the United States adhered to international patent agreements (involving a requirement that the patent be expressed in the English language); and encourage reform of product liability laws. In short, recognizing that their combined national incomes were almost 40 percent of world GDP, recognizing the growing capital market integration of the two economies, encouraged the governments of both Japan and the United States to reach cooperative agreements in the economic field.

Interestingly enough, as Alexander (2002) shows, negotiations designed to mitigate trade friction between the two economies went on a completely separate track from negotiations over other bilateral issues, military security for instance. Both countries avoided linking their economic negotiations to geopolitical issues. As important as correcting the bilateral trade imbalance was to the United States, it was not important enough to endanger strategic military arrangements that mutually benefited both nations, perhaps East Asia more generally.

The yen/dollar exchange rate

The upward drift in the yen turned into a gallop after the Plaza Accord. This is apparent from Table A.4 and from Figure 11.1. More important, the Plaza Accord marked a fundamental change in the terms of trade (the price of exports relative to import prices). As Figure 11.1 shows there is a tendency for movements in the yen/dollar exchange rate to be associated with, to be mirrored by, parallel movements in the terms of trade. When the yen goes up, the relative price of exports improves. However, prior to the mid-1980s, export prices tended to fall faster than import prices, regardless of whether the yen was appreciating or depreciating relative to the dollar. Prior to the mid-1980s import prices tended to go up even though each yen was buying more raw materials, more natural gas, more petroleum, more iron ore, most of these commodities denominated in

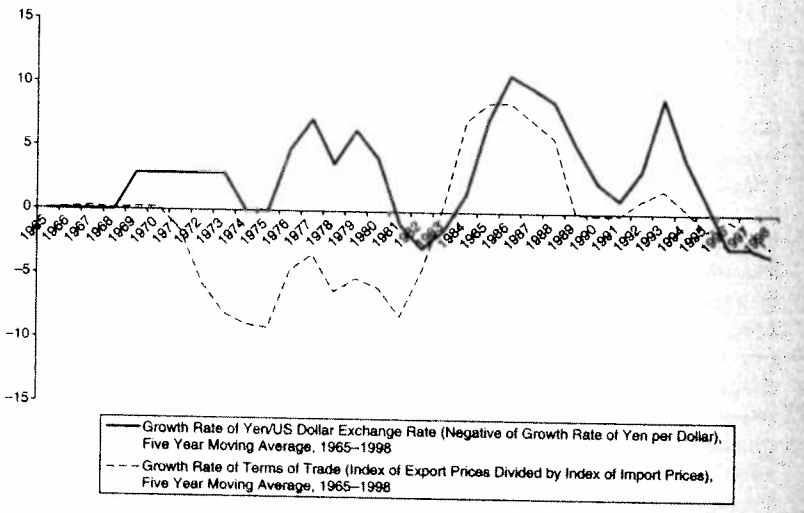

Figure 11.1 Growth rate of yen/US dollar exchange rate (negative of growth in number of yen per US dollar) and growth rate of terms of trade (index of export prices divided by index of import prices), five year moving averages, Japan, 1965–1998.

United States dollars. To some extent this was the result of the price hikes for petroleum that roiled the global economy during the 1970s.

From the mid-1980s Plaza Accord until the mid-1990s, appreciation in the yen went hand in hand with positive movements in the terms of trade. Import prices fell more than export prices. Japanese firms were paying less and less for the raw materials that they were bringing in. The tendency of import prices to fall – because the international purchasing power of the yen was going up – kept export prices from rising as much as they would have risen in the absence of yen appreciation. This was one reason why the dramatic appreciation in the yen (known as *endaka* in Japanese) after 1985 did not correct the bilateral United States/Japan trade imbalance, at least as it was calibrated in United States dollars. A number of other factors operating in the medium run kept the bilateral balance computed in dollars from closing. First under the agreements reached in the *shuntō* that mainly dealt with extending the retirement age, the union federations agreed to modify their wage demands so that exporting firms could continue to export even under *endaka*. This kept a lid on inflationary pressures in the Japanese economy. As can be seen from Panel A of Table A.4, the consumer price index hardly increased during the late 1980s or 1990s. Cost-push due to upward movement in nominal wages was muted under the collective bargaining umbrella. Because inflationary pressures were less in Japan than in the United States, the real exchange between the yen and the dollar did not increase as much as the nominal exchange rate. This worked to keep Japanese goods competitive in the American marketplace.

Alexander (2002) shows the yen/dollar nominal exchange rate did tend to diverge from the real exchange rate after 1985, the yen growing stronger than would be expected taking into account inflation rates in the two economies. Why? The answer lies in the discrepancy between movements in prices for goods and services only produced and consumed in Japan – wholesale and retail, rent on land, infrastructure – the so-called non-tradable sector, and movements in prices of tradable exports and imports. As you can see from Table A.4 tradable goods and services fell in price (export prices continued to decline throughout the period 1980–2000) while overall goods and services, tradable and non-tradable, rose somewhat in price over the same period. The export oriented sector was far more efficient – enjoyed more rapid productivity growth – than did the non-export oriented sector. The result is that the nominal yen/dollar exchange that mainly reflects the flow of traded goods and capital movements moved up more vigorously than the real exchange rate.

Second, the total cost of consumer durables includes the discounted costs of maintenance and repair. Once a Japanese automobile is purchased in the United States and used there, maintenance costs are expressed in United States dollars and are unaffected by any further changes in the yen/dollar exchange rate. The reputation for building quality into cars that Japanese manufacturers enjoyed allowed them to hold onto market share in the United States despite *endaka*.

In the short term there are two factors that always help explain why the bilateral trade balance at least measured from the American side, in United States dollars,

did not vanish. The J-curve is one factor. Once orders are placed by wholesalers and retailers in the United States for Japanese goods, the dealer must absorb any depreciation in the dollar relative to the yen occurring between the date the order is placed and the date shipment takes place, paying out more dollars than the dealer originally expected to spend. This J-curve effect weakens the bilateral trade imbalance calibrated in United States dollars. Adding to these concerns is currency speculation. Acting on expectations about future movements in the yen/dollar exchange rate, speculators can drive the exchange rate at least in the very short run. In the medium term, fundamentals shape exchange rates. But in the short run speculation can drive it.

In one sense, in terms of actual volumes of goods traded, the bilateral trade imbalance between the two countries did shrink as the yen appreciated relative to the dollar. Indeed, calibrated in yen the bilateral imbalance actually shrunk. Negotiators for Japan could and did point this out to their American counterparts. Unfortunately for the American side what counted was the bilateral trade imbalance computed in American dollars. It was cold comfort that the Japanese side was observing shrinkage when it carried out its computations in yen.

The bubble

From the mid-1980s until it began bursting in December 1989, Japan was caught up in talk of twin bubbles in land prices and in stock prices. Is this description an accurate reflection of the facts on the ground?

