Balancing economic growth with well-being:
Implications of the Japanese experience

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1 Human and social capital supporting Japanese rapid growth

In Japanese and Asian development, human capital was essential, especially in accumulating technology through learning by doing. Social capital also played an important role, through mutual trust within the general public and thorough cooperative behavior among colleagues and between companies that held long-term relationships.

However, just like physical capital, human and social capital may become obsolete. Some aspects of society that helped Japan to grow quickly have become obsolete and are being replaced by market mechanism and formal institutions.

Social capital has three dimensions. First, it substitutes for markets and institutions, especially in developing economies. Second, it complements markets and institutions. Third, it can be a direct foundation for well-being.

The best balance between the economic implications and the direct benefits of human and social capital may be different across countries, depending upon culture and history. This is because there is a substantial degree of institutional complementarity and path dependency in the dynamics of human and social capital.

Even with the internationalization of economic activities, differences in human and social capital can remain, and they will put different pressures on future development of technology. Such differences will become an increasingly important

[1] Economic Planning Agency, The Government of Japan. The author thanks for the thoughtful and helpful comments made by the participants of the Symposium on the Contribution of Human and Social Capital to Sustained Economic Growth and Well-Being, especially Mr. Sylvain Côté and Mr. Thomas Healy. The views expressed in this paper are not those of the organization the author works for.

source of comparative advantage.

This paper tries to clarify the role and implication of human and social capital in achieving economic growth and enhancing well-being. In section 1, I discuss human and social capital as a background of the rapid development of Japan and Asian countries, with an emphasis on the interaction between the two. In section 2, I argue that both human and social capital are context-dependent in the sense that they may become obsolete, based on the Japanese experience where accumulated capital has become less useful. In section 3, I discuss some implications of the new technology. Finally, I summarize economic implications of social capital by categorizing it into three groups.

1.1 Historical background

Japan had been closed for more than two centuries, and developed as a unique society. When Japan decided to open the country and to catch up with the industrialized world, there was a unique composition of human and social capital.

As for human capital, the literacy rate was relatively high. This is partly because many feudal lords placed importance on learning and technology, and facilitated education. It is also because poor people tried to give their children elementary education. By 1868, 219 institutions of higher education and more than ten thousands of primary schools had been established. In certain areas of mathematics, there were researches of the international standard. However, the knowledge of modern technology was very scarce. The mode of inland transportation, for example, almost solely depended on human and horsepower.

As for social capital, it is not easy to define what it is in a clear-cut way. However, broadly speaking, Japan's situation was perhaps better than that of major developed countries at that time. Indeed, many foreigners found the Japanese society extremely open and friendly with few crimes. Ludovic Beauvoir, a young French count, after traveling many counties, found Japanese people "the most courteous in the world" (1881, p. 31, 23rd April). Isabella Bird, an English lady, emphasized that Japan is a country where a lady can travel around on her own, and she did so herself (1880). Lev Ilich Metchnikov, a Russian teacher wrote “Here, however poor or exhausted a porter may be, he would never behave without courtesy” (1883-84, p. 126). There were numerous such observations[2].

One notable example of how mutual trusting was prevalent was that in the early 18th century, there was a well-developed futures market for rice, the world’s first futures market. This would not have been possible if participants did not trust commitments.

Given the fact that Japan had little natural resources to rely on, its rapid development owed much to human and social capital.

Just after opening the country, the Government was very keen to invest in human capital. Indeed a large proportion of the budget was allocated for inviting excellent scholars and engineers from advanced countries on very favorable terms[3]. Young students sent abroad were given important posts after coming back.

1.2 Development after World War II

The rapid recovery after a large-scale destruction during World War II was also an example of the importance of human and social capital. Japan lost a substantial

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[2] This is partly because income inequality was relatively small in Japan, as industrial exploitation had not started at that time.

[3] The total monthly salary for foreign scholars in 1873 was 109 thousand yen. If this is multiplied by 12,

proportion of national wealth during the war, and there was not much modern productive equipment left. But there were people and the society that had a memory of the past.

