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GROWTH AND CRISIS IN THE JAPANESE ECONOMY

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Growth and crisis in the Japanese economy.

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Abstract

Japan' economy has experienced a period of very rapid economic growth in the 1950-1973 years, a partial slowing down of the rate of growth up to the end of the 1980s and then a prolonged severe structural crisis in the last two decades. The paper gives an overview of Japan's main economic trends and policies in the post-war period and tries explaining the period of rapid growth and the period of structural crisis with an interpretative framework that can in part account for both phases.

Growth and crisis in the Japanese economy.
Vittorio Valli[1]

1. The flying duck that was not able to walk

Between the early 1950s and the late 1980s Japan was the first major country outside Europe and North America to experience a period of exceptional and lasting economic growth, which carried it into the league of the world's great industrial powers. However, after the 1973 energy crisis the pace of growth slowed down and, at the beginning of the 1990s, the Japanese economy slid into a deep structural crisis which the country has been unable, in over two decades, to overcome (see figure 1 and tables 1 and 2).

For example, in 1991-2011 Japan's annual rate of growth of real GDP went down to 0.7%. Moreover, Japan's per capita GDP in percentage of the US level decreased from almost 85% in 1991 to less than 72% in 2010.

Notwithstanding this, in 2011, Japan, with its 128 million inhabitants and about one third of the total GDP in PPPs of the USA, still ranked as the world's third economy, and the second one for overall technological level.

There are countless analyses of the period of rapid Japanese growth, and many analyses of the structural crisis[2], but few with an interpretative framework that attempts to simultaneously account for both phases.

My proposed explanation is suggested in the title of this paragraph and will be described in more detail in paragraph 5.

The Japanese economy, as it developed after the Second World War, was an exceptional flying machine—a graceful duck that could fly beautifully and very high. However, some of the very features that propitiated this flight, once on the ground made it more difficult and awkward walking. Metaphors aside, the Japanese economy was well-equipped to continue at a high growth rate, when capital gains were huge and positive, but when, for a variety of reasons, the structural and cyclical bubbles exploded, growth fell below a given

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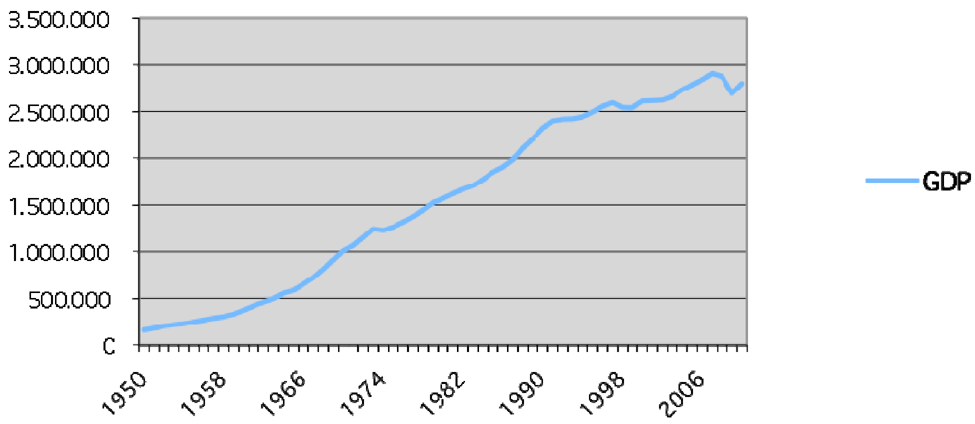
1 University of Turin, Department of Economics Cognetti De Martiis (vittorio valli@unito.it). The paper represents a chapter of a forthcoming book on the major Asian economies.

2 See, for example, Aoki (2001), (2011), Boltho (1975), (2009), (2011), Boltho, Vercelli, Yokishawa (2001), Caballero, Hoshi, Kashyap (2008), Dore (1973), (2000), Fodella (1989), (1993), Hoshi, Kashyap (2004), Kosai (1986), Morishima (1982), Nakamura (1981), Ohkawa, Shinohara (1979), Okumura (1994), Patrick, Rosovski (1976), Shinohara (1982), Yoshikawa (1995).

level, capital gains became capital losses, and Japan's economy collapsed, struggled to recover and was no longer able to proceed at an adequate pace.
The development of Japan in the post-World War II era can be divided into four major phases: the *reconstruction* period (1945-1953), the *high growth* period (1954-1973), *the slowing-down phase* (1974-1990), and the *structural crisis* period (1991-2011). [3]

Figure 1. Japan' s economic growth: 1950-2010

(Real GDP in millions 1990 USD in PPPs GK)



Source: Conference Board-GGDC (2011)

[3] Sometimes the years preceding the 1990-91 crisis are called the "bubble period" (see Japan Statistics Bureau, 2011).

Table 1. Japan and the United States

(Real GDP and per capita GDP in PPPs GK, international 1990 USD: USA = 100)

	1950	1973	1991	2010
GDP (% of USA)	13.0	35.1	41.4	29.6
Per capita GDP (% of USA)	23.3	68.5	84.7	71.6

Source: Conference Board-GGDC (2011)

2. From Reconstruction to the high growth period

During the reconstruction period, which lasted roughly from 1945 to 1953, when real GDP overtook its previous historical maximum, not only did the country achieve a very high rate of growth (9.9% real GDP growth per annum) but, most important, the stage was set for a long period of rapid and relatively stable growth. There was an ideal cocktail of starting conditions and traditions, local decisions and strategies imposed by the American occupation, which would subsequently lead to an extraordinary economic growth from 1953 to 1973, with a 9.1% average annual rate of increase in real GDP (see table 2).
The main ingredients of this ideal cocktail were partly common to other countries, and partly specific to Japan. What several other countries shared, especially *latecomer countries* in Gerschenkron's terminology[4], was the advantage of being able to mobilise a large labour force from lower productivity sectors, such as agriculture, to higher productivity sectors, such as industry and modern services. Moreover, Japan could experience a rapid technological upgrading via the purchase, or copying, or imitation, of more advanced technologies from countries such as the US, Germany, France and the United Kingdom.

Table 2. Annual average compound rates of change of real GDP in PPPs in Japan: 1945-2011

1945- 1953	1953- 1973	1973-1991	1991-2011
9.9	9.1	3.7	0.7

Sources: Maddison (1995) for the years 1945-1953, Conference Board- GGDC (2011) PPPs GK for the succeeding years, OECD estimates for 2011.

