

PROSPECTS FOR JAPAN'S ECONOMIC GROWTH

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## CHAPTER I

### INTRODUCTION

In 1945 Japan sank into the ashes of a devastating military defeat. There was serious doubt of her ability to recovery from the ruins. At the very least, few expected that Japan would again become a major economic power.

Less than three decades later, Japan has again emerged as a powerful industrial nation. Japan's gross national product (GNP) caught up with that of France and the United Kingdom before 1965, and surpassed that of West Germany in 1967, making Japan the third largest economy in the world.

Japanese economic growth has been so impressive that some observers have called it a "miracle". Since the first long-term economic program (Economic Self-Reliance Five-Year Program) was drafted in 1955, Japan's real GNP increased from \$36.5 billion in 1956 to \$199.4 billion in 1973, an increase of 450 per cent. Japan's per capita income was \$433 in 1956. By 1973, it stood at \$1834, amounting to about 80 per cent of that of the European nations and one half of that of the United States. Japan's rate of economic growth during that period averaged 12.2 per cent annum, greatly exceeding those of any other industrial nation. The details are shown in Table 1.

In examining the possible future of the Japanese economy, the essential question is whether or not the high rate of economic growth experienced in the past will continue in the future. Long-term economic

TABLE 1

## JAPAN'S GNP AND PER CAPITA GNP, 1946-1973

(U.S. dollars)

Year	GNP <sup>a</sup>	% Increase <sup>b</sup>	Per Capita GNP <sup>c</sup>	% Increase <sup>d</sup>
1946	15.3		203	
1947	16.9	10.1	216	6.8
1948	19.6	15.8	245	13.0
1949	20.4	4.8	250	2.1
1950	22.8	11.7	274	9.8
1951	26.3	15.2	311	13.4
1952	29.7	13.0	346	11.3
1953	32.1	7.9	369	6.5
1954	32.8	2.3	372	0.9
1955	36.5	11.4	409	10.1
1956	39.0	6.8	433	5.7
1957	42.3	8.3	465	7.3
1958	44.7	5.7	487	4.8
1959	49.9	11.7	539	10.7
1960	56.5	13.3	605	12.3
1961	64.7	14.4	686	13.3
1962	68.4	5.7	718	4.7
1963	77.1	12.8	805	11.7
1964	85.1	10.4	876	9.2
1965	89.7	5.4	913	4.2
1966	100.0	11.4	1009	10.6
1967	113.1	13.1	1128	11.8
1968	128.6	13.7	1268	12.4
1969	144.8	12.6	1411	11.3
1970	158.9	9.7	1532	8.6
1971	163.7	6.2	1559	4.8
1972	181.5	9.2	1706	6.0
1973	199.4	10.9	1834	9.1

Note: <sup>a</sup>GNP in 1965 prices (U.S. billion dollars).

<sup>b</sup>Per cent increase over preceding year.

<sup>c</sup>Per capita GNP in 1965 prices (U.S. dollars).

<sup>d</sup>Per cent increase over preceding year.

Conversion to U.S. dollars: 1946-1970 \$1.00=¥360, 1971 \$1.00=¥347, 1972 \$1.00=¥303, and 1973 \$1.00=¥270.

Source: For 1946-1970, Economic Statistics Annual, 1970, p. 2.

Reprinted from Warren S. Hunsberger, Japan: New Industrial Giant

(New York: American-Asia Educational Exchange, Inc., 1972), p. 74.

For 1971-1973, IMF Monthly Statistical Bulletin, February 1974, pp. 39-40.

forecasts are made on the basis of examining various factors affecting the economic growth rate. It is the purpose of this report to study some of the major factors determining Japan's past economic growth, and to offer conjectures as to whether Japan is likely to continue the rapid growth rates of the past in the future.

Some forecasts of Japan's economic future have been made by economists in recent years. Opinions and expectations vary. Herman Kahn predicts that Japan's economic growth rate will average 9.4 per cent a year through the period 1970-2000. The projection assumes a drop in the growth rate as time passes, because negative factors such as labor shortage and possible difficulties with foreign trade begin to take effect in the future. Nevertheless, Kahn predicts that Japan will catch up with the United States in terms of both per capita and total income by the year 2000:

(Assuming) the initial 11 percent (growth rate)...drops to 7.5 percent, averaging 9.4 percent..., Japan probably passes the United States in per capita income around 1990 and probably equals the U.S. in Gross National Product by about the year 2000.<sup>1</sup>

For Japan to catch up with the United States, assuming the Japanese economic growth rate averages at 9.4 per cent, the United States' economy must be assumed to grow at an average of 4.5 per cent or less.

Henry Rosovsky argues that the phenomenal growth of the past was transitory in nature. He predicts that the Japanese economy will slow down in the near future, and will not surpass the United States in total GNP by 2000 for the following reasons:

There are certain factors inherent in a higher level of economic maturity which will make it increasingly more difficult to maintain a real annual growth rate of 10 per cent, and a government financed improvement in the quality of life (the improvement of the welfare

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<sup>1</sup>Herman Kahn, The Emerging Japanese Superstate (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970), pp. 129-130.

system) will have the same result... If the rate of growth is reduced for the right reasons, Japan may not surpass us in aggregate income by the year 2000.<sup>2</sup>

The factors alluded to by Rosovsky include technical progress, labor supply, and foreign trade.

Zbigniew Brzezinski's projection is even less optimistic about Japan's future economic growth. He lists twenty causes of Japan's past economic growth and finds only four of them likely to be positive in the decade of the seventies. Among the remaining sixteen causes, ten are regarded as doubtful, and six as likely to become negative factors for Japan's future growth. He does not make a projection beyond 1980, but offers the following estimate for the seventies:

My own general estimate--and it cannot be more than an estimate--is for an average growth rate of somewhere around (and perhaps even somewhat below) 8 percent per annum between 1970 and 1975, with perhaps a more marked slowdown developing around 1975 and thereafter, to an average of about 6 percent per annum between 1975 and 1980. This would give Japan a GNP of approximately \$385 billion in 1980.<sup>3</sup>

Brzezinski is quite skeptical of Japan's ability to continue increasing its total GNP at the extraordinary high rates of the past.

In order to estimate whether Japan's economic "miracle" of the past will continue, one must consider the factors likely to affect the growth rate in the future. The major factors studied in this report are personal savings, technological progress, foreign trade, and human resources. Those factors were essential for Japan's rapid economic growth in the past.

The following chapters examine in detail possible effects of

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<sup>2</sup>Henry Rosovsky, "The Economic Position of Japan: Past, Present, and Future," The United States International Economic Policy In An Interdependent World, Vol. II, The Commission on International Trade and Investment policy (Washington, D.C.: U.S. Government Printing Office, 1971), p. 126

<sup>3</sup>Zbigniew Brzezinski, The Fragile Blossom (New York: Harper & Row Publishers, 1972), p. 56.

each factor upon economic growth. Chapter II examines Japan's personal savings, listing some contributing causes for the high ratio. Japan's technological progress is analyzed in Chapter III. Japan's foreign trade problems are studied in Chapter IV. Matters relating to the human resources are dealt with in Chapter V.

## CHAPTER II

### PERSONAL SAVINGS

An important factor influencing Japan's future economic performance is its high net saving ratio. Abundant capital makes it possible for the physical expansion of domestic industries, and in turn, for its economic growth.

It is important to distinguish between "gross" and "net" saving and "gross" and "net" investment. The difference between "gross" and "net" is the estimate of depreciation--the value of the capital used up in production. Expansion of an economic system generally requires net investment. An increase in net investment means capital deepening--the use of more capital per worker in addition to the capital equipment already in use. Therefore the net concepts are more useful measures in a study concerned with economic growth. The following discussion is in terms of net saving and net national product (NNP).

In its rapid growth of the 1960s, Japan's net saving ratio was very high. Over the period 1965-1970, Japan's saving ratio was the highest among the industrial nations, at 22.1 per cent of the total NNP, compared to the United States' 4.3 per cent, West Germany's 17.2 per cent, France's 16.7 per cent, and the United Kingdom's 10.6 per cent, as indicated in Table 2.

The composition of net savings in the industrial nations is shown in Table 3. The countries differ widely in respect to the source

TABLE 2

## NET SAVING RATIO AND ECONOMIC GROWTH RATE, 1965-1970

(Per cent)

Country	Net Saving Ratio <sup>a</sup>	Economic Growth Rate <sup>b</sup>
Japan	22.1%	12.2%
United States	4.3%	4.6%
West Germany	17.2%	4.6%
France	16.7%	5.6%
United Kingdom	10.6%	2.2%

Note: <sup>a</sup>Saving Ratio=Net saving/NNP.<sup>b</sup>Average annual growth rate.

Source: For saving ratio, United Nations, Yearbook of National Accounts 1971, Vol. I and II, pp. 585-600 (Vol. I) for Japan, pp. 535-569 (Vol. II) for the United States, pp. 360-384 (Vol. II) for West Germany, pp. 332-355 (Vol. I) for France, and pp. 485-525 (Vol. II) for United Kingdom. For growth rate, Japan Economic Yearbook 1971, p. 26.

TABLE 3

## COMPOSITION OF NET SAVINGS, 1965-1970

(Per cent)

Country	Personal <sup>a</sup>	Corporate <sup>b</sup>	Government <sup>c</sup>
Japan	49.5%	21.8%	28.7%
West Germany	46.2%	24.3%	29.5%
France	48.0%	24.0%	28.0%
United States	68.5%	28.5%	3.0%
United Kingdom	36.4%	23.0%	40.6%

Note: <sup>a</sup>Personal saving=disposable income-consumption expenditures.

<sup>b</sup>Corporate saving=undistributed profits.

<sup>c</sup>Government saving=current revenue-government expenditures.

Source: United Nations, Yearbook of National Accounts 1971, Vol. III, pp. 158-169.



of net savings. In the United States personal saving is a large portion of net saving and government saving is negligible. In the United Kingdom government saving plays the dominant role while personal and corporate savings are lower than those of the other countries. Japan stands in between these extremes with personal saving accounting for 49.5 per cent of the total, corporate saving for 21.8 per cent, and government saving for 28.7 per cent (Note that personal saving includes saving from unincorporated business.) While Japan's saving ratio is the highest among the nations it does not show any peculiarity as far as the composition of saving is concerned.

Corporate saving was probably affected by the rate of profit and the optimistic expectations of the Japanese businessmen during the continuous boom of the past. Government saving was, on the other hand, the result of policy decisions. The Japanese government has had growth-oriented policies since the early modernization of postwar Japan.

It is true that government and corporations have played an important role in Japan's capital formation. However, Japan's personal (household) saving has contributed to approximately half of the total saving, as shown in Table 3. Furthermore, Japan's personal saving ratio is the highest among the industrial nations at 19.2 per cent, as indicated in Table 4. The international comparison seems to support the following claim made by Shinohara:

It is evident that personal savings have played a greater role in Japan than in other countries. By sustaining a considerably high personal saving ratio, the personal sector can be a most important source of investment funds, we do wish to emphasize that when financing from personal savings is internationally compared its importance becomes clearly evident.<sup>4</sup>

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<sup>4</sup>Miyohai Shinohara, Structural Changes in Japan's Economic Development (Tokyo: Kinokuniya Bookstore Co., Ltd., 1970), p. 44.