In addition to that, reforms made by the occupation army helped to improve human and social capital. They forced military people out of the Government, re-distributed farmlands to small-scale farmers, and introduced active competition by breaking down large company groups. Based on such renewed soft infrastructure, Japan was able to achieve rapid economic growth.

Social factors behind growth

It is worth noting that many aspects of the so-called "Japanese system" were formed and established after World War II. There are a number of studies examining the factors that facilitated growth. If social capital is broadly defined to include inter-personal relationships that affect efficiency of the economy, a number of factors can be listed:

a: the way people coordinate themselves

b: the degree to which people trust each other

c: the way workers cooperate within firms

d: the way workers cooperate across firms

e: the efficiency of the labor market in allocating the right person to the right place

f: the extent to which management encourages workers to improve their skills

g: the trustworthiness of the people in business from the viewpoint of customers

h: the reliability of the infrastructure

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it becomes slightly less than 3% of the government annual budget of 4.66 million yen.

i: the extent to which people trust and cooperate with the government

The social factor that enabled rapid economic growth of course includes the narrowly defined trust and cooperative attitude as a relationship between anonymous persons in the economy, namely *a* and *b* in the above list. However, at least equally important were the inter-personal relationships, corresponding to *c* through *f* in the above list.

Cooperative attitudes in long-run relationships

Haruo Shimada (1988) created a new concept "human-ware" as opposed to hardware and software. He argued that the basic reason for the strong competitiveness of Japanese automobile companies was the cooperative attitude of the workers. He quoted a Japanese worker as follows: "In a US company, each worker is eager to make his individual success, and unwilling to tell what he knows to his colleague. But here, everybody is willing to tell what he knows as much as possible to the colleague. This is because he believes that he can make a success only as a team, not on his own" (p. 61).

This is partly an issue of management, but also one of inter-personal relationships, as well as of employment systems and of labor markets. In a country where long-term employment is dominant, it is worthwhile to work for the success of the whole team. By so doing, one can expect not only the benefits from future prosperity of the firm but also respect from the colleagues with whom he will spend a large proportion of his lifetime. In such a climate in the labor market, a job-seeker who quits a company after only a short period of service would tend to be regarded poorly. As Otaki (1994) points out, this is a self-reinforcing mechanism. If job-seekers in the second-hand market are judged to be inferior, more people would prefer to stay in the company than otherwise. Thus, workers accumulate company-specific skills rather than general skills.

Cooperative behaviour among firms is also thought to have aided the development of Japan’s manufacturing sector, especially in the consumer durable sector. In drafting a design of a new car, for example, Japanese car producers took full account of the views of parts makers, as well as those of the retailers, and tried to find the best match of cost reduction and consumer satisfaction. This was possible only based on the mutual trust, which was strengthened by strategies such as cross holding of equities and temporary exchanges of workers between firms.

Such long-run relationships and mutual trust were helpful in reducing informational costs, not only in designing a new product but also in making contracts. It was often the case that contracts were just broad agreements and specific conditions were discussed later on. Contingent and conditional contracts were seldom thought of.

What was perhaps equally important was the trustworthiness of the people in business from the viewpoint of customers, and trustworthiness of infrastructure, namely g and h in the above list. Although it is difficult to pick up a single indicator, the low defect ratio, punctuality of railways and postal service, reliability of electricity and telephone networks, and sincere handling of consumer claims, have all been the features of Japanese economy. These favorable social conditions encouraged human capital formation, as they provided incentives for effort and ideas by guaranteeing that they can be rewarded without being disturbed by the failure of somebody else.[4]

1.3 Consensus Formation

As for the trust in the government, let us see the role government played in forming a consensus on the direction in which the economy should move.

Japan has an established tradition of official economic planning. Rapid economic growth, such as that recorded in the 1970s, was often seen as a notable example of successful economic planning, as the 3rd plan explicitly called for “doubling national income”. The plans show not only policy emphasis on the future but also macro-economic projections.