[4] See Gerschenkron (1962). The author asserted that latecomer countries could exploit some advantages, due to their relative economic backwardness, which might facilitate their economic catching-up.

An additional advantage came from the ability to convert certain goods and services from small-scale to mass production, in order to fully utilize economies of scale. In the 1950s and the 1960s, Japan could thus take advantage from its peculiar version of *the fordist model of growth*, very rapidly increasing productivity, wages, employment, total profits and aggregate demand.

Thirdly, the Korean War provided Japan, South Korea and some other Asian countries with a strong demand for goods and services mainly destined to the US military effort.

Finally, as many other nations, Japan also shared the advantage of entering an expanding and increasingly liberalised global marketplace, which meant it could also rely, especially from a certain point onward, on the stimulus of exports. However, as Andrea Boltho has shown[5], Japan did not experience an export-led pattern of growth. Boltho maintains, on the contrary, that during the years 1950-1973 the expansion of exports and of the economy was demonstrably driven chiefly by internal factors, although exports were important in order to increase efficiency and provide the means to import energy and capital goods.

There were, moreover, several conditions peculiar to Japan.

First of all, there was a comparatively high 'human capital' resulting from the traditional propensity of households and companies to massively invest in education and training. In 1950 the average years of education for people aged 15-64 were in Japan 9.1, lower than the United States (11.3) and Germany (10.4), but close to the level of much richer countries, such as the Netherlands (8.1) and France (9.6)[6]. In 1973 this indicator went up to 12.1 years, well over most other industrialized countries, with the exception of the United States.

Another element, which favoured growth during that period, was the system of industrial relations, based in large corporations upon corporate contracts with company trade unions that were for the most part cooperative.

Moreover, there was *lifetime employment* for the majority of employees in large and medium sized companies and the ensuing dualism, which this created in the labour market. Dualism was between large companies with high productivity, high wages and mostly stable jobs, versus small firms with much lower productivity, lower labour costs, more labour mobility, but with a large absorption of employment. A widespread reliance of larger firms on sub-contracting, generally to small firms, interconnected these two poles of the labour market and production system.

In addition, the country reaped the benefits of political stability and skilful manoeuvres by the public authorities, especially the MITI (Ministry for Industry and Foreign Trade), which oriented private sector production strategies toward more modern and dynamic segments, thereby stimulating continuous improvement and technological progress.

There also was a very peculiar system of corporate governance and operation of the

[5] See Boltho (1994).

[6] See Maddison (1995), p. 37.

financial markets and of the banks. It was based essentially on the fact that a large savings pool, coupled with an elevated GDP growth rate and the traditionally high propensity of families to save, could provide a source of low cost financing to corporations over the medium to long term, thanks to the close ties linking corporations to their "main banks" -- i.e. the banks with which the companies formed preferential relationships, often with cross ownership of shares. In fact, the major corporate groups tended to make considerable investments, securing a large slice of their capital needs from a single bank. Major corporations often held sizable shares of their "main banks", and vice versa, so that each was represented on the other's board of directors. This close-knit relationship between banks and corporations, while it permitted more far-sighted investment strategies and gave the companies greater scope of action during prosperous times, also made hostile buyouts of those companies extremely difficult. As a result the corporations tended to grow increasingly self- enclosed. Their managers became less accountable to ordinary shareholders, and the stock market became more fossilised, with less floating capital, making it more easily manipulated by small groups of power brokers. Although this system assured stability during the years of expansion and was more able to absorb small crises, it proved much more vulnerable in the event of a major and prolonged recession, as the great structural crisis started in 1990-1. In fact, a protracted crisis in a major corporation could have a knock-on effect on its main banks, causing them to cut off lines of credit to other companies, even if fundamentally sound, precipitating a chain of bankruptcies of companies and banks.

Finally, there were wide-ranging institutional reforms put in place by the American occupation during the latter half of the 1940s. These went in the direction of a deep redistribution of rural land, the dismantling of the *zaibatsu* (the huge banking and industrial conglomerates) and the deposition of most of the great capitalist families. There also was the US encouragement to re-establish the trade unions, only to subsequently repress some of their activities. Agricultural reform brought social stability to rural areas and consolidated the power of the Liberal Democratic Party, which dominated the Japanese political scene for much of the post-World War II era. The break-up of the *zaibatsu,* the overthrow of some great capitalist families and the agricultural reform helped reduce social inequalities. However, it was not possible to prevent the resurgence of the old industrial-financial conglomerates in the form of *keiretsu*, though now controlled by managers rather than by the owners as before: hence the term *Managerial Capitalism,* to describe the Japanese flavour of capitalism.

These changes, partly brought about by the Americans, helped make Japanese society more egalitarian and with less social conflicts, and this, along with various other factors, strongly contributed to a smoother and more stable economic growth trajectory during the years 1950-73.

There was an additional factor—one that is difficult to analyse, but which played an important role. The humiliation of military defeat at the hands of the US had instilled in Japanese society a desire to even up the score, coupled with a certain tendency to emulate

the victorious American model. This settling of scores, which could not be achieved in the military arena, was instead sought on economic and technological terrain, and by the end of the 1980s Japan had competitively overtaken America in various sectors of industry, heavily penetrating the US market. However, as Japan progressively caught up with, or even surpassed the US, and the wartime generations went off the scene, this urge to settle scores began to fade.
It should also be noted that the United States strongly contributed, also during the post-occupation period, to the economic reconstruction and development of Japan, by importing many goods and services from Japan's economy during the Korean war, by adopting an open and friendly tariff structure and opening its market to exports of Japanese goods and FDI flows. Meanwhile, through the American military presence and nuclear umbrella, the US enabled Japan to focus all its efforts and resources solely on civil production. It was clearly America's intention to keep Japan within its sphere of influence, in order to establish an economic and political stronghold in a strategic area of the Pacific, in particular to contrast the USSR, China and North Korea.