TABLE 4

## COMPARISON OF PERSONAL SAVING RATIO, 1965-1970

(Per cent)

Country	Personal Saving Ratio <sup>a</sup>
Japan	19.2%
United States	7.1%
West Germany	12.2%
France	7.3%
United Kingdom	5.6%

Note: <sup>a</sup>Personal saving ratio=personal saving/disposable income.

Source: United Nations, Yearbook of National Accounts 1971, Vol. I and II, pp. 585-600 (Vol. I) for Japan, pp. 535-569 (Vol. II) for United States, pp. 360-384 (Vol. II) for West Germany, pp. 332-355 (Vol. I) for France, and pp. 485-525 (Vol. II) for United Kingdom.

It is now appropriate to explore the reasons why such a high personal saving ratio has prevailed in Japan. The saving-inducing factors include the following: (1)Growth-rate effect, (2)Bonus-payment effect, (3)Age-composition effect, (4)Inadequate social security system, (5)Higher education, and (6)Housing. These factors have been an influential force in building Japan's high personal saving in the postwar period.

#### Growth-Rate Effect

The first factor is the high growth rate of the Japanese economy. The growth effect assumes a lag in Japan's consumption pattern. The rapid increase in income resulting from economic growth brings about a relatively greater increase in personal saving than consumption.

There are two main reasons for the existence of the consumption lag in the Japanese economy. The first reason is related to "stickiness" of Japan's consumption pattern. The reason is explained as follows:

The reason is supposed to lie in the fact that people tend to stick to their old consumption habits causing the increase in consumption to lag behind the increase in income and saving to go up, not only absolutely but also as a fraction of income.<sup>5</sup>

The second reason for Japan's consumption lag is explained by the following statement:

It has been often said that the amounts of consumer durables in Japan are relatively small as compared with high income level and that this can be explained by the less developed situation of consumer financings.<sup>6</sup>

Thus, limited credit expansion for consumer goods, especially large consumer durable goods, has constituted a main factor for the consumption lag,

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<sup>5</sup>Tuvia Blumenthal, Saving in Postwar Japan (Cambridge, Mass.: Harvard University Press, 1970), p. 19.

<sup>6</sup>Toshiyuki Mizoguchi, "An Analysis of Consumption Pattern in Post-war Japan," Hitotsubashi Journal of Economics, Vol. 11, No. 1 (June 1970), p. 43.

restraining the consumption spending of the families in Japan. Consumer credits on reasonable terms, available to persons of moderate means in their purchases of durable goods, are less extensively used in Japan than in other advanced nations. There is thus a hypothesis that the high and increasing ratio of personal saving was a reflection of the rapid growth in income combined with a lag in consumption.

Yoshihara regards the growth rate as one of the most important determinants of the Japan's saving ratio. His study compared the past experiences of Japan and the United States with respect to the consumption lag and the growth rates, in deciding the importance of the growth rate as a factor for high savings. The study employed a distributed-lag model to detect the chain of causation of lag and growth rate for high savings. The distributed-lag hypothesis assumes the following model:

$$C(T) = \sum_{i=1}^n a_i Y(T-i) + c,$$
 assumes that consumption at time  $T$  depends on current as well as all previous income. The effect of income at time  $T$  is felt not only on consumption at time  $T$  but also on consumption at  $T+1$ ,  $T+2$ , ---. The first coefficient,  $a_0$  measures the contribution of  $Y(T)$  to  $C(T)$ ,  $a_1$  the contribution of  $Y(T)$  to  $C(T+1)$ — extending to time  $T+n$  which is sufficiently remote for  $Y(T)$  to have no real influence on consumption behavior. The term  $a_0$  measures the proportion of  $Y(T)$  consumed at time  $T$  and can be therefore called the short-term propensity to consume. On the other hand,  $a_1$  measures the proportion of  $Y(T)$  consumed over time and can be called the long-term propensity to consume.<sup>7</sup>

Based on the model above, Japan's lag pattern in consumption was compared with that of the United States. The study offers the following account for Japan's high saving ratio:

If the propensity to consume of the two countries were the same, the lag structure and the growth rate would

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<sup>7</sup>Kunio Yoshihara, "The Growth Rate as a Determinant of the Saving Ratio," Hitotsubashi Journal of Economics, Vol. 12, No. 2 (February 1972), p. 62.

influence the saving ratio. We could not detect the existence of a lag in U.S. consumption behavior, whereas a lag is present for Japan. This means that the past growth rate does not have any impact on the saving ratio of the United States. On the other hand the presence of the lag for Japan makes it possible for the growth rate to influence the saving ratio... This accounted for more than one third of the differenced in the saving ratio for some years. For every year between 1955 and 1965, at least 20 per cent of the difference was due to the growth rate.<sup>8</sup>

The rapid growth rate of the past appears to be an important determining factor in Japan's high saving ratio.

#### Bonus-Payment Effect

The second factor is Japan's unique wage system with a substantial bonus payment often given semi-annually. It is likely that the bonus increased personal saving. Shinohara thinks that Milton Friedman's "permanent income hypothesis" can explain how the bonus payment influence the saving ratio:

In explaining the size of a saving ratio, Milton Friedman has postulated a very useful theory, the permanent income hypothesis. He emphasizes that the proportion of transitory or temporary income will be a vital factor in deciding the propensity to save. For example, if one receives a windfall income in addition to his regular income by writing a bestseller, his savings ratio may naturally increase, say from 10% to 40% in that particular year. In the same way, the increased proportion of bonus payments in a worker's income may increase his savings ratio from the time-series point of view..., and Friedman's permanent income hypothesis may be extremely useful in explaining the high savings ratio.<sup>9</sup>

The "permanent income hypothesis" explanation of Japan's high personal saving ratio was challenged by Blumenthal on the ground that the bonus payment cannot be regarded as transitory income which the household

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<sup>8</sup>Ibid., pp. 69-70.

<sup>9</sup>Miyoei Shinohara, Structural Changes in Japan's Economic Development (Tokyo: Kinokuniya Bookstore Co., Ltd., 1970), pp. 59-60.

receives as a windfall gain. Blumenthal argues as follows:

Bonus payment can not be considered "transitory" income.... They are regarded by workers as an integral part of their yearly wages and the expected size of the bonus enters economic decisions such as the selection of jobs. On the other hand there is an element of uncertainty regarding the exact size of the bonus since it varies with market conditions and the performance of the firm. Furthermore the size of bonus payment can not be said to be independent of the level of regular income and the two show a high correlation in a cross-section analysis.<sup>10</sup>

There are thus two points in dispute in explaining the effect of the bonus payment on Japan's saving ratio. First, the "permanent income hypothesis" states that permanent consumption (saving) depends on permanent income, and the transitory part of income is mostly saved. Secondly, the hypothesis assumes that there is no correlation between the "permanent" and "transitory" parts of income. The bonus payment of Japan is not, however, considered by Blumenthal to be subject to the above assumptions. Yet, he does not say that the bonus system has no impact upon saving. Blumenthal found that bonus payments have an impact on saving for rather different reasons than those put forward by Shinohara's approach based on the "permanent income hypothesis." Blumenthal offers the following alternative hypothesis:

Households do not adjust their consumption expenditures to their average monthly income (as would follow from Friedman's "permanent income hypothesis") but adjust their consumption expenditures to the regular monthly income, while the bonus is largely saved. In other words households regard the two components of income as different types to be used for different purposes.<sup>11</sup>

Thus, the households do not include the bonus payment in the income which determines the scale of spending. It is therefore clear that a large

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<sup>10</sup>Tuvia Blumenthal, Saving in Postwar Japan (Cambridge, Mass: Harvard University Press, 1970), pp. 25-26.

<sup>11</sup>Ibid., p. 92.

part of the payment, if not all, is liable to be saved. The bonus payment is simply regarded as an income for saving. Thus the bonus payment system in Japan brings the personal (household) saving ratio to a high level.

#### Age Composition Factor

The third factor determining saving in Japan is the age composition of the population. According to Clark, the age composition of the population is one of the determinants of differences in the saving ratio among countries. Clark suggests that:

Savings are generally accumulated by the young and decumulated by the old, so a rapidly growing population with a high proportion of young men should have a high rate of accumulation, an elderly population a lower rate.<sup>12</sup>

Blumenthal accepts this argument and regards the age effect as one cause for Japan's high saving ratio in the past. Blumenthal says that:

We find an increase in the rate of saving (from the age of 25) up to age 35-39 and a decline to age 60-64. The large increase in age group 65+ may well be due to sampling error. Thus the age effect per se indicates a higher desire for saving by the young.<sup>13</sup>

It is a fact that the age composition of the Japanese population has been younger than those of the other industrial nations, as indicated in Table 5. If Blumenthal's above observation is correct, we can arrive at the following results as to the effect of Japan's young age composition on the saving ratio. In its total population, age group 25-39, whose saving ratio increased, was proportionally highest at 22.3 per cent in Japan among the industrial nations. On the other hand, age group 40-64, whose saving ratio decreased, was lower in Japan than in the other countries in terms

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<sup>12</sup>Colin Clark, The Conditions of Economic Progress, 2nd ed. (London: Macmillan and Co., Ltd., 1951), p. 505.

<sup>13</sup>Tuvia Blumenthal, Saving in Postwar Japan (Cambridge Mass.: Harvard University Press, 1970), p. 53.

TABLE 5

## AGE COMPOSITION OF POPULATION, 1950-1960

(Per cent)

Country	0-24	25-39	40-64	65+
Japan	51.6%	22.3%	20.7%	5.4%
United States	41.2%	21.6%	28.1%	9.1%
France	38.2%	19.4%	30.8%	11.6%
West Germany	38.3%	20.2%	32.2%	9.3%
United Kingdom	35.0%	20.9%	32.6%	11.5%

Note: Based on midyear estimates.

Source: United Nations, Demographic Yearbook 1970, pp. 166-406.



of the proportion of the total population. The young age composition of Japan seems to have contributed to its high saving ratio in the past.

### Inadequate Social Security System

An essential purpose of most social security systems is to guarantee all citizens a minimus standard of living through redistribution of income. Two main characteristics of Japan's public social security system should be noted. First, Japan's public social security system is markedly inferior to that of other industrial nations. A big gap was found in public social security spending per person between Japan and the other industrial nations, as indicated in Table 6. Japan's per capita public social security spending of \$36 was roughly  $\frac{1}{6}$  of the United States',  $\frac{1}{5}$  of the United Kingdom's,  $\frac{1}{8}$  of West Germany's, and  $\frac{1}{7}$  of France's.

It is true that big Japanese companies offer to their employees private security programs, such as guaranteed employment, good fringe benefits, and retirement benefits. However, there is a definite limit to those private programs. The people who need the benefits of social security most are excluded from the programs. The majority of the population are self-employed or workers in small firms that cannot afford such private programs.

Table 7 show the percentage distribution of establishments and total employment by the size of the firm. Small firms (1-29 persons employed) constituted roughly 96 per cent of the total number of establishments. Furthermore, the small firms employed roughly half of Japan's total labor force, while the largest firms (1000 or more persons employed) accounted for less than 8 per cent of the total. Thus, it can be said that the majority of Japan's labor force is employed in small firms that cannot afford their own private social security programs.