Council works for a consensus

It is the Economic Council, not the bureaucrats or politicians, that works on a draft-plan for cabinet approval. The Economic Council is a group of people nominated by the Prime Minister. Its members are chosen to represent the various social and economic groups such as business executives, labor unions, consumers, academics, and ex-bureaucrats. An example of such composition is shown in Table 2. The Council is not large, and the meetings are not frequent. However, intensive and frequent discussions are conducted by various subcommittees.

Complement of future markets

It is often said that an economic plan in a market economy is an indicative plan, in the sense that it has no compulsory power for private economic activities but indicates what is desirable and feasible. Japan’s case is no exception. However, it seems that Japan’s economic plan has some additional characteristics. First, the plans

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[4] The argument that this aspect of social capital fosters human capital development is universal and not

are made taking account of views of various participants of the economy as much as possible, as is reflected by the composition of the Economic Council. Thus the planning process can be regarded as a place for soft negotiations among social partners over macro-economic issues and for information exchange.

The fact that a large amount of information is exchanged among the members of the Council indicates that the process complements the market mechanism. Although textbooks in economics assert that the market mechanism is efficient, there is an important pre-requisite: that every future market exists. This is clearly not the case in the real world, which is full of uncertainties. If market participants are informed of the background of their partners' likely responses to possible changes in the environment, they can be better prepared than if all the information is processed through changes in prices and through contracts.

Table 1 Composition of the Economic Council
(The Main Committee)

industry	**6**
ex-bureaucrats	**7**
academic	**4**
press	**3**
labor union	**3**
finance	**2**
consumer	**1**

context-dependent.

central bank	**1**
total	**27**

Note: Author's own calculation as of March 2000.

Consensus vs. vested interest

Second, the economic plan is used to confirm the general direction, when specificity is difficult to implement. A notable example is the need for de-regulation. Almost everybody agrees upon the need for liberalizing the economy further, mainly through relaxing or abandoning outdated regulations, and through further opening the domestic market to international trade. However, when it comes to choosing which regulation is to be abandoned, the discussion may become difficult, as each such change would endanger some vested interests. If the general direction has been emphasized in the plan and if it has been shown in the plan that such a direction would bring about better economic performance, it becomes easier to embark upon the specific reforms.

Challenges for economic planning

The recent long recession and volatile asset prices made it clear that the market economy is not complete. However, direct government intervention or regulation may weaken the economic incentives for productivity improvement. An indicative plan can play an important role as it provides a channel for exchanging information on the future among the participants of the economy, a channel different from price signals.

It is true that economic projection as well as consensus building has become difficult because of increased uncertainty. Uncertainty has increased partly because of the internationalization of economic activities, partly from increased speculative activities, and to some extent because of the de-centralization of decisions. As a means to reduce costs deriving from uncertainties, indicative plans can play a more important role under increased uncertainty, with the following modification.

First, the informational aspect of the planning process has to be underlined. Frank and open discussion is crucial. Second, discussion of contingencies is helpful, rather than sticking to one scenario which is based on ad hoc and wishful assumptions. The whole set of "what if" questions has to be addressed in the planning process. Third, international interdependence has to be more thoroughly taken into account.

1.4 Human capital in Asian development

Fukuda, Kamiya and Toya (1995), found an asymmetric growth effect of human capital between East Asia and other countries. By estimating a growth convergence equation, extended to take account of human capital, over a cross-section sample of 101 countries for the 1970-85 period, they found that:

1) Growth convergence theory did not hold for East Asia, if human capital was not taken into account. But it was supported by the data if human capital was included. That is, the long-run growth rate was not only dependent on initial real income level, but also on the investment in human capital, measured by the GDP share of government expenditure on education.

2) The human capital variable, defined by education spending as a share of GDP, was negative and statistically significant in their growth rate equation for the whole sample,

but positive and significant for East Asian countries.

3) The human factor was insignificant if measured by enrollment ratio for junior high schools.