The figures in Table A.4 and the graphical evidence presented in Figure 11.2 suggest that talk of a bubble was exaggerated. The inflation in land and stock

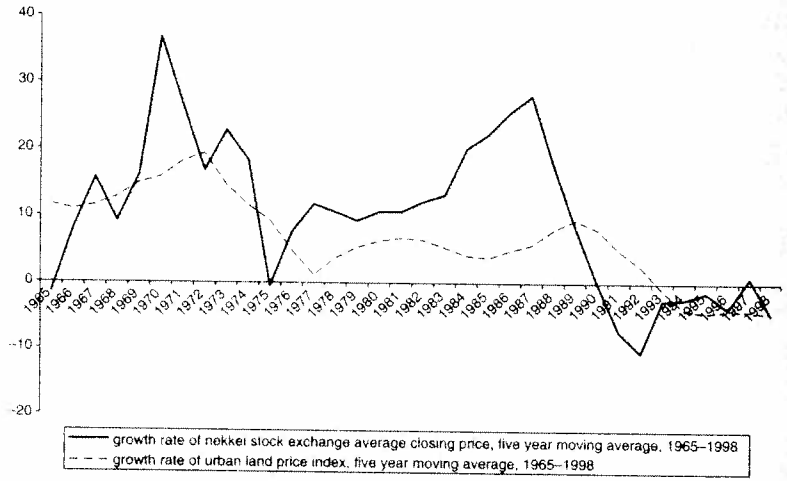

Figure 11.2 Growth rate of Nikkei stock exchange average closing price and growth rate of urban land price index, five year moving averages, Japan, 1965–1998.

market prices was greater during the 1970s than it was during the late 1980s. Indeed in the first two decades of the twentieth century, when the intercity railroad lines were being built and bedroom suburbs were proliferating, the upward thrust in land prices was probably equal to that of the 1970s. Is this surprising? When rapid urbanization is occurring, dabbling in land speculation is a natural thing to do. Buy cultivated fields and unused land when it is still cheap; sell it when it becomes dear. Moreover, investing in housing that appreciates in value is a good way to make more money on asset holding than by putting your funds into a bank account, particularly with a shaky financial institution that might go under.

The only way to make sense of the talk of a bubble economy is to relate the upward thrust in land and stock prices to *endaka*. Once one does this talk of a bubble makes sense. Calibrated in American dollars land and stock in Japan became incredibly expensive. It is the linkage between the yen/dollar exchange rate and domestic land prices that makes the idea of a bubble occurring during the late 1980s reasonable.

A price tag for the Imperial Palace and its immediate environs

The upward surge in asset prices – for real estate prices and for stocks and bonds bought and sold on the Nikkei exchange – characterizing Japan's so-called bubble economy is evident in the cold hard growth rate estimates for the period 1986–90 appearing in Table A.4. But grasping the sheer dramatic extent of the inflation in Japanese assets is difficult to do through a simple perusal of these figures. A better vehicle for communicating the extremity of Japan's asset inflation is to consider the price of the Imperial Palace and its immediate surroundings, namely the price tag for several hundred acres of downtown Tokyo. At the height of the bubble in 1989 the value of this small piece of real estate had the same value as all of the land in Canada, the same value as all of the land in California!

There is no doubt that the upward spike in Japanese real estate values was especially pronounced in Tokyo, especially in the commercial properties of downtown Tokyo for which prices more than doubled between 1986 and 1990. But residential prices in Tokyo also soared, roaring up by almost 70 percent during 1988 alone, a year that saw Tokyo commercial real estate values jump by almost 80 percent. And what was true in Tokyo was true elsewhere in urban Japan, in great metropolitan centers like Osaka and Nagoya, and in relatively remote cities like Sendai in northeastern Honshū and Sapporo in Hokkaidō.

If we are using the value of the Tokyo real estate as a barometer for Japan's bubble, it is fair to use its value as a barometer for the bursting of that very same bubble. By 2001 the highest priced real estate in Tokyo was trading at about a quarter of its value at the peak of the bubble. What went

up like a rocket came down like sledgehammer, reminiscent of the crash in tulip prices in early 1637 in Amsterdam and the sharp fall off in closing stock prices on the New York exchange in 1929 as the American economy lurched its way into the Great Depression of the 1930s. In Japan the bursting of the bubble seemed to mimic the dismal American experience, ushering in the lost decade of the 1990s.

Why did land and stock prices escalate during the late 1980s? In the literature on the subject we can distinguish three major lines of argument: those that mainly focus on domestic circumstances; those that take into account globalization, Japanese companies increasingly financing their activities abroad, foreign financial institutions moving into the Japanese market, the range of tradable services being extended to finance and banking; and those that directly link movements in the yen/dollar exchange rate and the terms of trade to the inflation in land and stock prices.

We begin with arguments centering upon domestic circumstances. Consider expectations. What counts in a stock or bond market is what other people do. One forms expectations based on what you think other people expect. In this way, expectations can drive expectations. This may explain some of the most famous bubbles in history. Underlining these arguments is deregulation of the stock and

The tulip mania and the South Sea bubble

Asset price bubbles are not necessarily typical of market economies, but they do occur with some frequency. Two of the earliest well documented bubbles occurred in seventeenth and eighteenth-century Europe. In both cases expectations about future asset prices seemed to drive the run-up and then collapse of the markets. In both cases the specific institutional rules underlying the operation of the financial markets played a role in generating expectation driven buying of the assets.

The tulip mania was largely confined to Holland in the 1630s. The tulip bulb, considered an especially exotic and attractive flower, cannot be rapidly multiplied, thus opening up the possibility of demand outstripping supply, generating a rise in tulip prices relative to other prices. Complicating matters was the fact that a tiny fraction of the tulips in seventeenth-century Holland were infected. Attacked by a mosaic virus, the infected tulip generated petals of contrasting colors, flamed as it were. These were especially rare and hence commanding of exceptionally inflated prices.

Further contributing to the bubble in tulips was the existence of a futures market in Holland. Purchasers could pay for the flowers well in advance, obtaining delivery of them during the ensuing spring. During 1636–37, the market for tulips spread rapidly in taverns, the prices for all bulbs – but especially for the flamed bulbs – rising dramatically. The market broke in February 1637, prices dropping drastically thereafter. Future contracts were not enforceable, leading to the bankruptcy of many speculators in the market.

The term South Sea bubble actually refers to two bubbles, both taking place in 1720, one occurring in England and the other in France. At the heart of the bubbles was the fact that the state governments in both countries had allowed for the establishment of joint-stock companies that issued shares on the stock market in exchange for taking on the public debt of the governments. The particular joint-stock companies involved invested in other activities, but at their financial heart was management of the public debt.

As a result of the government support for, and dependence on, joint-stock activity for handling debt, speculation in the shares of the companies spread from London and Paris to Amsterdam and Hamburg. Expectations for further increases in share prices tended to bid up share prices. Benefiting from the surge of interest in joint-stock issue, shares in the South Seas Company surged upward in the summer of 1720. When confidence in the company collapsed, financial panic ensued, exacerbated by rumors of insider trading, directors of the company issuing new stock to the public while selling off their own shares at the same time. As a result of the fiasco the British government decided to prevent any new joint-stock companies from being formed, issuing the Bubble Act that stayed on the books until the 1850s.