TABLE 6

## PUBLIC SOCIAL SECURITY SPENDING, 1970

(U.S. dollars)

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Japan	\$36
United States	\$206
United Kingdom	\$188
West Germany	\$286
France	\$260

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Note: Public social security spending per person per year.

Source: Japan Economic Yearbook 1973, p. 46.

TABLE 7

## DISTRIBUTION OF ESTABLISHMENTS AND EMPLOYMENT BY SIZE, 1966-1969

(Per cent)

Size by employment	1-29	30-99	100-299	300-999	1000+
Establishments	95.96%	3.26%	0.63%	0.12%	0.02%
Persons employed	50.61%	20.20%	13.10%	8.33%	7.34%

Source: Japan Statistical Yearbook 1972, pp. 92-93.

The second characteristic is that the objective of Japan's social security program differs from that of the developed countries of the West, which puts emphasis on the age groups at both ends of the life cycle. The percentage of expenditures for pensions and child care allowances is about 50-60 per cent in Western European countries, in contrast to 8.6 per cent in Japan, as seen in Table 8. Japan's public social security is inferior to the others in the sense that the aged and the children that need social security the most are covered least under Japan's public security system. The important thing is not just the level of public spending, but rather whether social security expenditures are effectively allocated in reference to the objective of the public social security system.

The Japanese are far more responsible for their own future welfare than are citizens of other nations. A definite need for personal saving for the purpose becomes apparent:

In a country where the social security is imperfect people need to provide for old age and illness, with concomitant requirement of maintaining a higher saving ratio.<sup>14</sup>

Thus, the inadequate public social security system, especially old-age security, has been one of the motives for the Japanese households to save.

### Higher Education

Higher education is another reason for saving for the Japanese. The cost of higher education is borne largely by the student's family. Government has paid little attention to the subject in the past:

Government spending for higher education was very low at 2 percent of the total expenditures in 1972.<sup>15</sup>

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<sup>14</sup>Miyoshi Shinohara, Structural Changes in Japan's Economic Development (Tokyo: Kinokuniya Bookstore Co., Ltd., 1970), p. 58.

<sup>15</sup>The Oriental Economist, Japan Economic Yearbook 1972, p. 32.

TABLE 8

## BREAKDOWN OF PUBLIC SOCIAL SECURITY SPENDING, 1966

(Per cent)

Country	Medical	Workman's Compensation	Pension	Unemploy- ment	Child Care
Japan	75.6%	5.3%	8.6%	10.5%	—
United Kingdom	47.4%	2.6%	42.2%	33.2%	4.5%
France	32.2%	7.9%	33.2%	0.1%	20.6%
West Germany	31.9%	5.4%	56.2%	1.3%	5.2%

Source: International Labor Office, The Cost of Social Security (Geneva, 1972), reprinted from Shigeyoshi Jinushi, "Social Security in Transition," The Developing Economies, Vol. X, No. 4 (December 1972), p. 503.

Since college education is essential for many types of "desirable" employment in Japan, saving for this purpose is important. Higher education has become a major reasons for personal saving, as shown in the following survey:

Results of a 1962 survey, in which families were asked about their saving motives, shows that 32.2 per cent mentioned education as one motive. This came as second only to "unexpected disaster" (33.5 per cent) and ahead of such motives as the purchase of land or houses (9.7 per cent) and "old age reserves" (9.1 per cent).<sup>16</sup>

### Housing

Saving for purchases of housing is another important reason for the high saving ratio in Japan. An extremely important objective of most Japanese families is to possess their own house. A family is forced to save a large part of its income to finance such once-in-life-time spending, because there is limited credit available for purchase of housing in Japan.

There are many reasons why Japanese families want to buy a house instead of renting an apartment, despite high prices of houses. First, the Japanese strongly value a family unit. A family is the smallest and closest unit in the Japanese social structure. The family needs a sound place to establish a good family. Secondly, it is a precious and satisfying thing to own a house in Japan. The satisfying feeling of having "my home" is the reflection of one's independence and privacy in a crowded society. Housing is thus a contributing factor for personal saving.

Having discussed some factors responsible for high personal savings in the past, it is now appropriate to examine likely result of those factors in the future. It is admittedly difficult to forecast the exact level of future personal savings. Nevertheless, it is necessary to project the general trend of the saving ratio in order to determine if high personal

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<sup>16</sup>Tuvia Blumenthal, Saving in Postwar Japan (Cambridge, Mass.: Harvard University press, 1970), p. 76.

savings will continue to contribute to rapid growth in the future.

#### Growth-Rate Effect Reexamined

First, the growth-rate factor is reexamined. The factor results in high savings when a consumption lag exists. As indicated earlier, the limited credit availability seemed to be a major cause of the consumption lag; a family must wait to purchase until sufficient money is saved. We need to examine consumption behavior in some detail.

Today many families in Japan enjoy various consumer goods. Table 9 indicates the extent of ownership of some principal durable goods in 1968-1972. In 1972 more than 90 per cent of the Japanese households surveyed had such durable goods as washing machines, and refrigerators. Black and white TV, vacuum cleaners, and sewing machines were owned by more than three-quarters of the Japanese families. Color TV also showed a remarkable increase in recent years.

On the other hand, there were various items that had not been made available to many families. The extent of ownership of air-conditioning, pianos, passenger cars, and stereo components was low. However, demand for these items has become stronger in Japan in recent years, as seen from the following observation:

Consumption patterns have shown a great shift in the direction of mass consumption of durable goods, whereas many of the traditional patterns have remained unchanged in the consumption of non-durables, particularly food. After reaching a point of near-saturation with regard to the three appliances, refrigerators, washing machines and television sets, the Japanese are now pursuing the "three C's"--Car, cooler (air-conditioner) and color television with better dwelling facilities probably next on the list.<sup>17</sup>

To finance the purchase of durable goods and houses, consumer credits

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<sup>17</sup>Ibid., p. 75.

TABLE 9

## RATES OF HOUSEHOLDS HAVING PRINCIPAL DURABLE GOODS, 1968-1972

(Per cent)

Durable goods	1968	1969	1970	1971	1972
Sewing machine	82.6%	84.6%	84.5%	84.4%	83.0%
B&W TV	96.4%	94.7%	90.2%	82.3%	75.1%
Color TV	5.4%	13.9%	26.3%	42.4	75.1%
Camera	59.8%	62.7%	64.1%	67.0%	69.8%
Washing machine	84.4%	88.3%	91.4%	93.6%	96.1%
Vacuum cleaner	53.8%	62.6%	68.3%	74.3%	79.8%
Refrigerator	77.6%	84.6%	89.1%	91.2%	91.6%
Air Conditioner	3.9%	4.7%	5.9%	7.7%	9.3%
Piano	5.2%	6.1%	6.8%	7.3%	8.6%
Stainless Steel	32.0%	38.5%	44.5%	48.7%	56.9%
Passenger car	3.1%	17.3%	22.1%	25.8%	30.1%
Bicycle	70.5%	67.8%	67.1%	66.8%	71.0%

Source: For 1968, Japan Economic Yearbook 1968, p. 224. For 1969, Japan Economic Yearbook 1969, p. 244. For 1970, Japan Economic Yearbook 1970, p. 224. For 1971, Japan Economic Yearbook 1971, p. 278. For 1972, Japan Economic Yearbook 1972, p. 300.



and housing loans have recently been extended to increasing numbers of families. The total consumer credit and housing loans were, for example, increased from \$750 million in 1968 to \$2,281 million in 1972, as indicated in Table 10. It was a roughly three-fold increase in the four-year period.

Consumer credit is divided into three categories: credit for the purchase of passenger cars, household appliances, and services. The total consumer credit, over the years, more than doubled. While credit for household appliances showed a 4 1/2-fold increase, credit for the purchase of a passenger car expanded significantly less. Throughout the period there was little use of consumer credit for services. Housing loans showed a three-fold increase in the four-year period, increasing from \$407 million in 1968 to \$1,436 million in 1971.

The credit expansion of recent years in Japan has made it possible for many families to purchase immediately such goods as cars and houses, which they could not have owned before without substantial savings. It is likely that this credit expansion has tended to reduce the consumption lag in Japan. The growth-rate effect can be expected, therefore, to become a less important factor for high saving in future.

#### Age Composition Factor Reexamined

The age composition factor requires an examination. An estimate of Japan's future age composition is given in Table 11. According to the estimate, the general trend is that Japan's age composition becomes older in the coming decades. During 1970-1990 the proportion of age group 25-39 in the total population is expected to decrease gradually from 26.7 per cent in 1970 to 24.1 per cent in 1990. The proportion of age group 40-64 is, on the other hand, estimated to increase slowly. A remarkable increase in proportion is expected in age group 65 and older. These

TABLE 10

## CONSUMER CREDIT AND HOUSING LOANS, 1968-1971

(Million U.S. dollars)

Year	Total	Consumer Credit				Housing Loans
		Total	Passenger Car	Household Appliances	Service	
1968	750	343	198	137	8	407
1969	1,342	673	307	351	15	669
1970	1,826	856	352	482	22	970
1971	2,281	845	339	478	28	1,436

Note: ¥360=\$1.00

Source: Japan Statistical Yearbook 1972, pp. 340-341.

TABLE 11

## ESTIMATE OF JAPAN'S FUTURE POPULATION COMPOSITION, 1975-1990

(Per cent)

Year	0-24	25-39	40-64	65 and +
1970	43.3%	26.7%	26.0%	4.0%
1975	39.6%	25.8%	27.2%	7.4%
1980	37.9%	25.7%	28.2%	8.2%
1985	36.2%	24.5%	30.0%	9.3%
1990	31.6%	24.1%	32.4%	11.9%

Note: Based on midyear estimates.

Source: N. Keyfitz and W. Flieger, World Population: An Analysis Of Vital Data 1970, pp. 224-233.

demographic changes appear small. Nevertheless, they are important in relation to the saving ratio of Japan. The trend toward an older population can be expected to work in the direction of a lower saving ratio in the future.

#### Inadequate Social Security System Reexamined

The inadequate social security system affected household saving in Japan in the past. However, household savings have declined in value because of rapidly rising prices in recent years. Personal savings for old age are thus losing their function, as seen in the following statement:

With rapid economic growth accompanied by spiralling prices, private savings against old age are rapidly losing their function of providing for personal economic security. This indicates that there are some limitations to the capacity of private security. These circumstances have made the problem of old people, and especially the income-security aspect, an increasingly serious social problem.<sup>18</sup>

It was with this background that the Japanese government formulated the Basic Socio-Economic Program in 1973. Japan's social security system is currently undergoing a drastic change.

The government's priority on social security can be witnessed in the substantial increase in its spending:

The FY (fiscal year) 1973 budget features expanded social security spendings of Y2,114.5 billion, a 28.8 per cent increase over the previous year to take 14.8 per cent of the total general account budget. This reflects the prime objective of ensuring that the benefits of economic growth are made available to every social stratum and a catching up with the advanced nations of the West in the area of social security.<sup>19</sup>

The Japanese government has begun to cope with the problem of inadequate

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<sup>18</sup>Shigeyoshi Jinushi, "Social Security System in Transition," The Developing Economies, Vol. X, No. 4 (December 1972), p. 506.