Concerning the difference between East Asia and the rest of the sample, they pointed out the fact that the former depended heavily on exports. Since they thought that the human factor was important in the export-oriented industries through the learning-by-doing process, they argued this was why education spending positively contributed to the growth in their estimation for East Asia. They found that the addition of the GDP share of exports to their equation made the coefficient of initial real income level more significant, implying stronger support for the convergence theory.

2 Human and social background of growth slowdown

Since the beginning of the 1990s, Japanese economic growth slowed down substantially. The average annual growth rate in the 1990s was 1.4% as against 4.0% in the 1980s[5]. There are many possible reasons behind such a marked slowdown, including satiation suggested by the growth convergence theory, collapse of bubbles in asset prices, catch up by Asian newly-industrialized economies, and mismanagement in fiscal and monetary policy. I do not go into a detailed discussion of the above listed factors, as there have already been a number of excellent analyses. Instead, let us examine the economic growth slowdown from the viewpoint of human and social capital. There has been an increasing mismatch between the needs of the new economic era and the current stocks of human and social capital.

2.1 Social capital as a risk diversification system

Increased needs for risk processing

In a market economy, economic agents are faced with uncertainty, and almost any economic decision, investment or saving, involves risk-taking. Generally speaking, households are risk-averse, and become increasingly so as they get rich. But on the other hand, as an economy develops, there tends to be an increased uncertainty in the supply side of the economy. This became apparent as the Japanese economy had caught up with the U.S. and Europe. Japanese firms were increasingly required to make their own way, rather than replicate what U.S. and European firms did. Another reason for increased uncertainty is that people have become more or less satiated with basic commodities, and it became difficult to make a correct forecast as to what kind of goods and services would sell well.

Thus, what is crucial is a transmission mechanism between risk-averse individuals and risk-taking companies. Up to the 1990s, this had been done, based on a unique land-value-based system. With respect to the financial channel, there were two major channels for so-called "risk capital", the capital that is used for high-risk/high-return projects. One is unrealized capital gains. This is the difference between the market and book value of the land and equities held by large companies and banks. Partly because of the weak surveillance by the capital market, which was made more difficult by the extensive cross-holding of equities, managers tended to think that the unrealized capital gains were at their disposal and within their discretion. The other channel was bank loans to small and medium-sized firms based on land collateral. With the expectation that land prices would never fall, banks did not scrutinize the use of the

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[5] Annualized real average growth rates of 1998Calendar Year/1990Calendar Year and 1990CY/1980CY

loans they provided.

Based on long-term relationships, there were many tacit rules. One example was the "main bank system" under which the main lending bank monitored the management of a company and took the major responsibility, in the sense that if the company went wrong, other lenders suffered only after the main bank gave up all its claims. Another example was the long-term employment principle, under which workers could expect life-time job security. In addition to that, government played an important role in critical situations. For example, it used to be the case that the government asked large and sound banks to absorb a deteriorating one, without any compensation.

All in all, Japanese firms, banks, and households were rather insensitive to financial risks they faced because risks were "socialized," in the long-term relationship, in the reliance on the government discretion, and in the expectation of ever-rising land prices.

However, because of the collapse of the financial bubbles after 1990 and the financial crisis in 1997, this system ceased to work. When some banks could not keep the main bank rule, doubts spread to other cases. As some famous companies gave up guaranteeing job security, households became uneasy about future income. In addition, the two channels of risk capital were choked as land prices fell.