3. The high growth period and the fordist model of growth (1953-1973)

After the completion of Reconstruction, Japan could begin its long phase of very rapid economic growth, which lasted about two decades. It was an extraordinary accomplishment, with no previous historical precedent. Among the major economies China only, from 1978 onwards, has experienced an even longer period of similarly rapid and stable growth, but starting from a much lower level of development.
Table 3 gives an idea of some of the major aspects of Japan's economic development and profound structural changes in the 1953-1973 years. It is important to remember that in 1953 Japan had a per capita GDP in PPPs that was less than one fourth of the US level and about half of Italy's level.
However, in the 1975-73 years, the average annual rates of growth of real GDP (+ 9.1), per capita GDP (+ 8.0) and labour productivity were very high, much higher than in all other industrialized countries. The inflation rate was contained. The rates of growth of real investment, real consumption, real unit wages, total wages and exports were very sustained. Employment increased substantially so that the rate of unemployment remained very low. The balance of current accounts, negative until 1967, became almost permanently positive, so that Japan soon became a net creditor country.
While in 1953 Japan had an important agricultural sector, which accounted for almost 40 % of the employed labour force and a substantial part of total GDP, in 1973 the situation had radically changed. Agriculture's share in total employment had fallen to 13.5% while industry's share had risen to 36.6% and services were up to almost 50%.
Also income inequality was considerably lower than in the pre-war period thanks to the dispossession of the rich zaibatsu owners, the agrarian reform imposed by the US, the high

rate of employment and the relative moderation of the wages of top managers. In the 1950s and in the 1960s income inequality was considerably lower than in the United States and in several other industrialized countries[7].
The level of education, which in 1953 was higher than in other countries with a similar level of development, increased rapidly, approaching, or even surpassing, in 1973, the level of several economically advanced countries. The expenditure in R.&.D increased rapidly, at first mainly under the impulse of the government and from 1959 onwards also for the massive investment of large corporations. Public infrastructures (such as railways, roads, ports, airports, telecommunications, hospitals, schools, etc.) improved briskly under

Table 3. Japan's economy: 1953-1973

Indicators	*Years*	
Annual average rates of change:	1953-1973	
Real GDP in PPPs	9.1	
Real per capita GDP in PPPs	8.0	
Population	1.1	
Employment	1.5	
Real labour productivity (GDP/employment)	7.6	
Real gross investment (1955-1973)	14.9	
Exports in volume (1955-1973)	13.5	
Real private final consumption (1955-1973)	8.7	
Real government consumption (1955-1973)	4.4	
Levels:	1953	1973
% of employment in agriculture, forestry and fishing	39.9	13.5
% of employment in industry (mining, manufacturing, constructi	24.3	36.6
% of employment in services	35.8	49.9
Level of GDP in PPPs GK in % of the level of the United States	13.0	35.1
Level of per capita GDP in PPPs GK in % of the level of the US	23.3	68.5
Unemployment rate (%)	1.8	1.3
Education (years of education for person aged 15-64)	9.4	12.1

Sources: Conference Board-GGDC (2011), Japan Statistics Bureau (2012), Maddison (1995), p. 37.

[7] The multiple of top decile per capita income on the bottom two deciles was 7.5 in Japan (1969), while it was 8.1 in Sweden (1972), 9.1 in United Kingdom (1973), 10.5 in Germany (1973), 14.4 in France (1970), 14.9 in USA, 20.0 in Brazil (1970), (see Maddison, 1995, p. 52).

the impulse of an expanding demand and a vigorous answer by politics and public administration.
The technological level rose also very rapidly because of the high rate of growth in investment, which in many cases incorporated foreign advanced technology, and the buying or imitation of foreign technology, but also because of the great increase of internal know-how and the massive effort in education and in R. & D., the latter especially from the 1960s onwards.
In the 1953-73 period in Japan there was also the participation in the second wave of the *fordist model of growth*, although applied in a very peculiar way.
In Japan, as in Western Europe, there was the complex macro-economic feedback between the high rate of growth of GDP, large economies of scale, high rate of growth of productivity, of unit wages and employment and thus of total wages, reduction in relative prices of many important durable consumer goods and services, the rapid rise of internal demand, of exports and total profits and thus of both intensive and extensive investment, etc.
However, from the micro-economic point of view, at the corporate level, the Japanese approach was very different from the US and the Western European examples.
One might say that in Japan there was the macro-economic *fordist model of growth* without several elements of *fordism* at firm's level, regarding industrial relations, the organization of labour and of production, etc. In fact the Japanese model of production in several major corporations was largely inspired by the concept of *TPS* (Toyota Production System) or *Toyotism*, or, more generally, by the concept of *lean production*, which changed in several ways the rigid, vertical organizational model prevailing until the late 1970s in most European industrial corporations and the US. Lean production[8], with its well known ancillary concepts of *just in time* manufacturing, *kamban* (pull systems), *kaizen* (improvement teams), etc. tried to avoid all sorts of wastes and increase production efficiency and flexibility. It also tried to smoothly adapt production to consumption, and not consumption to rigid production plans. Although implemented only in a sizable part of the Japanese productive system, lean production strongly contributed to determine the high growth rate of Japan's economy especially in the 1960s and the 1970s.
In the 1970s the main economic problems were housing, environment and energy dependence. Housing was very costly, so that most families could afford only very few per capita square meters, substantially less than in countries with similar levels of economic development. Pollution was very high, although in the 1970s the environmental policy began to become much stricter after cases of heavy pollution and thousands of deaths, as it happened in the 1960s in the Minamata city area. Energy dependence from abroad was

[8] On Japan's organization model and lean production, see, for example, Dohse, Jurgens, Malsch, (1985), Ohno (1988), Krafcik (1988), Kenney, Florida (1988), Womack, Jones, Roos (1990), Womack, Jones (2003). See also Kenney, Florida (1993) for the attempt to transfer Japan's organization model to some US corporations.

very high (about three quarters of total primary energy consumption had to be imported). Among major industrialized countries only Italy was more dependent than Japan from foreign energy sources.
This pushed the government to make a massive program in nuclear energy plants, whose defects in case of great hearthquakes and tsunami, were put in dramatic evidence by the Fukushima events in March 2011.