<sup>19</sup>The Oriental Economist, Japan Economic Yearbook 1973, p. 31.

public security system of the nation. The greater interest of the government in social betterment means each family is to bear a lesser responsibility for its own future well-being. It is likely that in the future the Japanese will save less for their own old age as a result of the establishment of a sound social security system.

#### Housing Reexamined

Housing was one of the motives for savings in Japan. The credit expansion mentioned earlier (in growth-rate effect reexamined) does not entirely solve the problem, but greater access to housing loans has an impact on the motives for saving. The recent expansion of housing loans affects these motives by reducing the desire to save for the purpose of buying a house. Furthermore, the rapid rise in the price of land and houses encourages a family to make an immediate purchase. Thus, the motive for the purpose of owning a house will be less important in the future.

The bonus-payment effect, and the education factor, call for no reexamination. It is very difficult to estimate the relation between personal savings and bonus payment, because it depends on the future condition of the economy and other indeterminate variables. The education factor is excluded from further inquiry, because there have been no additional programs resulting in increased government expenditures on higher education. Therefore, there seems to be no definite trend affecting the motive of saving for the purpose of education.

It should be noted that motives for housing and higher education may not contribute to the net savings of the nation. While some families are saving for these purposes, others are spending (dissaving) their accumulated reserves at the same time. If this is true, the contribution to net saving in the economy depends on the relative amounts of saving

and dissaving. In any case, the motives for the purpose of housing and higher education, as such, are present among the Japanese, and should not be excluded from the study of causes for higher personal savings.

Today, the acceptance by the public and government of the objectives of better social security system and high mass-consumption has become apparent in Japan. The objectives tend to increase the spending of consumers and government, and lessen their savings. Thus, the huge personal savings, which were once a readily available source of investment funds for industries, are less likely to be so important in the future.

## CHAPTER III

### TECHNOLOGICAL PROGRESS

Growth in economic production is the result of increase in resource supplies and technological progress. The resource supplies consist of land (natural resources), labor, capital, and entrepreneurial ability. Japan's recent great increase in production was not due to a large increase in the numbers of workers, for employment rose at a low rate of 1.3 per cent a year during 1960-1970.<sup>20</sup> The increase in economic production was largely due to the improvement in labor productivity. The increase in labor productivity appears to be due to the increase in the amount of capital per worker and to technological progress.

Technological progress and capital formation are closely related processes. Technological advance entails investment in the development and application of new products and/or better productive techniques. The technological advance involves two aspects: invention and innovation. Invention is the discovery and development of a new product or technique of production. Innovation is the practical application of the method which invention has provided.

Japan's past technological advance has been mainly innovation-oriented. It can be said that Japan's postwar economic growth was mainly

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<sup>20</sup>United Nations, Statistical Yearbook for Asia and the Far East 1971, p. 161.

successful adaptation of foreign technology to its economy:

It (Japan) wanted the increased size of its industry to be matched by a speeded-up modernization, and it took over great numbers of new foreign inventions. Electronics, oil derivatives, plastics, synthetic fibers and so on, which the West has taken years and years to develop, took only a very short time to come into full flower in Japan; it was a positive explosion.<sup>21</sup>

Japan had many advantages with regard to the importation of foreign technology. First, there was a wide range of foreign technology readily available at relatively low prices, first from the Americans and later from the Europeans. Secondly, the adaptation of foreign technology was considerably less time-consuming than the development of Japanese technology. Finally, the relatively high educational level of the Japanese facilitated the adaptation of technology.

It should be noted that the Japanese have also contributed to various inventions. It is difficult to measure accurately scientific output as the result of invention and the rate of technological progress. There are, however, available rough measures of human and property resources devoted to technological progress. One such measure is the number of scientists and engineers. Another measure of technological inputs is total research and development expenditures for the economy as a whole.

Japan has allocated increasing amounts of human and capital resources for research and development. The nation's total expenditure surged from \$1.2 billion in 1965 to \$4.3 billion in 1963, roughly a 3 1/2-fold increase. Research and development accounted for 1.7 per cent of the total GNP in 1971 and 1972, as indicated in Table 12. The number of researchers and technicians increased from 397.5 thousand in 1965 to 569.8 thousand in 1972.

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<sup>21</sup>Robert Guillain, The Japanese Challenge (New York: L. B. Lippincott Company, 1970), p. 124.



TABLE 12

## JAPAN'S TECHNOLOGICAL RESEARCH ACTIVITIES, 1965-1972

Year	Researchers (thousand)	Expenditures (US \$billion)	% of GNP
1965	397.5	1.2	1.4%
1966	427.4	1.4	1.4%
1967	440.3	1.6	1.6%
1968	477.8	2.0	1.4%
1969	487.7	2.4	1.5%
1970	527.4	3.0	1.5%
1971	568.2	3.8	1.7%
1972	569.8	4.3	1.7%

Source: For 1965-1969, Japan Statistical Yearbook 1970, pp. 578-579. For 1970-1972, Japan Statistical Yearbook 1972, pp. 576-577.

Because of the great expansion in research and development, Japanese technological capabilities have recently become competitive with those of other industrial nations. Japan has attained a high level of technology, partly because of the positive expansion in the field, and principally because of the introduction and improvement of technological developments initiated in European countries and the United States. Japan's high technological competence is stated as follows:

Partly because they have been able to obtain American technology at advantageous rates and conditions, and partly because of the peculiar characteristics of the Japanese and their economy, their technological capabilities are now more than competitive with the West. In fact, in many ways the Japanese are more advanced than the Europeans and the Americans. Furthermore, they seem increasingly creative and innovative.<sup>22</sup>

The present level of Japanese technology is regarded by Kahn as one of the favorable factors for its future economic growth.

To evaluate the technological competence of a nation, it is useful to study technological trade among industrial nations. Technological trade consists of the importation of foreign technology and the exportation of domestic technology. These flows are measured by payments and receipts for patent royalties. The receipts for the Japanese technological exports increased from \$17 million in 1965 to \$60 million in 1971, a 3 1/4-fold increase, as shown in Table 13. The payments for the foreign technology increased from \$167 million in 1965 to 488 million in 1971.

Japan's technological trade ratio, the ratio of receipts to payments, has been extremely low compared to those of the United States, the United Kingdom, France, and West Germany. The trade ratios were 0.12 for Japan (1971), 0.61 for France (1971), 11.31 for the United States (1971),

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<sup>22</sup>Herman Kahn, The Emerging Japanese Superstate (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1970), p. 108.

TABLE 13

## TECHNOLOGICAL TRADE BY MAJOR COUNTRIES, 1964-1971

(Million U.S. dollars)

Country	1964	1965	1966	1967	1968	1969	1970	1971
United States								
Receipts	1,059	1,246	1,380	1,567	1,805	1,858	2,158	2,465
Payments	127	134	140	171	194	192	227	218
Receipts/payments	8.34	9.29	9.86	9.16	9.68	9.68	9.51	11.41
United Kingdom								
Receipts	123	134	160	176	200	207	264	---
Payments	115	129	132	165	185	212	239	---
Receipts/payments	1.07	1.04	1.21	1.07	1.08	0.98	1.10	---
France								
Receipts	144	168	180	195	165	193	214	---
Payments	191	213	243	230	275	305	350	---
Receipts/payments	0.76	0.79	0.74	0.85	0.60	0.63	0.61	---
West Germany								
Receipts	62	75	73	90	99	97	119	142
Payments	153	166	175	192	220	251	307	359
Receipts/payments	0.40	0.45	0.42	0.47	0.45	0.38	0.39	0.40
Japan								
Receipts	15	17	19	27	34	46	59	60
Payments	156	167	192	239	314	368	433	488
Receipts/payments	0.10	0.10	0.10	0.11	0.11	0.13	0.14	0.12

Source: For 1964-1970, Japan Economic Yearbook 1972, pp. 124-129. For 1971, Japan Economic Yearbook 1973, pp. 121-126.

1.10 for the United Kingdom (1970), and 0.40 for West Germany (1971), as shown in Table 13. Japan is thus more dependent upon foreign technologies than the other industrial nations. It would have been difficult for Japan to attain its high economic growth rates of the past without this intensive technological trade.

There is no doubt that Japan will continue to use foreign technology in its industries in the future. Thus the technological gap between Japan and the other industrial nations will be closing rapidly. It is also likely that Japan will create numerous significant and profitable technologies in the coming decades. Given the increasing sophistication of the Japanese industry and the increasing dependency of Japanese exports on technology-intensive products, there must be much more of an effort to be made to promote indigenous research and development in the nation.

There is, however, a fundamental difference between closing the technology gap and depending on the extension of domestic and foreign technological progress. The difference must not be ignored if one is to evaluate Japan's technological competence for its economic growth:

In the former case (closing the gap), if other conditions are right, one can proceed at great speed. Gains can accrue in a relatively short time. In the latter case, one may face lengthy bottlenecks. The technological frontier is inevitably surrounded by uncertainties, hesitations, and false starts—soon an element of easy success in Japanese development may disappear.<sup>23</sup>

The question arises here as to how long it will take Japan to close the gap, such that Japan's technological progress can no longer depend on foreign technology imports. It is extremely difficult to determine when Japan will reach the point of no technological gap between itself and other industrial nations. However, there has appeared evidence to support

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<sup>23</sup>Kazushi Ohkawa and Henry Rosovsky, Japanese Economic Growth (London: Oxford University Press, 1973), p. 238.

the hypothesis that the point may be reached in the near future:

Since 1958 approximately 10 percent of total manufacturing in Japan was carried out using foreign technology. However, if only the modern sectors are considered, the dependency on foreign technology would rise to 25-30 percent. Although the number of technical agreements has continued to increase all the time, the proportion of agreements representing technology new to Japan and previously unlicensed is dropping steadily, from 70 percent in 1961 to only one-third in 1966. This is one sign that the gap is closing, both because Japan is achieving technical parity with the nations of the West and because of an increasing reluctance of Western business to make technology available on license.<sup>24</sup>

The gap seems to be closing very rapidly.

It is difficult to quantify the effect of closing the gap on the Japanese economy. However, it seems reasonable to conclude that closing the gap will make Japan's continued rapid economic growth more difficult.

Furthermore, Japan is likely to experience some difficulties in pursuing indigenous research and development needed for technological progress:

Research and development are, first of all, more costly than the adaptation of foreign research to Japanese needs. The present status of Japanese higher education is also such that a broadly gauged effort to improve Japanese institutes of technology and scientific training will have to be made if success is to be attained. More important still--and more difficult and even unpredictable--is the question of the suitability of the present Japanese structure and outlook to highly innovative and creative R&D. American experience, at least, shows that a fair amount of decentralization, willingness to run high risks, toleration of the unorthodox, and delegation of a great deal of authority and leeway to scientists and managers is a precondition for creative R&D.<sup>25</sup>

It is therefore probable that Japan's present economic and social structure with its reliance on seniority and internal patterns of accommodation,

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<sup>24</sup>Ibid., pp. 237-238.

<sup>25</sup>Zbigniew Brzezinski, The Fragile Blossom (New York: Harper & Row Publishers, 1972), p. 56.

may not prove suitable for creative indigenous research and development.

In summary, the disparities between Japanese and Western technology that were once easy to exploit seem to have already been exploited. The nature of Japanese society may constrain indigenous research and development. Thus, it can be concluded that the technology needed for Japan's future economic growth may not be as readily available in future.