Other famous bubble collapses include the panic of 1837 in the United States involving speculation in land, the panic of 1847 in Europe that centered around investments in mining and railroads, and the panic of 1873 in the United States that followed upon the foundering of the banking firm of Jay Cooke that had lavished funds on the building of the Northern Pacific Railroad. The most famous of the collapses occurred in the twentieth century however: the stock market collapse of 1929 in the United States. Fueled by the growth of investment trusts that used funds that they acquired from the public to purchase stocks and bonds, operating under the claim that the experts in the investment trusts were wiser than the public in the ways of the market, the stock market mania of the 1920s was driven by investment trusts buying shares in investment trusts, and by margin buying, a purchaser of a stock or bond only putting down a portion of the purchase price at the time the purchaser acquired the asset. Once the industrial conditions underlying the stock mania of the 1920s turned sour, once the

threat of trade wars in retaliation for American protectionism as the high tariff Smoot-Hawley bill made its way through the halls of Congress became a real possibility, the mania broke, the stock market diving during the fall of 1929. From the United States the ensuing downturn in investment and production spread to a broad range of countries worldwide.

Note: This discussion draws heavily upon O'Donnell (2003).

bond market. Had the volume of securities traded on the Nikkei exchange not exploded as fast as it did the bubble would not have gathered the force it did. As Lincoln (1988) points out the Japanese government had no choice but to deregulate the equity market during the early 1970s since it was increasingly engaging in deficit financing – bond issue – in order to raise funds to cover its outlays.

An alternative view, also domestic in its orientation, has to do with the rate of return on capital in the industrial sector. As we have seen the capital/output ratio in Japan surpassed the American level during the late 1980s. Other things equal this should drive down the marginal product of capital. Investing in corporations became increasingly unattractive. Seeking higher returns on alternatives to industrial loans, banks turned to funding real estate developers who put up land as collateral. As the value of the collateral held by real estate developers escalated so did the attractiveness of continuing to lend to them. Compounding the bubble like potential of this type of market activity was the linkage of stock market prices to land prices (cf. Figure 11.2). Banks lent to individuals wishing to speculate in stocks on the basis of collateral, in particular on the assessed value of the land assets that they held. As land prices jumped so did stock and bond prices. The headlong upward drive of the market became self-fulfilling, expectations feeding on expectations.

Moral hazard is usually invoked in stories that emphasize bad banking practices. As long as banks think that they will be bailed out – under the convoy system by other banks, the scenario played out under Ministry of Finance administrative guidance or by the Bank of Japan or by the taxpayer – they have little incentive to be cautious in their decisions. As long as a market is on an upward spiral, as long as the downside risk of failure is negligible, why not jump in, riding upward with the rest of the market? This is a basic theorem of financial economics. Allen (2001) provides a good treatment of the logic underlying this theorem.

Financial globalization may help account for the bubble. In 1980 the Japanese government revised the Foreign Exchange Control Law, allowing Japanese firms to freely issue unsecured foreign bonds. Attracted by the less regulated atmosphere in overseas markets, major Japanese firms entered the Euromarket, floating bonds and stocks, raising funds that they could use to liquidate their obligations to Japanese banks. In effect globalization encouraged Japanese companies to

switch from indirect financing of their debt using banks to direct equity issue, issuing stocks, bonds and debentures on both domestic and foreign markets. Banks had no choice but to switch away from loaning to export oriented prestigious companies to loaning to real estate developers, construction companies and more risky domestic manufacturing ventures. In this version of the story the emphasis is on deregulation rather than on the declining marginal productivity of capital. But the two arguments are not inconsistent with one another.

Foreign pressure to open up the Japanese capital market to non-Japanese banks and investment houses increased competition in the financial market, applying further pressure on Japanese banks. Many bankers felt that Japanese banks had to consolidate through wholesale mergers before Western banks were allowed relatively free entry into the Japanese market. Foreign banks were far more knowledgeable about financial opportunities than Japanese banks that had relied almost exclusively on industrial loans to make returns on their capital. Not coincidentally Western banks tended to crowd into the heart of the Tokyo financial district, adding fuel to the flames of land inflation in the center of Japan's capital.

A third line of analysis links movements in terms of trade to the movements in the stock market, hence to the land market. Consider Figure 11.3. As you can see the terms of trade and the Nikkei stock exchange index tend to move together from the mid-1970s until the bubble had fully burst in the early 1990s (the terms of trade did not start moving as long as Japan was adhering to the Dodge Line with a fixed exchange rate of 360 yen to a dollar). The key to a possible linkage between the two variables lies in expectations about the fortunes of the major

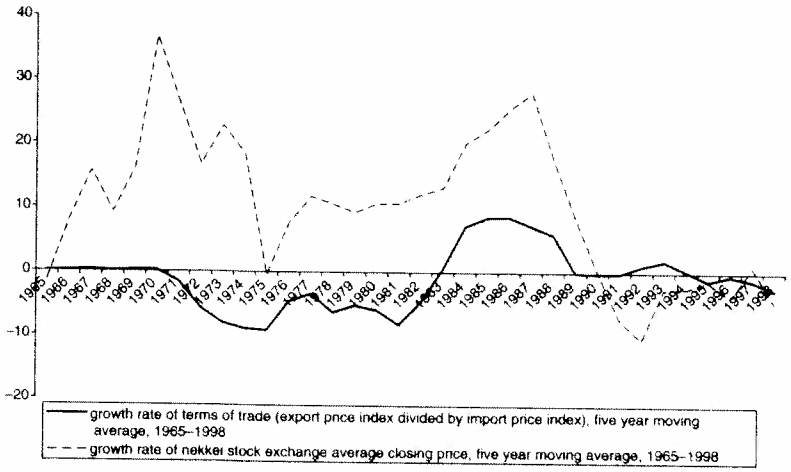

Figure 11.3 Growth rate of terms of trade (index of export prices divided by index of import prices) and growth rate of Nikkei stock exchange average closing price, five year moving averages, Japan, 1965–1998.

exporters, of the top ten "name brand" companies in particular. As the terms of trade improved so did the expectations about future profits in the exporting sector. This drove up stock prices in the tradable goods sector. Stock – like land – could be used as collateral. In this version of the story trade becomes crucial to the bubble.

Regardless of which story one finds the most convincing one thing is certain. Any convincing story about the bubble economy must include a discussion of *endaka*. In that sense the bubble economy was an outgrowth of the process by which a once tightly shut system was being integrated into the international economic order, an international economic order in which the menu of tradable goods was being steadfastly enriched. Globalization and the bubble economy went hand in hand.

Key terms and concepts in Chapter 11

Chaebol
Remodeling of the Japanese Archipelago
Japanese System
Strategic pragmatism
Duality principle
Strategic Impediment Initiative
Large-Scale Retail Law
Plaza Accord
Endaka
J-curve
Foreign Exchange Control Law
Terms of trade
Nikkei stock exchange index

12 Stagnation and reform

Deceleration with a vengeance

In the wake of the initial bursting of the bubble in late 1989 Japan's growth rate slowed to a crawl. This is apparent from Figure 1.1 in Chapter 1 and from the figures in Table A.1 in the Appendix. During the bubble phase and even during the first five years after the bubble began to burst Japan's per capita income continued to converge towards American levels. However during the next five-year period – between 1996 and 2000 – it diverged.

Whether this divergence will persist is unclear. Projections for Japan's growth of income have a high level of variance. There are a number of reasons why the variability of the estimates is considerable: as you know from the discussion in Chapter 1 national income is estimated imperfectly at best; and as you know from the discussion in the Appendix to this volume nailing down statistical models of an economy that can be usefully employed in forecasting is treacherous, highly controversial at best. Compounding difficulties are ongoing technical disputes about whether the national income accounting schemes employed by the governmental agencies in charge of national income estimation are used to confuse and mislead rather than inform the citizen about the underlying reality. After all, politicians do not like figures showing anemic growth in national income. Why not cook the books?