This is why it is necessary for Japan to build up a new system of risk processing, which would depend more on capital markets, explicit contracts and on legal procedure, and less on mutual trust (Diagram 2). Japan may have exploited social capital too much and exceeded the threshold over which mutual trust quickly

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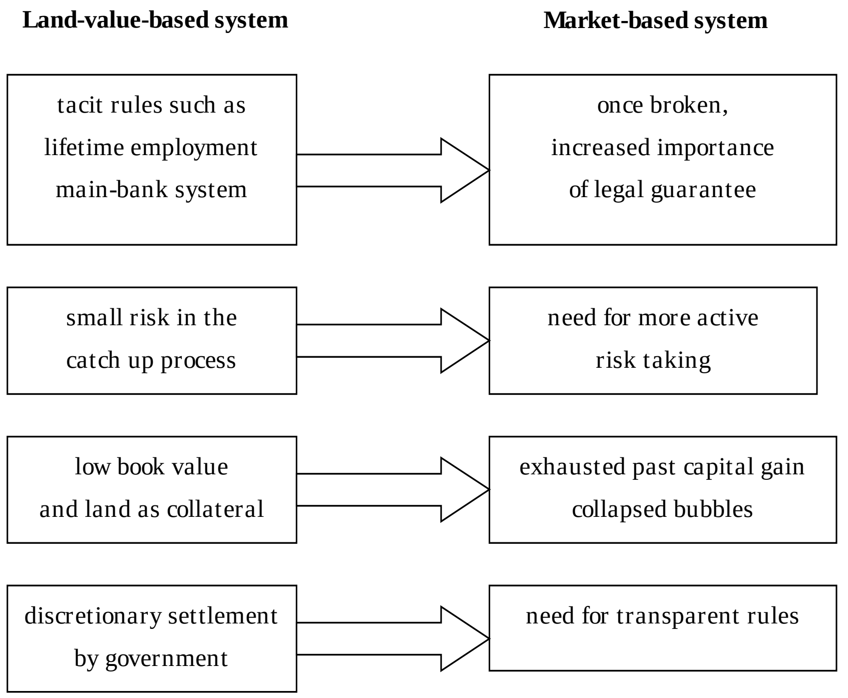
respectively.

deteriorates.

Diagram 2   Needed change in risk-diversification system



2.2 Heterogeneity vs. homogeneity

Japanese education placed priority on producing a large number of workers with standardized knowledge and skills, which would enable them to import and absorb foreign technology and improve it marginally. There was also a preference for human capital fitted and willing to participate in teamwork rather than innovators who tend to be independent from the colleague. Human capital of such a nature worked well up to the 1980s. Good teamwork in a factory was the base of incessant process innovation, and cooperative attitudes among companies were the basis for Japan’s competitive manufacturing sector.

However, as companies and banks grew large, the responsibility of individual workers became obscure. Under the bureaucratic rotation system, basic and difficult problems such as insolvent loans were left untouched until the arrival of the successor, who repeated the inactivity of the predecessor with a hope that the problem would remain unexploded during the bureaucrat's service period. Moreover, it has become clear that many executives, even among the best educated, either committed or permitted illegal accounting practices. In the lifelong employment system and with little non-company-specific skills, they became opportunists and dared not point out the defects of the Emperor's New Clothes.

Human resources devoted to education kept increasing. Many schoolchildren go to preparatory schools in the afternoon or evening with a view to gaining entrance to competitive high schools and eventually to prestigious universities. What they are taught is how to solve ready-made questions quickly, rather than how to set up a new question or how to apply a new methodology to a new question.

Since Japan has become one of the front-runners in the world economy, human resources with creativity, leadership and heterogeneity are called for, rather than those with obedience, diligence and homogeneity. The latter are the dominant features of the current stock of human capital. Previously successful methods of mass production of automobiles cannot be so easily applied in an era of high technology, because the essence of the latter lies in creative ideas, not in efficient mass production.

2.3 Market vs. non-market

From the viewpoint of foreign firms and investors, the long-run relationship among firms and the "risk-socializing system" were often claimed as entry barriers and lack of transparency. In view of internationalizing Japan's financial markets, it was and is necessary to express the financial status of companies in a more transparent and internationally understandable way. Otherwise, financial markets cannot correctly assess the risks each company faces. Thus, internationalization requires that some aspects of social capital, such as implicit long-term contracts, implicit government guarantee, or mutual trust be replaced by explicit contracts.