4. The phase of slowing-down (1973-1991)

The two great energy crises (1973-4 and 1979-80) contributed to sharply reduce the rate of growth together with the crisis of the fordist model of growth and the gradual vanishing of Gerschenkron's advantages of relative economic backwardness. The average annual rate of growth of real GDP fell from 9.1 in 1953-73 to 3.7 % of the 1973-1991 period. However, Japan continued to grow much faster than the US and Western Europe, reducing the gap with the United States. Total GDP in PPPs reached in 1991 over 41% of US GDP, while per capita GDP went up to almost 85% of the US level (see table 4). In some industrial sectors, such as for several microelectronic goods, motorcycles, automobiles, colour TV, etc. Japan was even able to overtake the US and Western European countries becoming the top exporter in the world market.
The economy continued to be technologically dynamic thanks to a highly educated labour force and a great public and private effort in R&D. R&D. expenditure in % of GDP rapidly rose becoming in the 1990s higher than in the major Western European countries. Many firms passed from the phase of imitation and purchase of foreign technology to the phase of genuine innovation.
The rate of growth of real investment, though consistent, fell remarkably compared with Japan's high growth period, and since 1978 it became much lower than the corresponding rate of growth of real investment in China and other emerging countries.
Economies of scale were less important and less pervasive than in the previous period and the rate of growth of productivity slowed down from 7.6% in 1953-73 to 2.5% in the 1973-1991 years.
However the more devastating long-run change was the demographic one. Since the second half of the 1970s there was a gradual, but inexorable, slowing down of the rate of growth of population, which fell from 1.3% in 1975 to 0.3% in 1991, becoming even negative in some years after 2005. Very low fertility, continuous prolongation of elders' life and strict barriers against immigration began to lead to an accelerated cumulative ageing of population with all its negative effects on economic dynamics in the 1990s and 2000s.
Table 4. Japan's economy in the 1973-1991 period

Annual average rates of change:	1973-1991

Real GDP in PPPs	3.7	
Real per capita GDP in PPPs	3.0	
Population	0.7	
Employment	1.2	
Real labour productivity (GDP/employment)	2.5	
Real gross investment	3.6	
Exports (in volume)	7.1	
Real private consumption	3.6	
Real government consumption	4.7	
Levels:	1973	1991
% of employment in agriculture, forestry and fishing	13.5	6.7
% of employment in industry (mining, manufacturing, construction)	36.6	33.9
% of employment in services	49.9	59.4
Level of GDP in PPPs GK in % of the level of the United States	35.1	41.4
Level of per capita GDP GK in PPPs in % of the level of the US	68.5	84.7
Unemployment rate (%)	1.3	2.1
Balance of current accounts in % of GDP	0.1	2.0
Education (years of education for person aged 15-64)	12.1	14.7

Sources: Conference Board-GGDC (2011), Japan Statistics Bureau (2012), Maddison (1995), p. 37. OECD, (2011).

5. The passage to the structural crisis

To better understand why the model of exceptionally fast economic growth, which persisted in Japan for two decades in the 1953-73 years, was already beginning to waver during the period 1973-91 and then definitively failed, it is important to consider, in addition to the gradual attenuation of the growth factors mentioned in paragraph 2 - 4, an important feature of the relationship between financial economy and real economy in Japan, and namely the role of *capital gains*. In the Japanese case, share and property prices had become increasingly inflated during the period 1946 to 1990. Up until 1990, these assets remained hugely overpriced compared with the level of most other countries, and since the 1980s even compared with highly industrialised countries. The bubble had been gradually created by the action of two mechanisms. First, property and building land prices were rising steeply in response to strong economic growth and a high concentration of the population in certain metropolitan areas (Tokyo, Nagoya, Kyoto, Osaka, etc.), and in the absence of adequate territorial and development planning policies. This pushed up the value of real assets owned by major corporations as well as smaller companies, which

were able to use these properties as collaterals to secure further generous loans from banks. In its turn, the scarcity of floating funds on the stock exchange and growing demand for shares on the part of businesses and investors drove up stock market prices beyond levels justified by normal parameters. What is more, the shares themselves could also be used as collaterals for securing loans. Generous loans from banks in turn made it possible for companies to rapidly step up both intensive and extensive investments—increases that were in any case justified by the expectations of a high GDP growth and global demand. High growth thus became self-perpetuating. The elevated rate of GDP growth, made possible by the rapid rise in investments, brought in large profits and increased the value of assets (real property and stocks), which in turn made possible more financing from banks, more investments, etc. Banks were lulled into a false sense of security over the soundness of their investments by the inflated value of the shares and property, which served as collaterals for those loans. So long as rapid growth could be sustained, everything went well or fairly well, and in fact this mechanism of growth was merely weakened—not overturned--by the two major energy crises of 1973-74 and 1978-80. Real GDP growth dropped more than half, from 9.1% in 1953-73 to 3.7% in 1973-91, also because Japan was one of the industrialised nations that depended most heavily on imports for its energy needs, and because in the 1970s and '80s it began to implement a costly, but indispensable, programme of environmental restoration. Moreover, as we have already mentioned, the advantages of relative economic backwardness were gradually vanishing and the crisis of the fordist model of growth was becoming severe. All this had the effect of putting the brakes on growth, although Japan continued to outpace both the US and Europe. However, at the end of the 1980s and at the beginning of the 1990s the Japanese growth mechanism broke down entirely, under the twofold impact of the liberalisation of capital movement and the structural economic bubble, compounded by a cyclical speculative bubble, both of which burst in 1989-1990.
One of the mainstays of the Japanese model, up until the mid- 1980s, had been a strict closure of its market to cross-border capital movement. This meant that Japanese investors could continue to be paid very low interest rates on bank deposits and bonds--generally well below the rates prevailing in most industrialized countries—and this enabled banks to issue low- cost loans to companies and individual investors. This fuelled the high rate of growth of real investment, and so the continuation of a rapid growth, but also the structural bubble on buildings and shares. However, this process could not go on endlessly and it was at odds with the process of liberalization of capital movements and of financial globalization.
After the 1966 entry in OECD, in 1967 Japan had relaxed some constraints on capital movements, but its regulations remained very strict and its international portfolio capital flows remained very limited, while for FDI outflows came to largely surpass inflows. In contrast with post-1978 China's policy, Japan did not rely on foreign direct investment in order to acquire more advanced technology and know- how.
However, the pressure of the United States and of internal financial circles induced Japan