This said, most estimates suggest that the Japanese per capita income has grown over the post-1990 period and will continue to grow in a range between 1 percent and 2 percent per year (extreme optimists put the figure higher at 3 percent but this is less likely). While the difference between the two rates appears to be small, the difference does matter significantly in the long run: if the economy grows at 2 percent per annum in per capita terms, real income per capita doubles in 35 years; if it grows at 1 percent per annum income per capita doubles in 70 years.

Growing from 1–2 percent per annum is respectable. Indeed in a Swann-Solow model in which the capital/labor ratio is high, the marginal product of capital low, and there is relatively slow growth in technological progress achieving growth in this range is completely expected. Growing at rates in the 1–2 percent range puts Japan's growth squarely within the economic territory occupied by other advanced industrial countries. However, in terms of Japan's historical

record – growing faster than the other advanced industrial economies over the last half century – the possibility that Japan has once and for all entered a new era of dramatic deceleration is a very sobering thought indeed. To bureaucrats and politicians accustomed to growing far faster than other advanced industrial economies the slowdown to so-called normal growth seemed to be a chastening experience.

Does the bursting of the bubble represent a fundamental watershed in Japan's economic development, a sharp structural break with the past? In a provocative book Teranishi (2005) argues that it has. Reasoning that a capitalist economy has three major subsystems – the division of labor between private sector and government, the institutions of the private sector, and the interface of government and private sector – Teranishi argues that fundamental system change takes place when three conditions characterizing a political economic system occur. The economic costs of maintaining it are too costly; the political costs of keeping it going are too high; and the rules governing the operation of the system become incompatible with social norms and values. When these conditions are met, the prevailing system becomes dysfunctional. Evolution takes place. A new system emerges out of the ashes of the old structure being discarded.

Using this framework, Teranishi argues that post-1870 Japan has passed through two systems: the Meiji-Taishō system and the high (miracle) growth era system. In the Meiji-Taishō system the private sector dominated the economy, government playing a relatively minor role. The main interface between government and the private sector was local, the *meibōka* elite lobbying for infrastructure in their districts in return for drumming up votes for the two major political parties. Local pork barrel politics dictated what the bureaucrats in the national ministries could and did accomplish. Eventually, during the 1920s and 1930s this system became dysfunctional. Extension of the franchise empowered tenant farmers; agriculture's share in national product fell, weakening a fiscal system mainly dependent upon the land tax; small rural banks became increasingly fragile; and many companies that had carved out niches during the World War I boom when imports were largely cut off became shaky, bringing down banks with them in some cases.

Out of this system emerged – during the late 1930s, World War II and the American Occupation – the institutions of the high-speed growth era. These included internalization of labor, extensive intervention of national government ministries in the private economy, industrial policy emerging as the key interface between the private and public sectors. This was the system that generated miracle growth.

Eventually it too became dysfunctional. Rising political costs of carrying out industrial policy were one problem. Increasingly, ministries were at cross purposes in implementing industrial policy, declining sectors competing for attention, each demanding intervention, cutting into the interests of other sectors when they managed to get protection from imports or subsidies that propped them up at least temporarily. The economic costs of maintaining the system soared as the yen appreciated. Consumers clamored for the benefits of a strong yen,

becoming increasingly restive over high prices that they attributed to excessive regulation. In addition consumerism affected social values. The younger generation became oriented towards consumption of material goods, less inclined to derive satisfaction from being a member of a prestigious "name brand" corporation. The bubble economy marked the last gasp of the high-speed growth system. A new system began emerging during the 1990s.

Is there evidence bearing out the notion of a system change? There are at least four quantitative indicators that suggest that a new era has dawned: a substantial drop in the investment and savings rates; a rise in unemployment rates, especially for young individuals, from the extremely low unemployment levels of the miracle growth period; a worsening of the income distribution; and consolidation and restructuring of the financial sector.

Consider investment and savings. As Table A.6 demonstrates investment demand has been falling off: particularly striking is the sharp drop in the contribution that investment demand growth makes to aggregate demand growth during 1991–2000 (see Panel B of the table). Even more striking is the decline in measured household savings rates. Estimates suggest that the rates have steadily declined over the 1990s – from around 10.8 percent in 1990 to 6.4 percent in 2000, tumbling further to around 2.4 percent in 2004. Moreover, credit card usage has spiraled upward during the same period. Estimates for 1980 showed Japan with a ratio of consumer credit to disposable income of around 10 percent (about half of the level in the United States). During the 1990s Japan's rate was actually greater than the American rate, dropping back to around 20 percent during the early years of the twenty-first century. During miracle growth most households in Japan had to save in order to purchase consumer durables. No more.

Showing that a structural break has occurred in savings behavior can be justified by considering the impact of factors that probably shaped savings in the past: income per capita growth, the level of assets relative to income, and aging. True, the Japanese population continues to age, thereby depressing savings. But the drop in savings in the 1990s and early 2000s is far too dramatic to be explained away in terms of aging. True assets have fallen relative to income in the aftermath of the bursting of the bubble. But savings rates were dropping even as asset prices were being driven up during the 1980s. Finally income per capita growth – embarrassingly low by miracle growth standards perhaps – has tended to be positive, albeit low, beginning in the early 1990s.

The labor market has also been transformed. From Table A.3 it is apparent that the rate began to creep up after the era of miracle growth had largely come to a close, accelerating in the late 1990s. Particularly striking is the growth of unemployment amongst the young aged 15–19. The growth of young adult unemployment has gone hand in hand with the proliferation of "freeters". The term "freeter" is an amalgamation of the German word "frei" (or the English word "free") with the German word "Arbeiter" (worker). It describes a person who is either unemployed or underemployed (moving in and out of employment) or working as a freelance worker, perhaps for a company that dispatches temporary workers to employers seeking an employee who works on a short-term basis.

Examples of "freeter" employment are convenience store workers, supermarket checkout employees, fast food employees and waiters in restaurants. Estimates of the number "freeters" in Japan varies depends on which ministry is doing the counting. The Japanese Ministry of Labor began publishing estimates of the number of NEET (not in education, employment or training), a definition that approximates the freeter definition, in 2000. A White Paper on National Life in 2003 estimated the number of freeters at over 4.1 million (an alternative official estimate was about half that number).

What motivates an individual to choose a freeter work style? The Japan Institute of Labor classifies freeters into two categories. One describes those who reject the values that the adult generation of the miracle growth era held regarding working for a large prestigious company. To some degree these individuals may be reacting to the way the implicit contracts of internalized market were revamped in the aftermath of miracle growth: the struggle for promotions was intensified, the possibility of forced transfer becoming a disquieting reality. A second type is the individual who has no alternative, who has no chance of securing employment in a good salaried position.

The social consequences of the freeter life style are important. Earnings being low most freeters cannot afford to marry and start a family. Female freeters tend to marry late or not marry at all. Often they end up living with their parents, joining the ranks of the so-called "parasite singles". As more Japanese embrace the freeter life-style, it is likely the gross reproduction rate will continue to fall.