## CHAPTER IV

### FOREIGN TRADE

Today Japan surges ahead of other industrial nations in the production and marketing of many standard industrial goods. As a result, Japan ranks first in manufacturing electrical appliances, and leads all other nations in shipbuilding. It lags behind only the U.S. in chemical, computer, and automobile production. Japanese-made products are bought by households all over the globe today.

It is often thought that Japan exports a large proportion of its total output. Exports, however, account for only about one-tenth of total output; therefore nine-tenths of Japan's production is absorbed in Japan. Japan's imports are also only about one-tenth of GNP, as shown in Table 14.

The expansion of Japan's foreign trade is seen in many parts of the world. The geographical distribution of Japan's trade is shown in Table 15. Over the years, the U.S. was Japan's principal trade partner. The proportion of Japan's exports going to the U.S. rose from 27.2 per cent in 1962 to 30.8 per cent in 1971. The share of imports coming from the U.S., on the other hand, decreased from 36.1 per cent to 29.4 per cent between the years,

Japan's second most important trading partners have been the countries of South and East Asia as a group. However, their relative importance in Japan's exports has declined over the years. Between 1962 and 1971, the proportion of Japanese total exports to these countries decreased

TABLE 14

## JAPAN'S EXPORTS AND IMPORTS AS PROPORTION OF GNP, 1965-1972

(Per cent)

	1965	1966	1967	1968	1969	1970	1971	1972
Exports <sup>a</sup>	11.1%	11.3%	10.2%	10.7%	11.2%	11.6%	12.5%	11.5%
Imports <sup>b</sup>	10.0%	10.0%	10.3%	9.8%	9.9%	10.5%	10.0%	9.1%

Note: <sup>a</sup>Exports/GNP.  
<sup>b</sup>Imports/GNP.

Source: Japan Economic Yearbook 1973, p. 240.



TABLE 15

## GEOGRAPHICAL DISTRIBUTION OF JAPAN'S FOREIGN TRADE, 1962 AND 1971

(Per cent)

	1962		1971	
	Exports	Imports	Exports	Imports
Developed Area	47.5%	58.1%	58.0%	55.4%
United States	27.2%	36.1%	30.8%	29.4%
Canada	3.2%	4.6%	2.9%	5.0%
Western Europe	13.3%	9.6%	15.0%	10.4%
Australia	3.8%	7.8%	3.1%	8.0%
Developing Area	51.9%	39.1%	36.6%	35.4%
South East Asia	32.7%	17.8%	25.4%	17.9%
Middle East	4.9%	9.1%	3.3%	12.4%
Latin America	7.5%	8.3%	4.5%	7.1%
Africa	4.3%	1.4%	2.1%	3.5%
Communist Bloc	2.5%	3.0%	4.7%	3.8%

Source: Japan Statistical Yearbook 1972, pp. 292-296.

from 32.7 per cent to 25.4 per cent. The decline of the Japanese exports in the area was explained as follows:

Under the combined effect of the slackening import demand in the United States and reduced United States military expenditures in Asia, these Asian trading partners of Japan experienced serious balance-of-payments difficulties in 1970 and restricted their imports. In addition, it is possible that in some product groups at least, a number of these markets have become relatively saturated with Japanese merchandise.<sup>26</sup>

The share of Japan's imports from the area remained approximately the same over the years. The countries in South and East Asia export to Japan mostly industrial raw materials, such as iron ore, mineral fuels and other resources.

The shares of Japan's exports to and imports from Western Europe have been steadily increasing over the period. A considerable increase in the share of Japan's imports is also seen in its trade with Middle East. Japan is heavily dependent on the Middle East countries for oil. The proportion of Japan's exports going to the communist bloc shows an increase.

A major characteristic of Japan's trade seen in the above table is that its exports go mostly to the more advanced nations, while its imports of essential raw materials are drawn from many less developed nations. This characteristic of its trade structure has brought to Japan some difficulties in its trade expansion. The problems facing Japan's trade are associated with both exports and imports.

### Exports

Japan's rapid export expansion in recent years began to threaten the prosperity of other nations. As the flow of Japanese goods into their markets increased rapidly, some major industrial nations experienced

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<sup>26</sup>"Japan's Economic and Foreign Trade 1955 to 1970," GATT Studies In International Trade, No. 2 (Geneva: General Agreement on Tariffs and Trade, 1971), p. 32.

chronic balance-of-payments deficits.

To cope with serious balance-of-payments problems, the U.S. and other industrial nations acted to limit the flow of Japanese goods into their economies. In the summer of 1971, President Nixon announced a new economic program to cope with the rapid deterioration of the U.S. balance-of-payments, by imposing a temporary ten per cent surcharge. The program also included cessation of dollar convertibility into gold. The purpose of these policies was to force exchange rate changes. These policy changes consequently created strong speculation of an immediate dollar devaluation. Speculators quickly began selling U.S. dollars in Japan. The enormous inflow of dollars to Japan forced the Bank of Japan to terminate its guaranteed price of 360 yen for a dollar. As a result, the Japanese government allowed the yen to float to a higher value in relation to the dollar.

The events took place in the following sequence:

(August 17, 1971) Dollar selling are extremely active in the Tokyo foreign exchange market. For supporting the dollar, the Bank of Japan took to massive equalization buying totaling around \$600 million.... (August 19, 1971) The Tokyo Foreign exchange market was virtually closed due to flurry of dollar selling.... (August 27, 1971) The government decided to float the yen as from Aug. 28....<sup>27</sup>

The changes in U.S. government policy can have an impact on Japan's trade. Japan's huge exports to the U.S.--roughly 30 per cent of the total--were made more expensive in the U.S., first by the temporary surcharge, and later by the higher yen value. Japan's exports may as a result decline in the future.

However, it should be noted that there are other forces influencing exports, such as changes in tastes, population increase, and rise in income in importing nation. For example, the demand for small-size Japanese

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<sup>27</sup>The Oriental Economist, Japan Economic Yearbook 1972, p. 9.

automobiles has increased in the U.S. due to recent energy shortage. If U.S. incomes increase more rapidly than Japan's export prices, then U.S. import demand may not be significantly affected. Furthermore, international trade is generally carried out on the basis of a long-term contract, and the impact of the yen revaluation may not become apparent immediately:

Although exports were originally believed to record a considerable decline during 1972 because of the stiff 16.88 per cent yen revaluation carried out toward the end of the preceding year, they registered an unexpectedly big advance. The figure, however, is lower than the spectacular 24.3 per cent increase recorded in the preceding year. By quarters, exports remained on a high level and recorded a sharp gain of 22.1 per cent in the January-March period. This was chiefly due to the fact that the contracts for such exports had been signed prior to the yen revaluation. In the April-June period, however, the export growth ratio dropped to a moderate 12.7 per cent because of the dwindling contracts signed after the floating of the yen as from the end of 1971.<sup>28</sup>

In any case, the revaluation of the yen makes Japan's exports more expensive in the long-run. Thus, it seems likely that Japan will lose some of its competitive advantage in exports in future.

U.S. imports from Japan were not the only reason for the heavy deficit of the U.S. during the period. Japan's tight import restrictions made it difficult for U.S. industries to export to Japan. Japan was criticized for its unfair trade policy:

The Japanese, while taking full advantage of American liberal trade policies to expand their markets in this country, have remained relatively restrictionist in their own trade and investment policies. It is true that Japan is much more protectionist than the United States. Since adhering to the General Agreement on Tariffs and Trade (GATT) in 1964, the Japanese have moved extremely slowly to abolish the trade quotas and investment restrictions prohibited by GATT. By their own admission they are still in violation of the agreement.<sup>29</sup>

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<sup>28</sup>Ibid., p. 76.

<sup>29</sup>Irwin Isenberg, "Japan and the World," Japan: Asian Power (New York: The H. W. Wilson Company. 1971), p. 170.

The U.S. demanded a rapid and effective liberalization of Japan's import policies.

The question was not one of value or justice, but of the simple self-interest of nations which faced severe economic problems:

Japanese prosperity is threatening the prosperity of both the United States and Western Europe. The Europeans are determined to keep the Japanese out. Period. The Americans, having already forced a 17% revaluation on the yen, are determined to force the Japanese either to sell less or buy more from us. Or both. Japanese-U.S. relations are no longer a question of diplomacy, but of simple arithmetic.<sup>30</sup>

The increasing economic and political pressures put on by these countries forced Japan to change its trade policies drastically. The first step was the realignment of exchange rates mentioned earlier.

The second step taken by Japan was to hurry its import liberalization. Japan's trade liberalization took place in 1971-1972 in the following sequence:

Looking at liberalization of trade, we see that ten new items were taken off the import restriction list in January, 1971, twenty more in July, and another twenty in September, leaving only forty items... which was about up to par with West Germany.... Thereafter U.S.-Japan negotiations stimulated further partial liberalization of four items in February, 1972, and full liberalization of six items in February, 1972, and full liberalization of six items in April.<sup>31</sup>

The third step Japan took to cope with the problem was to gradually shift its export interest from the U.S. and Western Europe to new potential partners. With its diplomatic effort to normalize relations with the communist bloc, Japanese industrialists became optimistic about the future potentiality of a larger trade with China and U.S.S.R. The eight hundred million possible future customers of China were, for example, extremely

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<sup>30</sup>"Sinking Feeling In The Land Of Rising Sun," Forbes (October 1, 1972), p. 30.

<sup>31</sup>The Oriental Economist, Japan Economic Yearbook 1972, p. 22.

attractive to the Japanese businessmen:

In Japan's ever-hungry business community the establishment of formal relations between Tokyo and Peking is being read to mean the opening of a vast market; one which will accept the Japanese exports and money that are meeting such resistance in the United States, Europe and ever elsewhere in Asia. Some Japanese businessmen even believe that they will be allowed to invest in China's heavy industries and social infrastructure projects, as well as reaping the profits of greater trade.<sup>32</sup>

Despite this optimism among the industrialists, the prospect seems to be a thing of the distant future. Much of the talk is:

More heady than realistic. The Chinese have always been hard-headed about their trade relationships: political considerations have been allowed to tip purchasing decisions only when the economic choices have been firmly balanced.<sup>33</sup>

#### Imports

It is well known that Japan lacks many of the raw materials needed for industrial production at home. Yet, it is surprising to visualize how dependent Japan really is on foreign suppliers for needed resources. Table 16 indicates Japan's needs and domestic supplies in 1971, and presents estimates for 1975. In 1971 Japan imported 96 per cent of its crude oil, and all of its nickel and aluminum. Many other items such as copper, lead, zinc, and lumber were brought in large quantities to Japan from foreign suppliers. Domestic supplies of such essential resources were small.

1975 estimates make the fact more convincing. Japan will have to import more than 90 per cent of its lead, nickel, aluminum, iron ore, and crude oil. Its needs continue to increase rapidly while domestic supplies dwindle. As far as industrial raw materials are concerned, Japan is bound to continue being dependent upon foreign suppliers. Japan's demand is

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<sup>32</sup>"800 Million Customers," The Economist (September 30, 1972), p. 91.

<sup>33</sup>Ibid.