to introduce a new *Foreign Exchange and Foreign Control Law* in December 1980 and to sign an important *Yen- Dollar* accord in 1984.
So, in the second half of the 1980s capital movements between Japan and other countries, especially the US, were substantially liberalized and began to rapidly increase, under the impetus of growing financial liberalisation, the expansion of investment funds, the modernisation of the stock exchange (the "Big Bang", advances in data communications, etc.) and the permanence of a high positive balance in current account in Japan, versus a large deficit in the US. The net outflow of portfolio capitals from Japan, especially towards the US, became huge. This heavily contributed to trigger the 1990-1 crisis in Japan, when there was the contemporary explosion of both the cyclical and the structural bubbles. A great net outflow of capital from Japan continued in most of the 1990s and contributed to finance the US expansion in the decade. It also structurally weakened Japan's ability to finance its productive system and to compete with the US in high-tech sectors such as IT, telecommunications and the "new economy" in general, in which the United States regained supremacy. In the first decade of the 2000s Japan's capital movements continued to heavily finance the US, but also China began accumulating a huge current account surplus and buying a very large amount of US Treasury bonds and other American financial assets, surpassing Japan as the top net creditor of the United States.
The collapse of the speculative bubble in the stock exchange, and the ensuing collapse of building land prices and the property market in general--precipitated in the second half of 1990[9]--had distant roots as well as more immediate causes. The latter were connected with financial deregulation, overly expansive monetary policy adopted in the 1980s and the abrupt switch to more restrictive policies in 1990-91. •The distant roots were of a structural character, and in the case of stocks essentially involved, as Hiroshi Okumura argues[10], the process of *corporatisation of share ownership*, that is to say a strong increase in share ownership by major corporations. The corporations had in fact directly or indirectly acquired, through various forms of cross-ownership, large shareholdings, which assured them a controlling stake in the companies. These majority shareholders (the corporations) were therefore not so much interested in dividends as in controlling the companies themselves. What is more, in order to secure fresh funding through capital increases, the corporations/majority shareholders had every interest in keeping stock prices high, so as to sell new shares to the public at the current market price. At the end of the 1980s the lack of floating capital and a great deal of manipulation contrived to artificially inflate share prices. High and rising stock market prices induced many small investors to

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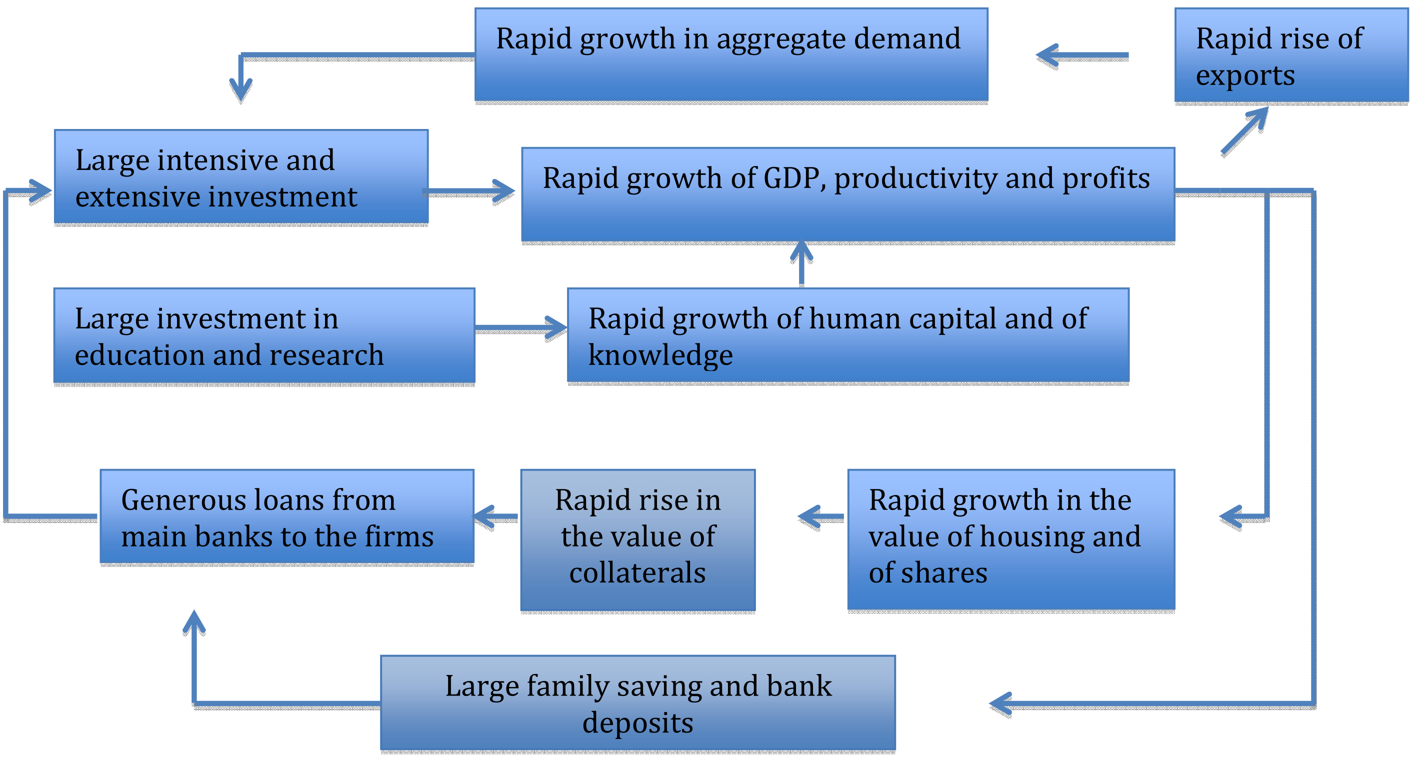
[9] The market capitalization in the Tokyo Stock Exchange went down by 46% from 1989 to 1992 and the price of housing fell by over one third from 1990 to the second half of the 1990s.

[10] See Okumura (1994).

buy shares, not so much with an eye to dividends as to the potential *capital gains*, and this in turn contributed--during the growth years--to further push up share prices, and so forth.

Figure 2. Main features of the Japanese growth model and of its crisis*



* During severe crises the direction of arrows and of changes are inverted (there is the burst of the bubble, a reduction of the prices of housing and of shares and a subsequent fall in the value of collaterals, etc.). See Valli (2002), p. 185).

As we have pointed out, the inflated value of the stocks and property offered as collaterals to banks enabled companies to secure generous loans and invest heavily, perpetuating the cycle of rapid growth.

Then, with the gradual opening of the market to capital movements, beginning in the mid-1980s, Japanese investors had the alternative of placing their savings in US public bonds and other financial assets, where shares gave higher dividends and public bonds were less risky and yielded higher returns than in Japan. Nevertheless, as long as the higher dividends and returns obtainable abroad were counterbalanced or exceeded by expectations of greater capital gains obtainable in Japan, or by the benefits accrued from appreciation of the yen relative to the dollar or other currencies, the Japanese model could be sustained. However, when, in 1990-1, the speculative bubble burst, these expectations were inverted and became expectations of capital losses for both property and stocks, causing the model to collapse.