Does low fertility encourage even further drops of fertility in post-1990 Japan? One can argue that parents are willing to tolerate housing freeters precisely because the number of children that they raised is small.

Another sign of changing labor market institutions is the growth of demand for mid-career hires. Rather than relying on fresh school graduates more and more companies are recruiting workers who have experience working elsewhere. Is this due to the increasing presence of foreign managed companies and subsidiaries in the Japanese market? Or is it the result of an increasing disintegration of the internal labor market model? Is Japan's labor market converging toward an American style market in which ten-year job retention rates are relatively low, especially for adults in their twenties and thirties?

Has the natural rate property of the Japanese economy changed? Has the Japanese economy shifted from one where the non-inflationary rate of unemployment, the so-called natural rate of unemployment, is over 4 percent, as opposed to the rates ranging between 1 and 1.5 percent characteristic of miracle growth?

One of the miracles in miracle growth was the fact that high-speed growth was achieved with equity. This surprised many economists. One of the assumptions made by most mainstream economists is that there is a tradeoff between growth and equity. At a low level of income per capita when agriculture predominates income is assumed to be distributed fairly equally. With industrialization and rapid accumulation of capital this changes. For instance when dualism emerged in Japan during the early twentieth century, income inequality did worsen. But

during miracle growth income inequality seems to have been muted, partly because agriculture was subsidized with the government's rice procurement program, partly because of the way the *shuntō* operated. Using estimates of the Gini coefficient (the lower the level of the Gini coefficient the more equal is income distribution) for Japan in 1968 (0.350) and in 1979 (0.336), we see that income distribution in miracle growth Japan and its immediate aftermath was relatively equal. However during the 1990s this changed: the Gini coefficient seems appears to have shot upward, from around 0.4 to around 0.433 (estimates of the Gini coefficient vary a bit depending on the nature of the households surveyed). There is little doubt that this trend mirrors the increasing presence of freeters and unemployed in the labor force.

Another quantitative indicator of structural change is the shakeup in the banking sector. Some banks were allowed to fail. As van Rixtel (2002: 250) shows, between 1990 and 1998 three city banks disappeared, eight second-tier regional banks vanished, 109 credit cooperatives closed their doors, and most dramatically over 2,000 agricultural and forestry cooperatives folded. Has Japan entered an era when unconditional moral hazard – every bank is bailed out no matter how badly managed it is, no matter how bad its loan program is – has given way to conditional moral hazard? Under conditional moral hazard government stands prepared to salvage responsible banks, not those managed irresponsibly. True, fear of foreign takeovers of Japanese banks limits the willingness of the Ministry of Finance and the political leadership to carry out a consistent conditional moral hazard approach. But the existence of bank failures suggests that the days of unconditional moral hazard are over.

Hyogo Bank goes under

From the theory of moral hazard, we have learned that an insuring agent – a central bank, a private insurance broker selling automobile premiums – can provide too much insurance, encouraging profligate and irresponsible behavior. For this reason there are limits to a central bank's willingness to bail out private banks whose managers may have made badly conceived non-performing loans, to fledging startup companies in industries going nowhere, to real estate speculators building structures that no one is likely to purchase, let alone occupy.

As we have seen there are two practices, peculiar to but not unique to Japan, that created an atmosphere of moral hazard in Japanese financial circles: the over loan policy of the Bank of Japan and the convoy system managed by the Ministry of Finance. Under the logic of the convoy system, groups of banks insured each other against the possibility of bankruptcy. In the event of a commercial bank failure government regulators would move in, arranging a merger of the embattled financial institution facing insolvency with a solvent bank. What was the incentive for the healthy bank to

acquire a bad business? Dangled in its face by the regulators was the acquisition of the acquired bank's branching rights (allocated by the regulators), potentially very valuable for future growth in depositors, especially in the big six cities. In addition, an acquiring bank might expect to be especially well treated by the Ministry of Finance, perhaps securing preferential treatment.

In August 1995 Hyogo Bank announced that it was failing. The regulators had finally decided to draw a line in the sand. Giving up on their effort to arrange assistance for beleaguered Hyogo with a package involving a group of strong banks, regulators let a very big bank – the Hyogo Bank was the thirty-eighth largest bank in Japan – that had made too many non-performing loans, had lost too much money in the Nikkei and land market rundowns of the early 1990s as the bubble economy came crashing to a dismal close – go under.

To some degree the willingness of the regulators to allow a major bank to fail was the result of the "big bang" reforms of the 1980s, substituting ex post *inspection of banking practices for advance guidance by the regulators. But it was also a signal that the Ministry of Finance was only willing to go so far in cleaning up messes attributable to poor commercial calculation, bad luck, or a combination thereof.*

This said it is clear that the regulators were not willing to jettison bailouts as a general rule. For instance in March 1998 the government pumped around 1.8 trillion yen into twenty-one banks perched on the edge of ruin, and another 7.46 trillion yen into fifteen large banks in March of the following year. When deemed necessary, the regulators were prepared to use funds taxed away from the public to shore up a shaky profit oriented banking system.

The willingness of the government to abandon its blanket bailout policy impacted international financial markets. Letting a major commercial bank like the Hyogo Bank fail triggered the emergence of the "Japan premium", a term describing the extra interest charged to Japanese banks by foreign lenders based in other countries. Unlike a Japanese bank's domestic depositors whose accounts are almost certain to be partially guaranteed in the event of a bank's failure, offshore lending to the bank is unlikely to be guaranteed. Hence foreign investors expect to receive a higher rate of interest than a domestic investor would, the premium for a specific bank reflecting perceptions of its stability and the expected returns to creditors following an unexpected failure.

Studies show that the Japan premium emerged in the wake of the Hyogo Bank's collapse, declined in 1996, remaining low through until late 1997 when a fresh rash of bank failures occurred, including the collapse of a "city bank", Hokkaidō Takushoku. Since late 1997 the amount of the premium has fluctuated, the market responding to informed opinion and rumors about the stability of particular banks and the willingness of the regulators to carry out thoroughgoing bailouts in the aftermath of the bubble economy collapse.

In addition to quantitative indicators of system change there are a number of qualitative indicators suggesting that Japan was undergoing substantial and wrenching change in the aftermath of the bursting of the bubble. International surveys of happiness carried out in the early twenty-first century ranks Japan very low; suicide rates for middle aged men terminated from their jobs appear to have been increasing during the 1990s and early 2000s; a Japanese television series about "Project X" highlights quality defects in Japanese manufacturing. Egregious examples cited in the television series include Sony's recall of over 300,000 batteries and a upward surge in the number of recalls carried out by Toyota, that latter committing itself to hiring thousands of engineers in an effort to reverse criticism of its deteriorating quality. To a growing number of Japanese consumers it appeared that South Korea, Taiwan and China were producing higher-quality goods than Japanese manufacturers were.

Teranishi's theory of sweeping structural transformation aside, economists and political scientists have weighed in with an abundance of theories about why growth in Japan has slowed down as much as it has. One argument that you should be familiar with from Chapter 1 is the liquidity trap theory (see Figure 1.4 D). The idea here is that interest rates had been driven to such a low level during the 1990s by Bank of Japan policy that further use of expansionary monetary policy was impossible. In one variant of this hypothesis emphasis is put on expectations about the yen/dollar exchange rate. To encourage investors to purchase American securities in the face of a possible depreciation of the dollar relative to the yen, Japanese interest rates dropped to a low level. True, nominal interest rates in Japan declined to extremely low levels during the 1990s. But as we can see from Table A.4 inflation rates were also very low during the late 1990s and the dollar actually appreciated against the yen during this period. Still, if Japan was in a liquidity trap during the 1990s, monetary policy became useless, sharply limiting the number of stabilization policy options.