2.4 Growth implications of social capital — investment vs. savings

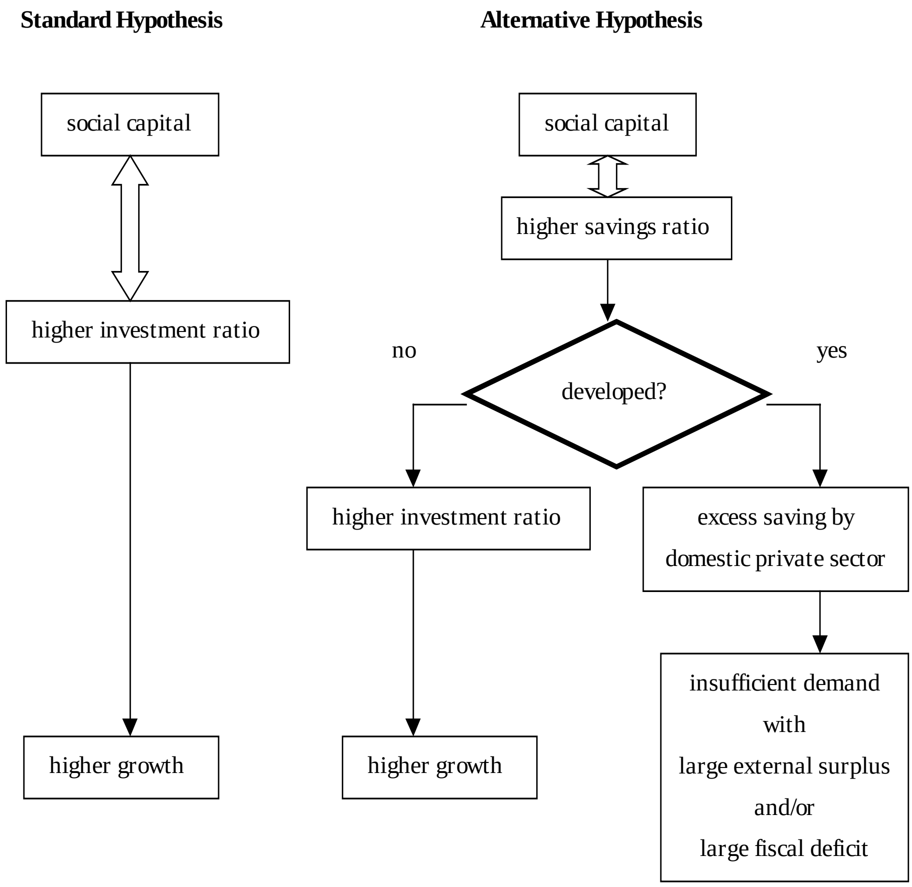
Even during the stagnant period since 1990, the ratio of investment to GDP stayed relatively high in Japan. This may be explained as influenced by the rich stock of social capital, in line with Knack and Keefer (1997). However, the fact that this high investment ratio is not accompanied by a high growth rate seems to indicate that there is another possible interpretation, leading to a quite different macro-economic implication.

The alternative hypothesis is that rich social capital pushes up the savings rate rather than the investment ratio. There are several possible reasons why this may be the case. First, higher credibility of the future working of the economy may lower the time discount rate of the people. Secondly, socially-minded people pay more attention to the interests of their descendants as well as of their contemporary neighbors, and thus tend to leave more bequests. Thirdly, there may be some cultural or religious background leading to trusting each other as well as saving more.

The positive correlation that Knack and Keefer found between social capital and investment may be the combination of the two things, a correlation between social capital and savings ratio, and the one between investment and savings. Although the latter correlation may be getting weaker with the greater internationalization of capital markets, it is still significant, especially for a country whose currency is subject to a large fluctuation.