To put a stop to capital flights, the Japanese monetary authorities had indeed increased the interest rate in 1990-91, thereby aggravating the crisis in the stock exchange as well as in the property and bond markets. The banks, in ever deepening trouble and no longer adequately covered by stocks and property mortgages due to sharp drops in the value of both, drastically cut lines of credit, causing the real investments of companies to slow down and ultimately collapse. The crisis, originally confined to finance, propagated to the real economy from 1991 to 1993. Due to the close interrelationship between banks and industry, which lay at the root of Japan's *main bank* model, this further aggravated the situation of many Japanese banks, securities companies and insurance companies. Despite State interventions to bail out some of the most important Japanese financial intermediaries in the 1990s, the financial sector, which had been the driving force behind the Japanese growth model from the 1950s to the end of the 1980s, became enfeebled in the nineties, depriving the Japanese production machinery of its lifeblood. The attempt by the monetary authorities to keep the rate of interest low led to a sort of Keynesian "liquidity trap", i.e. to unused liquidity inland, as well as heavy capital outflows.

Moreover, a close interrelation between bank and industry remained, so that several banks continued financing the so called "zombies-firms" reducing the process of "creative destruction" and the possibility to finance more vigorous and dynamic new firms[11].

The deep financial crisis of South-East Asia in 1997-98 and the World financial crisis of 2007-11 further contributed to depress the recovery of Japanese finance and industry, so that between 1992 and 2011 the economic performance of Japan was among the worst in the industrialised world. • Japan, hitherto accustomed to fast growth, found itself posting real GDP growth rates well below those of its major competing countries. The depressed expectations for growth had a diametrically opposite effect to the high expectations of the period preceding the speculative bubble, hampering all attempts at recovery. Over time this started eroding what had been the pillars of the Japanese growth model in the post-World War II era. Some large corporations began downsizing, abandoning the system of lifetime employment for the majority of their workers, which had prevailed up to the end of the 1980s. Companies also began investing less both in upgrading production capacity and in R&D, thereby undermining two of the key factors (high rate of investment and rapid technological progress) that had underpinned Japan's growth model. Job losses in some companies and cut-backs in extensive investments started pushing up the unemployment rate, which reached 4.7% in the year 2000 and over 5% in 2011, a very high level for Japanese standards. The liberalisation of capital movement and the crisis of the Japanese financial system prompted many companies to seek capital overseas, and

[11] See Hoshi, Kashyap (2004), Hoshi (2006), Caballero, Hoshi, Kashyap (2008).

many investors to place their money in foreign stocks or bonds. The crisis of some Japanese industrial conglomerates led them to sell off controlling stakes to foreign groups (consider, for example, the Renault – Nissan case) and to accept the progressive penetration of foreign capital into Japan, which up to the beginning of the 1980s had been almost non-existent. The rate of growth of real investment declined compared with the 1980s, and many Japanese corporations began to invest more in emerging countries, in the US and in Europe than on the national soil, thereby reducing the growth of employment and internal demand.
As a result, the Japanese growth model slid into a deep crisis. However the structural and institutional reforms needed to re-launch it, in a very different domestic and globalised context from that of the 1980s, have met with stubborn internal resistance, so that it is difficult to say--in the absence of radical reforms--if and when the Japanese economy will be able to resume an adequate and stable rate of growth.

6. Ageing, income inequalities and labour market changes.

Some other factors greatly contributed to the genesis and the continuation of the structural crisis.
First of all there is the demographic question. In the 1950-1973 years Japan had been able to exploit the so-called demographic dividend, due to a deep change in the age structure of the population, with an increase in the active population and the decrease of the rate of dependency. However, since the 1970s Japan experienced a persistent reduction in the fertility rate and in the rate of demographic growth as well as a rising *ageing of the population*. Many factors, such as economic development, rapid urbanization, higher education of women, use of birth- control devices, improved pension schemes, etc. have contributed to the decline of fertility rates. However, in the last two decades, also the formation of more precarious and low-paid jobs for young people has contributed to reduce the fertility rate and to increase the ageing of the population, which is the inner cancer of the Japanese society and one of the main factors of its relative economic decline.
At present Japan's population is on the average the oldest in the world. In 2010 13.2% only of its population was of age 0-14 years, while 63.7% belonged to the 15-64 age group and 23.1% was 65 or more: 2.7 percentage points over Germany's and Italy's levels[12].

[12] See Japan Statistics Bureau (2011). In 2010 Germany and Italy had the second and third oldest population in the world.

This fact has large and cumulative effects on economic growth. After certain levels, an older population means a less dynamic society and a sclerotized economy. There is a lower propensity to make real investment, a larger propensity to consume and a reduction in the saving rate. The decrease in the saving rate has contributed to the banking and financial structural crisis, and so to the decline in the investment rate. There is, moreover, a gradually fading innovative and entrepreneurial drive. A lot of accumulated saving are in a sort of way sterilized, since they are employed mainly in Japanese public bonds or in foreign financial assets, but are not used for productive real investment. The increase on the consumption rate of the ageing population has led to a decrease of the saving rate, but not to a large increase of consumption because of the negative wealth effect occurring since the end of the 1980s. In Japan per-capita wealth is rather high compared with most other industrialized countries, but this enormous pool of resources has diminished since the end of the 1980s (Figure 5.4) so that there was an important negative wealth effect on consumption. Other things being equal, consumption diminished because of capital losses in housing, shares and other financial assets. Moreover, household wealth is largely used for security and precautionary motives for the eldest.

Finally, also economic policy is likely to be more favourable to older people than to the young ones, since ageing determines the fact that there are many more voters over 40 than from 18 to 40 years of age.