A second line of argument focuses on facilitating/coordinating policy, especially industrial policy in manufacturing and Ministry of Finance administrative guidance in the case of banking. Anchordoguy (2000) argues that Japan's system of "catch-up" capitalism in which the Ministry of International Trade and Industry promoted models for acquiring foreign technology from international industry leaders began to sour during the post-miracle growth era. Using the software industry as an example, Anchordoguy argues that the Japanese computer companies became obsessed with using IBM style methods under administrative guidance from the Ministry of International Trade and Industry, employing reverse engineering wherever possible. In 1982, Mitsubishi and Hitachi were

caught stealing IBM technology, ultimately being forced to fork over massive annual fees to IBM for the use of the technology. Reacting to the "IBM industrial spy incident" the Japanese government sponsored a series of research and development projects designed to lead the industry away from the IBM standard, the most ambitious being the TRON project aimed at creating a Japan-specific operating system. While this project had some limited success within Japan itself, outside of the country it had little appeal. Internationally, IBM mainframe and personal computer software had a dominant position that TRON could not assail. Japan had locked itself out of international markets in the mainstream software sector.

Japan's computer game sector offers an interesting contrast according to Anchordoguy (2000). Largely left alone by the Ministry of International Trade and Industry it has flourished, enjoying strong demand in both domestic and international markets. The lesson is clear: industrial policy may be a good way to speed the process of "catch-up" growth. But it is a bad strategy for creating industries that flourish on their own innovative drive in a post-"catch-up" environment.

The critique by Van Rixtel (2002) of Ministry of Finance administrative guidance in the financial sector emphasizes other problems in the facilitating/coordinating model of policy-making, policy arising partly out of the regulated industry itself. Van Rixtel argues that Ministry of Finance accommodation of the wishes of the banks helped fuel the bubble itself, whose bursting undercut the viability of many of the banks. In effect he argues that administrative guidance in the financial field spawned moral hazard problems that would not have occurred had a different type of regulatory regime been in place. The problem was not regulation *per se*. The problem was the type of regulation.

The plight of the banks is often cited in explaining Japan's slow growth during the 1990s and early 2000s. It is said that they did not lend enough – or rather that they were not willing to lend to potentially innovative entrepreneurs – that they became overly cautious, that they refused to terminate non-performing loans. The fact that land prices continued to fall throughout the 1990s (see Table A.4) certainly made their fiscal lives difficult. As long as the value of their collateral kept following they were reluctant to terminate non-performing loans, continuing to extend credit to bad borrowers.

As is pointed out in the introduction to Blomström, Gangnes and La Croix (2001) the fact that Japanese banks were viewed as increasingly shaky and ill advised in their lending policies created growing distrust of Tokyo as a world-class financial center. Stung by this evaluation – maintaining the prestige Japan had garnered during the late 1970s and 1980s cannot be discounted as a motivation – the government further deregulated the industry with the Big Bang reforms of 2003. Despite these reforms many foreign financial institutions remain skeptical of the Japanese government's commitment to a responsible regulatory regime, in large part because of Ministry of Finance use of administrative guidance as opposed to clear and transparent rules.

For many students of the Japanese economy, however, it is not the banks, not aggregate stabilization policy, not administrative guidance and industrial policy, which is at the roots of Japan's current economic woes. Rather according to Katz (2003) the problem is total factor productivity. As long as sectors are protected from imports and thus shielded from the sting of global price reduction stemming from technological change in leading countries (whether the leader in a particular sector be the United States as in information technology and general purpose software, or Germany in the case of automobiles) productivity growth in Japan is likely to lag behind that of other countries. Exacerbating this problem is the fact that the most successful exporting companies, Toyota and Honda for instance, are increasingly carrying on their manufacturing outside of Japan. Another factor cited in discussing Japan's productivity problem: a decline in the skills acquired by youthful engineers, perhaps fueled by a failure of the Japanese educational system to keep up with trends in schooling initiated elsewhere. Is the long-standing emphasis on rote memorization in examinations catching up with the Japanese educational system? Or is the shop floor – once stimulating, indeed exciting to work in – becoming boring as workers are replaced with robots and digitally controlled machines?

True productivity can grow from sources other than total factor productivity. Accumulation – an increase in the capital/labor ratio – can fuel it. But as we know from Table A.1, Japan's capital/output ratio is already extremely high. So this is not a likely source for growth, at least for quite a while. Again, productivity growth can come from shifting resources like labor out of low productivity areas of a sector into higher productivity areas of the same sector. Moving workers from "mom and pop" retail outlets to convenience stores is one example of a possible productivity spur. How much productivity gain can be squeezed out of this type of change is questionable however. Unlike the sweeping gains during miracle growth in which agricultural employment gave way to manufacturing employment (one sector giving way to another), the type of structural change envisioned here involves change within a sector, less likely to boost the productivity figures at the aggregate level.

The political response

The fact that the bubble economy and the retardation afterward coincided with a growing number of scandals involving high level bureaucrats and politicians did not go unnoticed by the Japanese voter. Not surprisingly the Liberal Democratic Party's political support continued to erode. Still a fragmented opposition was having difficulty capitalizing on the disenchantment with the party that had ruled the country for so long. Growing dissatisfaction with this state of affairs was the political backdrop for the jettisoning of the system of voting for lower house representatives that had been put into place during the American Occupation, the multi-member medium sized district system being abandoned in favor of a system that mixed proportional representation with a single member district scheme.

As Reed (2003) points out there has been ongoing debate among students of democracy over the merits of single member "winner takes all" versus proportional representation systems. Those who think that it is important to have a majority in government – one that can actually pass legislation, one that can be held accountable in a future election for its deeds – favor "winner take all" systems in which one candidate from an electoral district emerges triumphant. This approach is known as majoritarian. The alternative view is that obtaining discussion, dialogue and consensus is the proper goal of democracy. Each voice should be heard. Parties should be represented in the legislature in proportion to their relative vote getting power in elections.

Between 1993 and 1996 Japan changed its system, moving away from the multi-member district system in which a voter cast one non-transferable vote, to a mixed system in which a voter cast one vote for a single candidate in a single member district and a second vote for the party of his or her choice, the proportional representation component of the election system. That Japan took this radical step – relatively few democracies have tinkered with their electoral systems in the post-World War II period (New Zealand has taken similar steps) – suggests that the Diet was concerned about growing discontent with the political status quo. Less convincing as a theory of the why the political system was willing to gamble on a radical change in the electoral system is the much vaunted theory that the Japanese people seek consensus. If this were true, why was proportional representation not adopted earlier?