TABLE 16

JAPAN'S NEEDS AND DOMESTIC SUPPLIES OF RESOURCES, AND  
THE LEVEL OF OVERSEA DEPENDENCE, 1971 AND 1975

	1971			1975 (estimates)		
	Need	Domestic Supply	Oversea Dependence	Need	Domestic Supply	Oversea Dependence
Copper	810	220	78%	1,400	240	83%
Lead	288	68	67%	368	16	96%
Iron	650	280	57%	1,290	494	62%
Nickel	81	0	100%	131	0	100%
Aluminum	134	0	100%	178	0	100%
(thousand of tons)						
Iron Ore	95	11	88%	164	16	90%
(Million of tons)						
Crude Oil	204	8	96%	290	0	100%
Gas	41	24	42%	60	31	61%
(Million cubic meters)						

Source: For 1971, Japan Statistical Yearbook 1972, pp. 254-255. For 1975 estimates, J. Halliday and G. McCormack, Japanese Imperialism Today, citing the 1970 Report of the Research Committee on Resources of the Economic Council, p. 18.

becoming a large part of the total world demand for some raw materials.

Some long-term estimates show Japan's larger consumption of world's resources in the future:

If current economic growth rates were maintained, Japan would, in ten years' time, be consuming 30 per cent of the world's total exports of raw materials, compared with 12 per cent today.... By 1980 the annual consumption of crude oil would rise to about 11 per cent of the total world consumption.<sup>34</sup>

Its dependence on imported raw materials exposes Japan to political pressure.

Political pressure exerted upon Japan by supplying nations is readily seen in the following facts:

The fuel, ferrous, and non-ferrous mining industries of the world are dominated by giant multinational and national corporations, which are increasingly government owned or controlled. It is possible for these corporations to influence export prices of these fuels and raw materials through cartelization, open or tacit collusion, etc. Governments of countries in which raw materials are mined can also exert pressure to revise prices upwards. It must also not be overlooked that some of these countries afford considerable export markets for Japanese manufacturers and therefore, are in a doubly advantageous position to exert pressure.<sup>35</sup>

The Arab nations' oil squeeze is a relevant example in the recent world-wide energy shortage. The oil-rich nations have successfully strengthened their political and economic positions by manipulating the supplies and prices of oil. Oil has indeed proved to be a powerful economic weapon for the Arab nations. As a result, some needy countries were forced to change their foreign policies, hoping that the needed oil supplies will be restored. Many economies suffered a reduction in production of oil-related industries.

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<sup>34</sup>Irwin Isenberg, "Japan and the World," Japan: Asian Power (New York: The H. W. Wilson Company, 1971), p. 170.

<sup>35</sup>V. K. Wickramasinghe, "Japan-The Emerging Superstate?" The Developing Economies Vol. XI, No. 2 (June 1973), p. 205.



The consequences were particularly hard felt in Japan, which depends almost totally on foreign suppliers. The shortage inevitably meant a jump in prices. Higher prices for the industrial materials represent added costs for production. The oil-consuming industries were, as a result, forced to curtail production:

What triggered the decline was the Arab oil producers' 40% hike in crude prices and the growing worldwide oil shortage.... And the cutback in oil output by the Persian Gulf producers, while not aimed specifically at Japan, is likely to squeeze everyone. In fact, it could curtail the production of Japanese industries, which are totally dependent on imported oil.<sup>36</sup>

The industries suffered a heavy loss in production. As a result, distortion of Japan's economic structure became apparent. Heavy damages done by the oil shortage have now spread beyond the industries immediately affected. In fact, the whole society has been affected:

Panicky consumers have denuded stores of items they think will be scarce, like toilet paper and detergents. Caches of perhaps as much as 500,000 gallons of oil products have been illegally hidden round the country. Earlier this month, a stray golf ball led to the discovery of one hidden store near Osaka; when the golfer scrambled down a ravine in search of the ball, he also found 624 drums of oil. Already two taxi drivers have committed suicide because of fears that the fuel shortage would put them out of business.<sup>37</sup>

The oil shortage had a disrupting effect upon Japanese society.

Japan's heavy dependence on foreign sources of raw materials makes its industries extremely sensitive to the trade policies of foreign suppliers. The trade policies of foreign countries can directly affect the performance of the Japanese economy. Japan, therefore, needs strong political and economic ties with supplying nations. It is only then that Japan can

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<sup>36</sup>"Shortage threaten the Japanese Boom," Business Week (November 10, 1973), p. 196.

<sup>37</sup>S. Chang, "In Tokyo, The Party Is Over," Time (December 31, 1973), p. 36.

secure sufficient raw materials for its industrial production.

Certainly the Japanese appreciate the gravity of this situation. Japan is now promoting the direct investment of its capital in supplier nations, in an attempt to assure an adequate supply of needed raw materials. However, it is difficult to see how this will entirely solve the problem, because the fundamental problem appears to be political not economic. For example, few countries today see their future as raw material exporters, and such nationalistic sentiments and fears of dominance are likely to restrain the efforts of the Japanese:

We must not overlook the pressures that can be exerted by the emergence of assertive nationalism in countries in which such investments are made. Such pressure can be expected particularly in the Middle Eastern, Asian, and Australasian regions where nationalism is a relatively new force and from where Japan draws the major proportion of her fuel and raw materials.<sup>38</sup>

There is no doubt that Japanese industries could find and purchase natural resources all over the world, if they were allowed to do so. But Japan may face the real possibility that the world is unwilling to supply needed raw materials under any "reasonable" conditions.

It is probable, therefore, that Japan will be forced by supplying nations to pay substantially higher prices for raw material imports in the future. Higher prices for raw materials raise the costs of production. This puts Japan in a less advantageous position now in terms of foreign trade than in the past.

Japan's future economic growth with respect to foreign trade is likely to become increasingly difficult in two ways. First, a rise in the cost of production will make Japanese goods more expensive in the future, thus endangering export expansion. Secondly, the decline in exports

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<sup>38</sup>v. K. Wickramasinghe, "Japan-The Emerging Superstate?" The Developing Economies Vol. XI. No. 2 (June, 1973), p. 204.

will tend to reduce Japan's ability to pay for its raw material imports.

This has been the case with Japan, as indicated in the following report:

Higher oil payments and increased imports have predictably aggravated Japan's balance of payments position. In the first nine months of 1973, the country recorded a balance-of-payments deficit of \$6.8 billion, according to Tokyo's Nomura Research Institute. This compares with a payments surplus of \$4.7 billion in the first nine months of 1972. The institute estimates Japan's total deficit for 1973 may reach \$5-\$6 billion, compared with a \$3 billion surplus in 1972.<sup>39</sup>

Thus, Japan's foreign trade situation has become increasingly unfavorable for future economic growth.

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<sup>39</sup>Neil A. Martin, "Sayonara Super Growth," Financial World, Vol. 140, No. 25 (December 19/26, 1973), p. 21.

## CHAPTER V

### HUMAN RESOURCES

Human resources constitute one of the most important sources for economic growth. This chapter examines three main characteristics of human resources in postwar Japan: (1) the desire of the Japanese for material affluence, (2) "permanent employment" system, and (3) the increasingly "tight" labor market.

#### Desire for Material Affluence

One of the most important sources for Japan's economic growth came from the desire of the people for material affluence. This desire made the Japanese work-oriented. The achievement-orientation is felt strongly among both workers and management in Japan. Achievement orientation has been a classical explanation of Western industrialization and the West's rapid economic growth. Similar achievement-related attitudes and values exist in Japan, whereas they appear to be weakening in the West:

The Japanese today seem to have virtually as many of these "Calvinist" qualities as Northern Europe or the United States has had in the past, whereas in the West these attitudes and values seem to be increasingly eroding. They are probably eroding in Japan, as well, although to a lesser degree and at a slower rate.<sup>40</sup>

The dedication of the Japanese people was, accordingly, favorable for Japan's rapid economic growth. The people were determined to catch up economically

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<sup>40</sup>Herman Kahn, The Emerging Japanese Superstate (Englewood Cliffs, N. J.: Prentice Hall, Inc., 1970), pp. 108-109.

with the West.

Yet, the consequences of material affluence are not always what people work for. The Japanese are subject to all the agonies of today's modern industrial life. The people suffer the ills of social and economic disruption of society. Industrial cities have become increasingly congested and polluted. Industrial diseases are increasing, as serious pollution endangers the public health. Automobile accidents claim thousands of lives every year. Japan continues to be near the top of the international ranking in suicide.

The Japanese population appears now to be demanding a change. The people are aware of a deterioration of the environment. They have begun to doubt the value of material affluence obtained at such high costs. Various social trends away from the value of material affluence appear to be taking place in Japan:

Misgivings about the validity of such a materialistic way of thinking, and feelings of the growing emptiness of materialism have begun to appear, concern for the cultural and spiritual aspects of life, for creativity, aesthetics, and enjoyment..., in general for those things which give life a purpose, together with a reaction against materialism has gathered strength and in consumer behavior a trend away from mass consumption and a tiring of materialism has appeared.<sup>41</sup>

Today many younger people strongly reject the dedication of the older generation to material affluence. The contrasts between generations has been described as follows:

The younger people have already begun to reject the dedication of the older generation to rapid economic growth. The fascination with the GNP, the gross national product--a kind of GNPism as an informal ideology of the older generation--is clearly not as strong among the younger, many of whom take Japan's economic recovery for granted, and some whom--

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<sup>41</sup>Takemi Yasunaga, "Patterns of Living in a Changing Society," The Developing Economies Vol. X, No. 4 (December 1972), p. 440.

egged on by the intellectuals and academicians—eagerly adopt the antigrowth doctrines of their counterparts in the Western world. The postwar outlook of the older people was single-faceted. It concentrated on recovery at all costs, in part because of the dictates of survival, in part because of patriotism, in part doubtless as a way of restoring one's own sense of psychic balance in the wake of shattering defeat.... The younger people, in contrast, have more multifaceted but less clear goals, which include life, as well as a variety of idealistic social objectives.... As a result, for many of them—especially for the offspring of the middle class, increasingly flocking into colleges—the growth of the GNP is an insufficient or even unworthy objective. More and more contrasts are drawn between the GNP and the quality of life, more and more the disparity it highlighted between abstract GNP percentages and concrete manifestations of social inadequacy.<sup>42</sup>

The young Japanese have thus shifted their priority away from mere material advance to "betterment in life." This trend is observed not only among the young, but also among the rich and older generation. The continuous surveys done by the Japanese Research Center in 1968 and 1969 into households with income levels of at least 5 million yen per year (approximately \$23,000) gave the following results:

Of those interviewed, 35.1 per cent showed concern for a "spiritually rich life," whereas only 4.7 per cent showed concern for the material aspects of life. Also, from the results of a survey with futurists and social forecasters as subjects concerning the quality of life in the twenty-first century, it was thought that only a mere 13 per cent of the population would show concern for material affluence.<sup>43</sup>

It is very difficult to forecast the effect of such changes in values on Japan's future economic growth. Nevertheless, it can be said that the Japanese have begun to shift their priority from mere material affluence

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<sup>42</sup>Zbigniew Brzezinski, The Fragile Blossom (New York: Harper & Row Publishers, 1972), pp. 9-10.

<sup>43</sup>Takemi Yasunaga, "Patterns of Living in a Changing Society," The Developing Economies Vol. X, No. 4 (December 1972), p. 440.

to "betterment in life." Therefore, the drive for further economic growth may no longer be a "main desire" of the people in Japan.