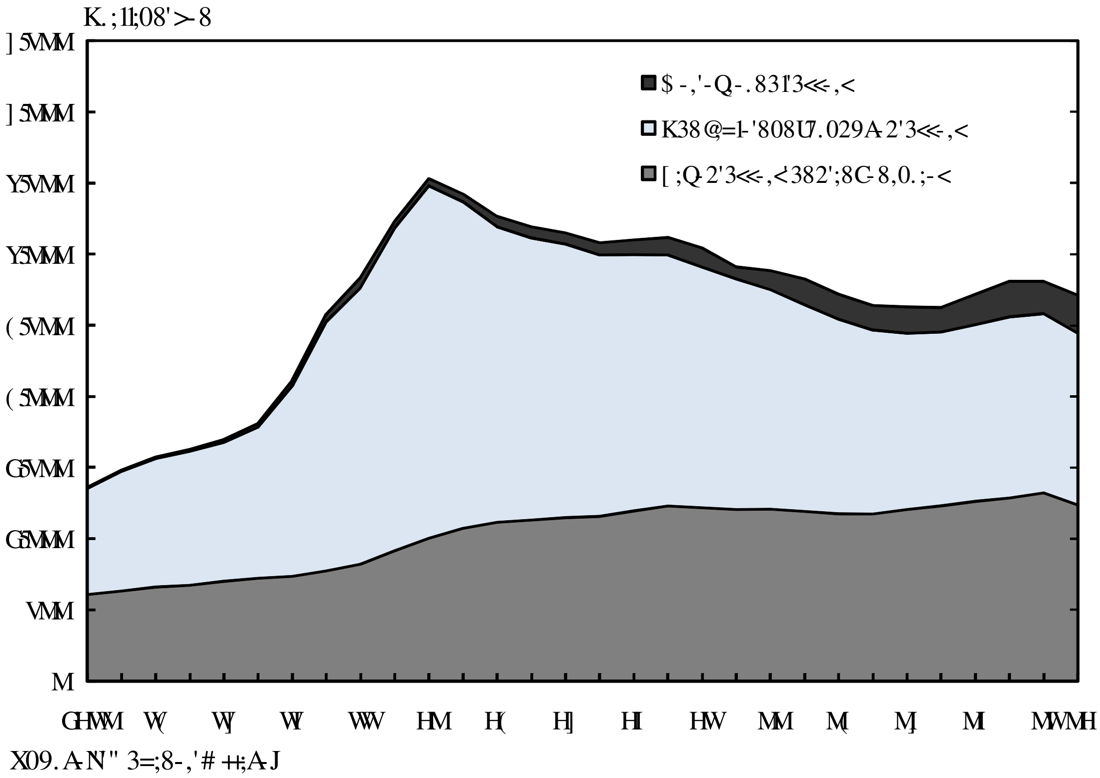
Therefore, since the 1990s, notwithstanding the discreet rise in exports, aggregate demand grew in Japan very slowly because both consumption and investment were stagnating, while public expenditure for pensions and health services rose rather rapidly.

As Table 5 shows, real household consumption grew very slowly (+ 1.1% per year), if compared with the two preceding periods (+ 8.7% and + 3.6%) and real gross investment fell (- 1.3% per year), while it had annually grown by 14.9 in the 1955-73 period and by 3.6% in the 1973-91 years. Government consumption rose by 2.3% per annum versus 4.4% and 4.7% of the previous two periods.

Secondly, since the mid-1980s there has been *a large increase in income inequalities*. This was mainly due to increasing unemployment, to the stagnation in real wages since the early 1990s, while there was a rapid increase in top-managers' compensations, and to a rapid growth in precarious jobs, with the end, in several corporations, of the traditional life-employment model.

Unemployment rate rose from 2.1% in 1991 up to 5.1 % in 2010, a relatively low level for international standards, but a very high one for Japanese standards. Wage differentials increased. Several top managers gradually abandoned the traditional sobriety and obtained large increases in compensation and fringe benefits, following the prevailing international trend, while the structural crisis led to a semi-stagnation of real wages of average employees, so that wage differentials increased considerably.

Figure 3. Wealth in Japan



The graph is taken from Japan Statistics Bureau, Statistical Handbook, 2011, p. 29.

Moreover, there was a gradual rise in the relative and absolute importance of big corporations, such as Panasonic, Toyota, Honda, Sony, which had been for long periods dominated by the wealthy founding families, and where often exponents of the families could cumulate managerial compensations and rich dividends.

Table 5. Japan's economy in the 1991-2011 period

Indicators	*Years*	
Annual average rates of change:	1991-2011	
Real GDP in PPPs GK	0.7	
Real per capita GDP in PPPs GK	0.6	
Population	0.1	
Employment	- 0.1	
Real labour productivity (GDP/ employed persons)	0.8	
Real gross investment (1991-2010)	-1,3	
Exports of goods and services (volumes) (1991-2010)	3.6	
Imports of goods and services (volumes) (1991-2010)	1.8	
Real private consumption (1991-2010)	1,1	
Real government consumption (1991-2010)	2,3	
Levels:	1991	2010
% of employment in agriculture, forestry, fishing	6.7	4.1
% of employment in industry (mining, manufacturing, construction)	33.9	25.0
% of employment in services	59.4	70.9
Level of GDP in PPPs GK in % of the level of the United States	41.4	29.6
Level of per capita GDP in PPPs GK in % of the level of the US	84.7	71.6
Unemployment rate (%)	2.1	5.1
Percentage of non- regular workers on total employees (1992 and 2010)	20.0	34.3
Gini index (1993 and 2008)	24.9	37.6
Balance of current accounts in % of GDP	2.0	3.6
Inward stock of FDI in % of GDP (1995 and 2010)	0.6	3.9
Outward stock of FDI in % of GDP (1995 and 2010)	4.5	15.1
Expenditure in R. & D. in % of GDP (1996 and 2009)	2,8	3.3

Sources: Conference Board-GGDC (2011), Japan Statistics Bureau (2011), UNCTAD (2011), World Bank (2011).

The percentage of non-regular staff members on total employees gradually rose up from 20% in 1992 to 34.3 in 2010 (18.9 % for men and 53.8% for women) and non-regular

staff-member jobs were concentrated mainly on young workers and older ones,[13] so that younger people coming from low-middle income families and older workers could not increase their consumption very much.
While, in the 1950s and in the 1960s, Japan had passed through a phase of low and declining income inequality, followed by alternate trends, in the 1990s and in the 2000s there was a phase of rapid increase in the Gini index for income concentration, which went up to 37.6 % in 2008, a middle-high level for international standards.