Indeed, in the 1993 election the Liberal Democratic Party did not actually garner a majority of seats in the Diet. Thirty-nine members of the party precipitated the 1993 election by voting to support a no-confidence motion aimed at bringing down the party's cabinet. In bolting from the ranks of the Liberal Democratic Party they formed several new parties, including the Renewal Party and the Japan New Party. A combination of Liberal Democratic Party defections and the possibility of voting for fresh new parties ended almost four decades of Liberal Democratic Party rule. Ironically introducing the new voting system actually helped the Liberal Democratic Party. No longer were its candidates pitted against one another in districts. Now individual Liberal Democratic Party candidates could draw upon party funds, rather than upon individually managed local fundraising bases, in standing for election. Rather than minority/coalition governments emerging from the new voting system, the Liberal Democratic Party's fortunes were revitalized.

While Liberal Democratic Party hegemony over the national political scene soon resumed it occurred in an environment in which the demand for economic and political reform continued. As a result the party itself split into reformist and non-reformist wings, in effect one wing of the party engaging in all out political warfare with the other wing. The result was the dramatic election of 2005 in which Prime Minister Koizumi Junichiro triumphed over the opposition of his own Liberal Democratic Party colleagues. At the heart of his campaign was a drive to weaken the faction within the party committed to the Tanaka Kakuei pork barrel approach to policy making.

Postal reform as political theater

In a parliamentary democracy the astute prime minister must master the art of strategically picking clearly etched battles. Focusing on one or two symbolic issues designed to rally political allies and flesh out political enemies is one key. Another is timing. Knowing when to dissolve parliament and call an election; knowing how to frame the dissolution decision; knowing how to carry the battle to the electorate. In Japan post-bubble economy Koizumi Junichiro has proven to be a master of the art.

Making reform of Japan Post symbolic of his drive to transform Japan's political economy, Koizumi turned the lower house elections on 11 September 2005, into political theater of the highest order. Returned to power in 2003 with a diminished majority for his Liberal Democratic Party, facing an apparently increasingly popular Democratic Party of Japan, Koizumi had watched the fortunes of his party falter, mired as it was in a reputation for corruption, tarnished as it was for creating the regulatory politics of the 1960s and 1970s whose apparent legacy was the bubble economy.

Securing lower house passage of the postal reform in July, 2005, by a vote of 233–228, dividing his own party in the process, Koizumi's commitment to postal reform ran into concerted opposition in the upper house which voted down the measure by a 125–108 vote. Unable to muster enough votes in the lower house to override the upper house vote, Koizumi dissolved the lower house, calling for a September election to decide the fate of his proposed reform package. In the September election, Koizumi was triumphant, securing a landside, winning a commanding 296 seats in the 480-seat lower house, forcing the twenty-two members of the Liberal Democratic Party in the upper house who had voted against the reform to reconsider their positions.

To understand why the September 2005 election represents one of the most important examples of post-1950 political theater in Japan, an understanding of what Japan Post is and what privatization of the system (specifically splitting the banking and insurance services of the system off from mail delivery in 2007 and selling the banking and insurance services a decade later) may accomplish, is essential. In doing so, it is important to consider economic aspects of the privatization scheme separately from political aspects although they are both ultimately intertwined.

The economic reform drive centers upon reducing the role of government in the Japanese economy, increasing the returns on pensions (which will be a growing political issue as Japan ages), and making the financial sector more competitive. Japan Post is one of the most powerful financial institutions in the country, managing around a quarter of Japan's personal assets, around 85 percent of Japanese having savings accounts or other deposit accounts in the system. In 2006 it employed over 250,000 workers in about

25,000 post offices around the nation, far exceeding the 2,600 branches of the seven major banks.

Privatizing the financial wing of the system creates a major player in the private financial sector, one that can muster clout in going head to head with commercial banks. In theory privatizing the system, making it more competitive and market oriented, should increase the returns that investors in the system earn, bolstering pensions built up within it. From an economic viewpoint, postal reform is tantamount to making the Japanese economy more market oriented.

As important as the symbolic breakup of Japan Post is for the economy, as crucial as it may be to making a break with an overly regulated economic past, it is in the political arena that Koizumi's postal reform victory of September 2005 seems to be especially path breaking. In rural areas the post office has been intertwined with politics, used as a vote-generating machine by powerful politicians bent on keeping their Diet seats, used as a funding vehicle for pork barrel projects dear to the local rural district. Liberal Democratic Party politicians based in rural areas naturally wanted to keep this system functioning, protecting the jobs of postal workers who had assisted them in past campaigns, therefore breaking with their own party leader over the reform proposal.

Having gone to the polls with a clear intent of defeating this rural based old guard of the Liberal Democratic Party, Koizumi has effectively transformed the image of the party, making it more urban in its orientation, making it less dependent on the rural political machine wing that tended to prioritize the interests of farmers and rural pork masquerading as infrastructure needed for assisting remote villagers.

One can argue that Koizumi was completing a process initiated by the administrative reform movement of the late 1970s and early 1980s. In that movement the bureaucracy was under attack, but not the Tanaka style model of dispensing pork for votes. Koizumi carried the logic of the attack one step further. After all, Koizumi had progressed through his political career during the heyday of the administrative reform movement. His thinking was shaped by the debates going on about the spectrum of reforms that should be packaged into the *rinchō* program.

One of the main tenets of the administrative reform movement, however, was reining in government spending. Koizumi adhered to the logic of this position, thereby discouraging the use of expansionary fiscal policy as a tool for stimulating growth and reducing unemployment. In this sense, his commitment to political reform may have hampered his willingness to counteract Japan's economic doldrums through bold stabilization measures. Concerns about inefficient uses of public funds in pork barrel projects, concerns about controlling the

bureaucracy, concerns about the impact of aging on the viability – in short structural concerns – dominated the Koizumi agenda.

The question whether this approach to reform will continue to dominate Japan's politics remains to be answered. What is clear is that Liberal Democratic Party rule in the early twentieth century (if it continues) is likely to look very different than it did in the miracle growth period and its immediate aftermath.

Paths walked, paths taken

Path dependence is a strong concept. Whatever happens in the future depends at least partly on what has gone before.

Many social scientists think the idea is absurd. Consider Japan's economic transformation over the period 1886–2000 as captured in the snapshots that are Tables A.1–A.7 in the Appendix. By all accounts Japan is so different in the early twenty-first century from how it was in the late nineteenth century – in terms of per capita income, in terms of life expectancy and fertility, in terms of structure of output and labor force, in terms of the structure of aggregate demand, in terms of the anthropometric measures of height and weight – that talk of continuity over time is seemingly ridiculous.

Still continuity abounds. Indeed one can argue that the greatest continuity is in the very drive to innovate what became apparent when entrepreneurs built the first steam driven integrated spinning and weaving mills in Osaka in the 1880s. Even during the bubble and its problematic aftermath Japanese companies continue to be innovative, continue to take risks, continue to push into new ventures. In so innovating, they embody a past that they project into the future.

Sharp gambles on liquid crystal display technology

In the Schumpeterian model of invention, innovation, imitation and creative destruction corporate survival depends upon taking risks, gambling on new products, jettisoning old product lines. In the course of an industry's evolution, companies come and go, those wedded to the ways of the past disappearing, new startups taking their place.

The company that manages to remain in the marketplace for a long time – for a half century or more – goes through a parallel evolution, its product line and its target base continually changing as the industry it is associated with twists and turns through the forces of innovation and creative destruction. In this process of transformation, an externally imposed crisis can play a positive role, forcing management to think anew about the company's focus, necessity being the mother of invention as it were.