If the alternative hypothesis holds, social capital has a different implication for growth depending upon the development stage. In a developing stage, rich social capital is an advantage, as it provides sufficient amount of domestic savings to finance investment, while foreign capital may be reluctant to flow in due to the country risk or uncertainty about future exchange rate. On the other hand, for a developed country,

Diagram 3 Growth Implication of Social Capital



with slower or negative population growth, and with lower potential growth rate[6],

[6] With a technical progress of the Harrod-neutral type, the equilibrium growth rate is the sum of two rates,

required investment is smaller than before. Thus, rich social capital would lead to insufficiency in domestic private demand and either large current account surplus or large fiscal deficit (see Diagram 3).

However, quite the contrary can be argued with respect to savings. If an important part of savings is of a precautionary nature rather than of a life-cycle nature, an economy where family ties are strong enough to pool the financial risk of getting ill or bedridden, there is less need for precautionary saving, even if public insurance system is underdeveloped. Thus, social capital in this sense decreases savings.

All this suggests the necessity of more empirical studies that would take due account of interaction among various aspects of social capital, savings and investment.

2.5 Social capital and well-being

Although some of the aspects of social capital have become obsolete, this does not mean that the direct link between social factors and well-being has changed. Education is something more than an economic investment in human capacity. The fact that estimated internal rate of return of education is often lower than the market interest rates[7], and the fact that there are always "reckless young people" who wish to go to schools that their parents would not recommend, are indirect evidence of the non-economic benefits of education.

The same may be true for social capital. Small income disparity in Japan[8], for

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one of labor force growth and the other of technical progress. However, in an open economy, savings may not necessarily be invested within the country. If demand prospects are not good enough, expected rate of return on investment may be low, leading to sluggish investment. In such a case, the equilibrium rate may not be "warranted".

[7] Some argue this is because young people cannot correctly assess their intellectual capacity and, therefore, pay for education in case their intelligence is worth the investment. Such an activity is out of a *personal dream*, and may be classified as non-economic.

[8] About 80% of Japanese people think that they belong to the middle class.

example, may be affected by the institutional setting, which may place too much emphasis on equality in results rather than equality in opportunities. However, most people take the former good and desirable without any convincing reason, even if there should be a trade-off between equality and average incomes.

The best balance between the economic implication and the direct benefits of human and social capital may be different across countries, depending upon culture and history. This is because there is a substantial degree of institutional complementarity and path dependency in the dynamics of human and social capital. Even if preferences of people are universal within a nation, their implications can differ according to the institutional setting and social conditions. Social conditions are, in turn, importantly affected by the actions of individuals. Moreover, a man's preference is naturally influenced by the characteristics of the society in which he was born and brought up.

There may well be multiple equilibria, each consistent in itself. One possibility is such that people and firms have long-term trust in each other, with low information costs, but with little pressure from price competition and from international competition. Another possibility would be such that people stick to contracts and lawyers under a transparent competitive system and try to attract the best ideas and people from the world.

Thus, economic policies, especially structural policies, must be carefully managed, paying due attention to the consistency with social policies. A reform program must lead to a mutually consistent set of social and economic status. Moreover, sufficient degree of consistency has to be kept during the transitory period. Loss of consistency on the way would invoke loss of political support for the whole reform. A seemingly straight path towards the top of the mountain may lead you to a dead end under a cliff.

3 Social capital and new technology

3.1 Internet as new social capital

In December 1998, one consumer, who was not satisfied with a video recorder, made a complaint to the major electric company that produced it. After a chain of arguments with several branches of the company, a special public relations clerk responded to him. Then, the clerk used inappropriate words in an impolite way. Having tape-recorded the conversation, the customer sent the recording to the president of the company asking for an apology. When he did not get an answer, he opened an internet homepage in June 1999, presenting the recorded tape. Within a month, the number of hits on his homepage reached 1.65 million, and some newspapers took up the issue. Finally, the company admitted their fault.

This indicates that even a single consumer can affect the reputation of a gigantic firm, and that the distinction between personal communication and mass communication has become unclear.

Thanks to the internet, costs of information searching, sharing and exchange have dramatically decreased. If the essence of social capital lies in its informational aspect, it should have a long lasting impact on the significance of social capital, and a new dimension of social capital may become important. However, exact implications remain to be clarified.