### "Permanent Employment" System

Japan's postwar economic growth was partly the result of the effective adaptation of industrial management to traditional attitudes concerning interpersonal relationships. The practice of "permanent employment" is one relevant aspect of Japan's successful industrial organization.

"Permanent employment" generally means that an employee enters a large firm after school graduation, receives in-company training, and remains an employee in the same company until the retirement age of fifty-five. Major features of Japan's permanent employment were first introduced to the Westerners by James Abegglen in his book, The Japanese Factory, in 1958.<sup>44</sup> The features of the "Japanese factory" should be noted.

Large Japanese companies hire young men and women for worker class jobs as they leave school, and for managerial positions as they leave college. The company will not seek workers from among individuals employed elsewhere, for there is a lifetime commitment between an individual and his company. Within both the workers classes and the management ranks, the most capable individuals are assigned to the position of greater importance, but formal promotion in rank is primarily on the basis of seniority. Pay structure is on the basis of seniority and size of family with a small variation based on function and efficiency. Employees work within a system of shared obligations with enduring loyalty to the company. The management, in turn, gives the commitment of permanent employment to them.

The nature of this permanent employment can be understood only

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<sup>44</sup>Robert E. Cole, "Permanent Employment in Japan: Facts and Fantasies," Industrial and Labor Relations Review Vol. 26, No. 1 (October 1972), p. 615.



in the context of a whole pattern of human relationships deeply influenced by Japanese traditions. The "family" relations are described as follows:

The family in Japan used to be very large, a "household," almost a clan, and it was arranged in a strict series of ranks under a single chief. Each individual's rights and duties varied according to his position, but all owed complete obedience to the head of the family. Everyone, even a stranger, who was allowed to share in the family life became an integral part of it. These family relationships were all vertical; there was very little in the way of horizontal relations--that is to say, with other families, neighbors and so on. This big family has vanished, being replaced by the smaller modern kind, but it has left deep marks upon the community. It is as though the Japanese find it very difficult to imagine any other kind of human relationship, even in this modern world where so many other kinds of societies exist, and as though relationships within the firm are in fact a transposition of those which used to exist within the family of former times.<sup>45</sup>

The practice of permanent employment has contributed to Japan's economic growth in the following interrelated ways. First, permanent employment helped strengthen and stabilize the Japanese economic system. The maintenance of social stability was crucial during the transition from the ruins of World War II to a modern economy. Japan underwent the rapid industrialization based on its firm traditional social system, thus placing fewer social transition burdens on the people.

Secondly, permanent employment eliminated class struggle between employees and management, and thus reduced labor disputes. There have been unions and strikes in Japan, but the goals of the Japanese unions were different from those of unions in the West. It is in the "family" context, too, that we must consider relations between the company and unions in Japan. The relations are described in the following statement:

It is clear that the company will not look with a favorable eye upon the existence of any outside union,

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<sup>45</sup>Robert Guillain, The Japanese Challenge (New York: J. B. Lippincott Company, 1970), pp. 83-84.



one that follows a line that is not the company's line and that claims to give it direction or advice. Like any other family, the company wants to integrate and take over everything in contact with it: it must therefore take over the union too. The union is welcome only as long as it forms part of the family, in other words, it must be a "house union," a company union very much under the control of the management. The Japanese trade union movement is in fact based upon a great number of single-company unions.<sup>46</sup>

Unions in Japan are thus mostly vertical. Membership in a horizontal union, that is the one based on trade or occupation, is not common in Japan.

Strikes have been rarely motivated by general movement on the part of the working class or of a particular trade. A strike in Japan can be best described as follows:

A strike is a movement within some given company, intended to remind it of its duty to give its family of workers an adequate wage or to persuade it to give them more. But it will not be found that two different house unions belonging to the same sector of industry and having the same problems ever combine to act in concert.<sup>47</sup>

Therefore, Japanese industries could expand their industrial production without serious stoppages.

Thirdly, permanent employment promoted in-company training, thus improved the quality of workers. A firm could afford to invest substantial amounts of money and other resources in educating its labor, because the benefits of that education would remain with the firm.

Finally, permanent employment helped Japan's economic growth in that a firm could be quick and flexible in its adaptation of innovation or new ideas in a rapidly changing situation. The individuals concerned did not feel threatened, at least as far as their jobs and salaries were concerned, even by major changes in the company. This view is presented

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<sup>46</sup>Ibid., p. 85.

<sup>47</sup>Ibid., p. 86.

by Kahn as follows:

Each individual knew that no matter what happened, as far as title, status, and salary went few would suffer much, if at all, from even the most dramatic changes in the company. This confidence in one's status, along with the peculiar Japanese politics of consensus (which allow a large number of individuals, almost regardless of how low their status, to place their ideas into the system) and the enormous community pressures for the firm to do well competitively and absolutely (pressures felt by the individual at his own level of concern), meant that the organization did not hesitate at innovation or the introduction of new ideas.<sup>48</sup>

Permanent employment system had an important impact on Japan's economic expansion. The system enabled industries to maintain stability in labor-management relations, created an incentive for firms to equip employees with high quality training, and to be readily flexible in their adaptation of innovations. It can be said that permanent employment has been successful as a part of Japan's industrial organization, since Japan's growth rate of labor productivity has been one of the highest among industrial nations in the postwar period.

But some changes have been taking place with respect to the permanent employment system in recent years. An official nationwide survey indicates that strict permanent employment is not in fact so prevalent in Japan today. The survey asked companies to indicate which of four systems of hiring, wages, and promotions they followed: (1) Seniority, (2) Ability, (3) A compromise between the two, or (4) "Not identifiable," meaning there is no set of pattern followed. The result of the survey is summarized as follows:

To conform to the lifetime system, firms should have chosen the "seniority" column. But only 7.4 per cent picked this description of their practice. Nor was there much variation among the eight industry classes. Manufacturing, with 8.6 per cent of firms committed to the seniority system, was highest, followed by construction with 8.4 per cent. At the

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<sup>48</sup>Herman Kahn, The Emerging Japanese Superstate (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1970), pp. 84-85.

bottom was mining with 4.4 per cent. Even more surprising is the outcome for firms by size-class, because prevailing impressions are that the larger firms exhibit most commitment to seniority. No such progression is evident; in fact, the reverse appears to prevail, with the small firms most devoted to seniority.<sup>49</sup>

Thus, it appears that the practice of permanent employment may be changing in Japan today.

The main reason for the change lies in the fact that Japan has begun to experience a tight labor market. The change is especially affected by the difficulty of recruiting junior high school graduates, the favored group for entry blue-collar jobs:

Labor shortages have modified the recruitment policies of employers. Unable to hire sufficient numbers of new junior high school graduates, employers turned to graduates at higher levels and young workers with previous employment. In 1971, for every new school graduate recruited by private and public firms employing five regular workers or more, employers hired 3.4 workers who were not new school graduates. By the same token, workers, especially young ones, are changing jobs and firms more than the theory of lifetime commitment allows.<sup>50</sup>

Secondly, changes in the desires of workers discussed earlier, have had an impact on permanent employment. The third reason is that in a dynamic economy the employer needs several types of labor flexibility. This is explained by the following statement:

These include flexibility over the business cycle and under conditions of long term technological change. An occupational wage system in combination with high levels of inter-employer mobility provides reasonable short term flexibility. Workers can be added or laid off to maintain marginal cost in accord with marginal value product.<sup>51</sup>

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<sup>49</sup>Beatrice G. Reubens, "Manpower Training in Japan," Monthly Labor Review, Vol. 96, No. 9 (September, 1973), p. 16.

<sup>50</sup>Ibid., p. 17.

<sup>51</sup>Robert Evans, Jr., "Japan's Labor Economy—Prospect for the Future," Monthly Labor Review Vol. 95, No. 10 (October 1972), p. 7.

The important question is not why Japan's permanent employment has undergone changes, but what will be the impact of the changes upon future economic growth. The change has clearly affected Japanese organizational morale, spirit, unity, and management competency, both within the firm and the economy as a whole. It is evident that as the firms get larger, they lose some of the quality of being one big family. The tight labor market tends to put the workers in a stronger bargaining position. As a result, the breakdown of permanent employment has stimulated some unrest between labor and management. The reaction of organized labor to this situation should be considered in evaluating Japan's future economic growth:

Until now the Japanese worker has done well. His real wages have increased despite inflation, and individually and collectively he has had a somewhat superficial sweetheart agreement with his bosses at the plant level. Yet one may have doubts about the future. Management has shown little resistance to sizable wage increases, largely because these were more than matched by gains in productivity. But will management not be tempted to resist if it becomes more difficult to raise productivity levels? If this happens, if prices continue to go up, if labor shortages still exist, we can safely assume more severe and open worker-management conflict in the 1970's.<sup>52</sup>

The lengthy work stoppages of large firms in Japan can have a particularly crucial impact on its economic growth. Many of the large Japanese companies export a relatively large share of their output, and interruptions of shipments could lose some foreign buyers. Secondly, the companies are heavily indebted to banks for capital, and they would carry unusually heavy overhead burdens.

The Japanese labor unions will probably be engaged in increasing numbers of work stoppages in the future. If so, it could lead to some significant changes in the course of Japan's future economic growth.

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<sup>52</sup>Kazushi Ohkawa and Henry Rosovsky, Japanese Economic Growth (London: Oxford University Press, 1973), p. 241.

### Increasingly "Tight" Labor Market

Expansion of production in a country may be achieved by bringing some unemployed resources into productive employment and by increasing productivity of already employed resources. At the end of World War II, Japan had substantial unemployment. One of the factors contributing to Japan's postwar economic growth was its successful transformation to a full-employment economy. Another factor contributing to postwar growth was the transfer of labor from low-productivity employment to high-productivity employment:

In part, the extraordinarily high rate of Japanese economic growth is explainable by the simple fact that Japan has had a very large inefficient sector of the economy (agriculture, small-firm manufacturing and distribution) to start with, from which it has been rapidly shifting the factors of production into the advanced modern sector. It is obvious that each of the millions of workers removed, for instance, in the postwar period from low-wage (and in Japan unprofitable) agriculture, or from small retailer and small manufacturer sections into the high-wage modern profitable industrial sector, produces large increases of G.N.P. without the necessity for working harder, or without the people necessarily working with any greater originality or intelligence.<sup>53</sup>

However, in recent years Japan has begun to experience a chronic "tight" labor market. This may prove to be a critical problem for Japan's future aggregate economic expansion. The main argument here is that the very tight labor market may result in wage increases that are above productivity increases. If this happens Japanese labor costs are likely to lose some of their competitive advantages in international trade. This is a crucial problem since Japan depends on exports to pay for its imports of raw materials.

Close attention should be paid to the rate of change in the

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<sup>53</sup>K. Bieda, Japanese Economy (New York: John Wiley and Sons Australasia Pty. Ltd., 1970), p. 17-18.