7. The public finance crisis

In Japan's structural crisis there was also the severe deterioration of public finance. In the 1990s monetary policy was unable to push the economy to a higher rate of growth because of the peculiar kind of *liquidity trap* in which Japan had fallen. So, the government tried to stimulate the recovery with repeated phases of expansionary public expenditure policies. Moreover, the ageing of population and the problems associated to the financial and economic crisis led to larger public expenditures for pensions, health, the salvage of financial institutions and selected social interventions. Thus, since taxation did not grow as much as government expenditures, public finance rapidly deteriorated. Public deficit in % of GDP grew from 4% in 1997 up to 8.1 % in 2010 and public debt in % of GDP went up from about 85% in 1995 to 199.7% in 2010[14], the highest level in the world among industrialized countries. However, Japan's disastrous public finance situation has not led, up to now, to a dramatic financial unrest as in the case of Greece in 2009-12. This is essentially due to two facts. Japanese families, firms and financial intermediaries, own the great majority of Japan's public debt, while in 2009-10 foreign investors owned a large part of Greek debt. Moreover, Japan has a huge amount of international reserves and a massive net creditor position, while Greece has a severe external debt and a very weak international financial situation.
In any case, the crisis in public finance has made increasingly difficult for the Japanese government finding resources for infrastructures or growth incentives and has strongly limited the scope of public intervention. It has, moreover, severely hampered the economic prospects of future generations.

8. Balance of payments, de-industrialization and international competitiveness.

[13] See Japan Statistics Bureau (2011), Statistical Handbook of Japan for 2011, pp. 140-1. The definition of non-regular staff members includes part-time, contract, subcontract and agency temporary workers.

[14] See OECD Factbook (2011-12)

Notwithstanding the lasting structural crisis and the growing difficulties in public finance, in the last two decades, Japan has managed to maintain a solid position in the current account of the balance of payments and so a strong national currency, a huge amount of international reserves and an important net creditor position towards the rest of the world.

However, in 2011, after the Fukushima earthquake and nuclear disaster, for the first time in over two decades, the current account of Japan's balance of payments registered a small deficit, largely due to the loss of production and exports and to the increase of energy imports consequent to the Fukushima events.

But more structural reasons are gradually undermining the traditionally powerful international competitiveness of Japan's productive system. Japan competitive strength was mainly due to the particular weight of industry, gradually reached in the 1960s and in the 1970s; to the high rate of growth of real investment and of productivity; to the high annual number of working hours, compared with other industrialized countries; to the comparatively high and increasing human capital and level of knowledge of the labour force. However, three of these factors have been fading away in the last two decades. There has been a large de-industrialization process; a sharp reduction in the rate of growth of investment and productivity and a declining trend in average working hours. Only human capital and R. & D. expenditure have continued to rise at an adequate rate, constantly up- grading the technological content of manufacturing industry and modern services. However, many services are traditional ones, as retail distribution and restaurants, where it is very difficult to rapidly increase productivity.

De-industrialization has been important in the last two decades in Japan, although much delayed and less pronounced than in the US and in the UK. Employment in industry has diminished by five million people in the 1990-2009 years (table 6), industrial production has grown very slowly and Japan has lost its predominance in the production of goods such as TV sets, PCs and passenger cars.

Therefore, while until 1989 Japan's positive balance in the current account was largely due to the rapid growth of productivity and of exports of goods and services produced inland, in the last two decades it has been more and more dependent on the consequences of the increase in de-localization of production and on the particularly slow rate of growth of internal demand, and thus of Japan's imports. Japanese imports have continued to increase in 1991-2011, but at a much lower rate of growth than the preceding years, and their value has remained inferior to that of exports. Moreover, Japanese stock of outward FDI in % of GDP has more than tripled from 1995 to 2010. Japan's firms were in search of new markets, but also of lower labour costs for important phases of the production process. Japan has thus maintained its international competitiveness, but has slowed down the creation of jobs inland, worsening the conditions in its labour market, determining a sizable increase in the number of precarious jobs, unemployment and income inequality and increasing the number of foreign potential competitors.

Table 6. De-industrialization in Japan: some indicators

Indicators	*1990*	*2000*	*2009*
Percentage of GDP in industry	35.4	28.5	25.5
Percentage of employment in industry	33.6	30.7	25.4
Total employment in industry (millions)	21.0	19.8	16.0
Number of TV produced (millions)	15.1	3.4	3.5 (2005)
Number of passenger cars produced (millions)	9.9	8.4	9.9 (2008)
Number of PC (millions)	3.0	12.0	7.6 (2008)
Index of industrial production (1990 = 100)	100.0	100.0	104.6 (2008)
Final energy consumed (Index: 1990=100)	100.0	122.7	113.1 (2008)

Source: Japan Statistics Bureau. Key statistics (2011)

9. Concluding remarks

The response to both the great structural crisis and the world financial crisis of 2007-2011 has been largely inadequate. Instead of concentrating on its heavy structural economic, institutional and demographic problems, the Japanese government has tried to reshuffle the economy with a rather weak expansive intervention, which has not been able to re-launch growth, while contributing to an increase in the public debt/ GDP ratio.

The devastating hearth-quake, tsunami and nuclear accident in the Fukushima area of March 11 have further aggravated the situation.

Japan, more generally, in order to overcome the structural crisis of the "lost two decades" might re-think the bases of its long-run economic and social policies.

A vigorous demographic and immigration policy, plus a policy aimed at increasing investment and reducing the precariousness of the jobs for the younger generation and the women might contribute to halt in the long run the ageing problem. As Aoki has maintained "the prospect of aging of the population may not be an inevitable burden to society. Senior and gender development to broaden the labour participation rate of the population, reversal of fertility decline combined with the development of a care economy, inflow as well as outflow of foreign direct investment (FDI), immigration, and so on can not only mitigate the problem, but may make the coming mature society livelier and richer in diversity, although moderation in per capita income growth may be inevitable"[15].

[15] See Aoki (2011), p. 26

However, to do so, there are profound political difficulties "…in order to make these options viable, various interests differentiated by the broad categories of gender, generation, ethnicity, nationality, and so on must be accommodated and reconciled in the political process. This requires a fundamental transformation of the political institutions […]. In my view, the fact that Japan has not yet found a practical solution to this is a fundamental reason that the society appears to have lost vigour in the last two decades."[16]

Two reasons may have contributed to this lack of vigour.

First there is the growing power of internal and international financial capital in a globalizing world, which has contributed to reduce productive inland investment. In Japan there was, in fact, a rising preference to buy global financial assets and to encourage outsourcing of production in foreign low-cost countries.

Secondly, there is the conservative short- sighted attitude of most political leaders and political parties, which must take into account both the vested interests of financial capital, often amplified by major mass-media, and the interest of the majority of voters, largely composed by elder people.

However, many times in its long history Japan's society has shown to be able to strongly react to adverse conditions. Sometimes prolonged crises nurture basic changes and lay the foundation for a better future.

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[16] ibidem

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