Sharp is an old company. Originally established in 1912, the company was founded by Hayakawa Tokuji to manufacture mechanical pencils, "ever

sharp" pencils, hence taking on the name Sharp. From pencils Sharp shifted its manufacturing focus to vacuum tube radios, exporting them throughout Asia during the 1930s. After the American occupation ended, Sharp moved into television set production, following other Japanese consumer electronics companies into making air conditioners and appliances for the rapidly growing domestic market of the miracle growth era.

In the early 1970s Sharp began to shift out of labor intensive manufacturing of consumer durables into the new technology intensive sector developing around the manufacture of semiconductors and especially electronic calculators. Through the 1960s and the 1970s Sharp research laboratories churned out impressive inventions in the calculator field – the world's first all transistor-diode electronic calculator in 1964, the first electronic calculator with solar cells in 1976, the world's first 1.6 millimeter thin electronic calculator in 1979 – putting Sharp in the forefront of the industry, focusing on the younger generation of consumers in Japan and abroad with "life products" exemplified by clever designs and aesthetics attuned to persons in their twenties. In pursuing this strategy, Sharp's management put strong emphasis on selling abroad, exports accounting for almost 60 percent of sales in the early 1980s. Then came the violent upward movement of the yen, rapid appreciation following the 1985 Plaza Accord.

In the wake of yen appreciation, sales of calculators dropped precipitously. Avoiding layoffs at all costs, Sharp focused on introducing emergency measures, cutting costs on all fronts and establishing new lower prices for exported products. More important, Sharp decided to initiate a shift away from labor-intensive consumer electronics exemplified by its calculators and semiconductors to knowledge intensive products, exemplified by its research and development in the liquid crystal business. Continuing to manufacture calculators while it built up its liquid crystal technological base, Sharp gambled on a technologically oriented strategy, risky because research and development takes time, often proceeding down blind alleys.

That Sharp was willing to enthusiastically embrace the new and risky and downplay the old and well worn was partly due to the relatively youthful structure of its management and its rank and file employee base. Of course the association between the youthfulness of a company and its innovation capacity is tricky. Innovative companies tend to grow fast, taking on young recruits at a higher rate than less innovative competitors, ending up younger.

Despite its attempts at restructuring initiated in 1986 in the wake of the Plaza Accord, Sharp continued to struggle through the late 1980s and early 1990s as weak sales of its calculators resulting from growing competition from manufacturers elsewhere in Asia imitating Sharp's products cut into its profits. By 1998 when Machida Katsuhiko took over the reins of the enterprise, the company was mired in a serious financial crisis.

Once again, Sharp's management responded to crisis by playing the card of technology, of innovation. Machida decided that Sharp needed to give up completely on semiconductors, computer monitors and tube televisions, products that had become increasingly cheap as global production and global imitation drove down profit margins for already established producers. Instead, Machida argued that the company needed to focus completely on its knowledge intensive product lines, especially those exploiting its own research advances in liquid crystal display that Sharp management had invested in aggressively on the heels of the rapid yen appreciation of the mid-1980s.

Focusing on flat-panel televisions that took advantage of the liquid crystal display technology that it originally developed in the 1970s for calculators and had improved upon in its laboratories during the 1980s and 1990s, Sharp's management turned the fortunes of the enterprise around, bolstering its formerly embattled profit margins in the early 2000s. Root and branch restructuring paid off. Still the restructuring of the late 1990s and early 2000s would have been far harder to carry out, perhaps impossible to achieve, had an earlier management team not committed itself to intense research and development in liquid crystal display technology during the crisis of the 1980s brought on by rapid yen appreciation. In this sense necessity, pounding on the door of Sharp several times, was the mother of Sharp's newest revival as it pushed into its ninth decade of continuous operation.

True, much of the innovation in Japan involves hybridization, the adapting of foreign technology to the Japanese economic, social and political environment. But this is true everywhere. Indeed the same charge was leveled against the American innovating entrepreneurs during the 19th century. One of the greatest examples of Japanese innovation is in facilitating/coordinating policy making, an area that may be proving to be as much a barrier as a fillip to future economic advance in Japan. But as we have seen administrative guidance is itself undergoing change, unconditional moral hazard giving way to conditional moral hazard in the financial field.

It is easy to dismiss Japan's long-run growth potential in light of the struggle its economy has been enduring in the wake of the bursting of the bubble economy. That would be a mistake. When the Western powers broke Japan open in the 1850s they set in motion one of the greatest locomotives of economic growth the world has ever witnessed. Once unbound from its shackles, this locomotive of growth – powered by innovation – has continued on its dramatic journey for over a century.

It will continue on that journey, perhaps gaining speed at times, perhaps slowing down at times, for centuries to come. The strongest continuity in Japan's modern history is change itself. Whether we view Japan through the lens of markets, or norms and values, or political constraints, the continuity of change is the one overriding reality, the one bedrock proposition that we should never ignore. Emerging out of Japan's long and tumultuous history, wedding traditional norms and values to Western institutions and technology, the Japanese company is a formidable innovator, a formidable competitor, adapting to changing market conditions, to changing political realities, to changing social norms. That is the most important implication to draw from this account of Japan's remarkable long-run economic development.

Key terms and concepts in Chapter 12

Forecasting national income
Freeter
Gini coefficient
Moral hazard and conditional moral hazard
Changes in the voting system introduced during the early/mid-1990s

Appendix

Japanese economic development, 1886–2000 – a statistical portrait

A rich statistical record

One of the great attractions of becoming a student of Japan's economic development is access to statistical documentation covering Japan's economy prior to, during and after, its extensive industrialization and transformation from low to high levels of per capita income. Indeed, it is difficult to deny the statement that the statistics documenting Japan's economic development are more wide ranging and detailed than are the statistics of any other country undergoing development in the nineteenth, twentieth and twenty-first centuries.

Ultimately, Japanese government ministries deserve our gratitude for collecting, processing and publishing tabulations from the censuses and surveys they have carried out since the 1870s. While corporations and individuals have left useful statistical records of their activities, it is the Japanese government agency that has done the lion's share of documenting Japan's economic transformation. It should be kept in mind that while some of the numerical information available is generated from administrative functions carried out by officials – for instance collecting taxes and duties on imports, administrating employment exchanges, managing welfare offices, counting persons who clear customs at airports – much of the data was secured through special surveys. Some surveys, like the population census, attempt to count everyone residing in Japan. Other surveys attempt to sample from the population in order to make reasonably reliable inferences about the population or sub-populations as a whole.

For those interested in working with the original publications of Japanese ministries, a word of warning is in order. The names of the publishing agencies change due to administrative revamping and reform in Japan's national, prefecture and local bureaucracies. For instance consider the agency that publishes the statistical yearbook for Japan. Between 1881 and 1939, the Cabinet Bureau of Statistics (Naikaku tōkeikyoku) was responsible for issuing the *Statistical Annual of the Japanese Empire*; in the early 2000s it is the Statistics Bureau of the Ministry of Internal Affairs and Communications that publishes the yearbook and maintains the website (www.stat.go.jp/english/data/chouki) containing long-term historical statistics for Japan. Or consider the census. Between 1920 and 1940, it was administered and processed, by the Cabinet Bureau of Statistics. Beginning