3.2 Social capital as comparative advantage

Internationalization of economic activities is making economies more homogeneous. One example would be convergence of factor prices induced by free trade. The development of information technology is expected to reduce international technology gaps. Even so, technology and products may not converge. Different economies have different constellations of human and social capital and each constellation has different preferences for technology and places different pressures for future development.

One of such examples is the "convenience store" in Japan, a kind of drug store which is open 24 hours, and located in every corner of cities. This is one of the few growing business categories in Japan, supported by social factors such as an increase in the number of single people, an increase in night work, and most importantly, low crime rates. Besides selling books, foods and beverages, they handle account settling for telephone and electricity bills, keep parcels for collection by neighbour customers, reserve and issue theatre tickets and so on. Now, some of them are going to establish a bank terminal within each branch and start delivery service of commodities ordered by e-trade. Thus, convenience stores are increasingly becoming an essential infrastructure for Japan's city life.

4 Conclusion

For Japanese and Asian economic development, human capital was essential, especially in accumulating human-embodied technology through learning by doing. Social capital or social factors also played an important role, partly through mutual trust among the general public and partly through cooperative behavior among colleagues within firms, and among companies linked by long-term relationships.

However, the growth implications of human and social capital are not permanent. Just as a piece of physical capital equipment is useful or useless depending upon changes in technology or consumer preferences, human and social capital may become obsolete. Some aspects of society which helped Japan to grow quickly have become obsolete and are being replaced by market mechanisms and formal institutions.

Whatever the economic implications may be, some directions of human and social development are desirable if they are directly connected to the well-being of the people.

Diagram 4. Three Categories of Social capital (S.C.)

1. S.C. as inferior substitute for Markets and Institutions
   (especially in developing economy)

2. S.C. as complement for Markets and Institutions
   (to deal with information-related market failure)

3. S.C. as direct foundation for well-being

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1. and 2. → economic benefits
↓
3. → well-being

Besides,
S.C. as the base for:
.Incentives
.Innovations
.Comparative advantage

Thus, various components of social capital can be classified into three categories as in Diagram 4.

First, some of them are inferior substitutes for markets and institutions. In a developing economy, where market mechanisms and institutional arrangements are insufficient, people have to rely more on personal trust. Guiso, Sapienza and Zingales (2000) found empirically that the effect of trust on informal credit is more important and statistically significant in areas of weak legal enforcement. In the absence of medical insurance, one has to rely more on income transfers from other members of the family. In the absence of the police system, communities may have to organize their own policing and defense. If nursery schools are not available, parents must coordinate more in bringing up children than otherwise. This category is replaced by market activities, institutions, contracts and legal systems, as an economy develops.

Second, some components of social capital are complements for markets and institutions. Informal exchanges of views, as is done within the Economic Council, can enhance dynamic efficiency of the economy. Nonprofit organizations such as associations, hospitals, schools contribute importantly to economic activities in developed economies. After the Kobe Earthquake, it was mutual aid, rather than markets or institutions, which helped people.

Third, family, friendship, sports or hobby clubs, alumni associations etc. can be a direct foundation for well-being even if they are not producing economic benefits at all.

It goes without saying that these three are mutually related. Economic development reduces the need for the first category and sometimes leads to a deterioration of the integrity of rural villages. Then the quality of social capital can decay from the second and third perspectives as well. The borders of the three categories are affected by technology. Development of financial technology may expand the coverage of insurance. Agriculture in ancient days was more efficiently done community-wise rather than family-wise. Then, collaboration and even magic rituals may have been essential for production.

Even with the internationalization of economic activities, differences in human and social capital can remain, and they will put different pressures for future development of technology. Such a difference will become an increasingly important source of comparative advantage.

The best balance between the economic implications and the direct benefits of human and social capital may be different across countries, depending upon culture, history and technology. This is because there is a substantial degree of institutional complementarity and path dependency in the dynamics of human and social capital.

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