TABLE 17

## RATE OF CHANGE IN EMPLOYMENT-RELATED INDEXES, 1968-1972

(Per cent)

	1968	1969	1970	1971	1972
GNP	13.7%	12.6%	9.7%	6.2%	9.2%
Labor Productivity	18.0%	13.3%	11.2%	4.0%	2.5%
Nominal Wages	14.0%	14.9%	14.9%	14.3%	15.9%

Source: The figures for labor productivity and nominal wages are calculated from Table 18. GNP are from Table 1.

employment-related indexes in Table 17. While GNP growth slowed somewhat, nominal wages increased at roughly steady rates. Nominal wages increased at increasing rates from 14.0 per cent in 1967 to 15.9 per cent in 1970. Furthermore, the rate of growth of labor productivity was slowing. The annual rate of growth declined from 18.0 per cent to 2.5 per cent during the period, as indicated in Table 17. The decline of the rate of increase in productivity may be due to the increasing relative importance of the service sector whose rate of growth of productivity tends to lag behind that of manufacturing sector. The data indicates that the rate of increase in nominal wages has exceeded the rate of increase in productivity since 1969.

In explaining the reason for the increasingly tight labor market one needs to look at factors influencing the supply of labor and factors influencing the demand for labor. Labor supply has been growing slowly in Japan. The number of people of working age grows slowly due to a low rate of population growth.

But in addition to this, there has been a decline in the labor force participation rate in recent years. The labor force participation rate (labor force/population) declined from 65.9 per cent in 1967 to 64.4 per cent in 1972, as indicated in Table 18. There are four reasons for the decline in the participation rate. The first reason is that the government has constantly extended the social security system. In recent years an increasing effort has been made in this area by the government under the Socio-Economic Development Program (1967), though Japan still lags behind other advanced nations. As a result, the aged and disabled have become less concerned about being unemployed. The need to work for

TABLE 18

## JAPAN'S EMPLOYMENT-RELATED INDEXES, 1967-1972

	1967	1968	1969	1970	1971	1972
Labor Force Participation	65.9%	65.9%	65.5%	65.4%	65.0%	64.4%
Weekly Hours Worked	48.3	48.2	47.5	46.9	46.4	---
Nominal Wages	100	114	131	154	176	204
Labor Productivity	100	118	134	149	155	159

Source: For 1967-1971, Japan Statistical Yearbook 1972, pp. 225-226.  
 For 1972, Japan Economic Yearbook 1973, pp. 342-344.



those unfit is reduced due to:

A constantly extended social security program (the present 7 per cent ratio of social security benefits payments to national income under Japan's Livelihood Protection Law is still lower than in most Western industrial societies, but is nevertheless guarantees each national of medical care, modest unemployment compensation, and other welfare benefits), thereby weakening the traditional "hand-to-mouth" motivation to work.<sup>54</sup>

The second reason is that young people spend a longer time in school at all levels today than in the past. This tends to keep a large portion of young people out of the labor force. The ratio of the number of students to the student-age population increased from 55.5 per cent in 1950 to 61.1 per cent in 1970, as indicated in Table 19. The data for changes in each level of education are shown in Table 20. Because it is required by law, almost all children 7 to 16 years of age are enrolled in primary and secondary schools. Although high school education is not required by law, the ratio of enrollment has increased greatly over the years. The attendance increased from 29.3 per cent in 1950 to 71.7 per cent in 1970, as shown in Table 20. Another increase is observed at the college-university level, but to a lesser degree.

The third reason for the low labor participation rate is a substantial increase in nominal wages, as seen in Table 18. Higher average income of a bread-winner tends to make it unnecessary for supplementary jobs by other members of the family. Most Japanese women still in general prefer housework to outside jobs. With respect to female employment, Japan's Ministry of International Trade and Industry (MITI) announced the following estimate:

Female employment is expected to decline from its

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<sup>54</sup>Martin E. Weinstein, "Japan and Asia," Japan: Asian Power, ed. Irwin Isenberg (New York: The H. W. Wilson Company, 1971), pp. 192-193.

TABLE 19

## FIGURES OF POPULATION AND STUDENTS ENROLLED, 1950-1970

(Thousands)

Year	Population <sup>a</sup>	Student	Student/Population
1950	32,948	18,272	55.5%
1955	35,920	20,789	57.9%
1960	36,140	21,910	60.1%
1965	35,385	21,373	60.4%
1970	32,273	19,704	61.1%

Note: <sup>a</sup>Population aged 6-24.Source: Japan Statistical Yearbook 1972, p. 24 and pp. 546-554.

TABLE 20

PERCENTAGES OF STUDENTS ENROLLED IN THE AGE GROUP  
 BY THE LEVEL OF EDUCATION, 1950-1970  
 (Per cent)

	1950	1955	1960	1965	1970
Primary (7-13) <sup>a</sup>	99.1%	99.0%	99.1%	99.5%	99.9%
Secondary (14-16)	99.5%	99.6%	99.5%	99.2%	99.6%
High School (17-19)	29.3%	36.6%	46.7%	63.5%	71.7%
College & University (20-25)	3.8%	9.0%	10.4%	14.3%	14.6%

Note: <sup>a</sup>Number of students divided by student-age population.

Source: Japan Statistical Yearbook 1972, p. 24 and pp. 454-455

level of 50.6 per cent in 1970 to 45 per cent by 1980 (because of longer schooling and higher prosperity.)<sup>55</sup>

The fourth reason for the declining participation rate is that the desire for leisure of workers has become stronger. Workers want shorter hours and longer vacations. Japanese average work-hours per week have thus gradually been declining, as indicated in Table 18.

Alongside the above factors that influences the supply of labor, many changes have been occurring in the demand for labor. Japan experienced a great expansion in the capital-intensive manufacturing during the fifties and early sixties. But today Japan is in the process of becoming a service-oriented economy.

Table 21 indicates the nature of the transformation of Japan's three main GNP components for 1960-1970. The agriculture share of GNP decreased from 15 per cent in 1960 to 8 per cent in 1970. The manufacturing share remained stable. The services share increased remarkably from 48 per cent in 1960 to 54 per cent in 1970. The implication of the data is that Japan has become an increasingly service-oriented economy.

The change has been taking place in Japan's recent employment structure as well. Agricultural employment as a proportion of total employment decrease from 23 per cent in 1960 to 20 per cent in 1970, as shown in Table 22. On the other hand, manufacturing and service employment increased in relative importance. The manufacturing share increased from 29 per cent to 34 per cent, and the service employment from 38 per cent to 46 per cent over the period.

The Japanese economy has thus undergone a structural change

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<sup>55</sup>Warren S. Hunsberger, Japan: New Industrial Giant (New York: American-Asian Educational Exchange, 1971), p. 54.

TABLE 21

## JAPAN'S GNP BY KIND OF ECONOMIC ACTIVITY, 1960-1970

(Per cent)

	1960	1962	1964	1966	1968	1970
Agriculture	15%	13%	11%	11%	10%	8%
Manufacturing	37%	38%	37%	36%	37%	38%
Service	48%	49%	52%	53%	53%	54%

Source: Japan Statistical Yearbook 1972, p. 490.

TABLE 22

## JAPAN'S EMPLOYMENT STRUCTURE, 1960-1970

(Per cent)

	1960	1965	1970
Agriculture	33%	25%	21%
Manufacturing	29%	32%	33%
Service	38%	43%	46%

Source: Japan Statistical Yearbook 1972, p. 66.

towards a service-oriented economy. The rising trend of employment in the service sector reflects:

The post-war Japanese structural shift toward the tertiary sector in keeping with the general trend of all advanced industrial societies that require more and better services..., as well as goods. However, because of the labor-intensive nature of the case, the service sector as a whole is likely to aggravate the future problem of labor scarcity relative not only to its own requirement of labor input but also to that of the manufacturing sector.<sup>56</sup>

The short labor supply relative to the increasing demand has already had a significant effect on wages. The nominal wage rose on the average at about 14.8 per cent a year, with a 15.9 per cent rise in 1972, as seen in Table 17. Although this rate of increase may not continue indefinitely, it implies that Japanese labor is losing some of its competitive advantages, given that the rate of increase in wages exceeds the rate of increase in productivity.

Secondly, the tight labor market puts workers in a stronger position in bargaining, thereby stimulating some labor disputes:

Labor unions are bound to exploit this situation by demanding better conditions and higher wages. In a comprehensive "White Paper on Wages for 1971" put out by the General Council of Trade Unions of Japan (SOHYO), a large number of grievances were outlined, especially in comparison to the welfare arrangements and social conditions prevailing in other advanced countries, particularly Western Europe. Significantly, not only were wage and welfare improvements demanded, but opposition was registered to "all enterprise rationalization programs" posing the specter (so familiar already to some sectors of the American economy) of labor opposition to technologically oriented improvements in industrial productivity.<sup>57</sup>

The tight labor market is likely to create some unrest between labor and

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<sup>56</sup>Kenneth K. Kurihara, The Growth Potential of the Japanese Economy (Baltimore: The John Hopkins Press, 1971), p. 58.

<sup>57</sup>Zbigniew Brzezinski, The Fragile Blossom (New York: Harper & Row Publishers, 1972), p. 45.

management. This implication of the problem was discussed in the earlier section of this chapter.

It is difficult to predict the impact of the above on future Japanese economic growth. It is likely that the tight labor market will reduce the rate of growth of Japan's aggregate production.

It can be concluded that the rapidly changing labor situation is likely to become less favorable for Japan's future economic growth. From the current tight labor market situation, Japanese workers have attained a stronger position in bargaining. Management has begun to show resistance to sizable wage increases demanded by the workers, largely because those could not be met by gains in productivity growth any longer. As a result, more lengthy work stoppages will probably occur in the future. This could be an extremely unfavorable factor for Japan's future economic growth.



## CHAPTER VI

### SUMMARY AND CONCLUSION

This report has discussed some of the major factors contributing to Japan's economic growth in an attempt to determine if Japan is likely to maintain the rapid growth rates of the past in the future. No formal forecast or quantitative projection was attempted in this report. Instead, it examines some of the future implications stemming from the analysis of the factors having contributed to its growth in the past.

What are the implications of the recent development of economic and political relations in Japan and in the world with regard to the Japan's future economic growth? First, the acceptance by the public and government of the objectives of a better social security system and high mass-consumption has become increasingly apparent. These objectives tend to increase the spending of consumers and government, and weaken the motives for saving. Thus, the huge personal savings, which were once a readily available source of investment funds for the expansion of Japan's industries, will probably be less important in the future.

Secondly, the most important element of Japan's past rapid economic growth with regard to technological progress was that Japan was able to obtain American and European technology at advantageous rates and conditions. However, intensive technological trade has narrowed the disparities between Japan and other industrial nations. As a result, the gains from foreign technology are likely to be less important in the future. Furthermore,

Japan's present economic and social structure may not prove as suitable for creative indigenous research and development. Thus, the technology needed for Japan's future economic growth may no longer be as readily available as it was in the past.

Foreign trade is another area in which changes are taking place. A major characteristic of Japan's trade is that its exports go largely to the more advanced nations, while its imports of essential raw materials come largely from less developed nations. The dual characteristic of its trade structure has brought to Japan some difficulties in its trade expansion.

When Japan's rapid export expansion began to threaten the prosperity of other industrial nations in recent years, the U.S. and other industrial nations acted to limit the increasing flow of the Japanese goods into their economies. Japan's import situation has recently become extremely unfavorable, due to the worldwide energy shortage and the development of new economic nationalism in supplying nations. As a result, Japan is likely to pay substantially higher prices in the future. Higher production costs will put Japan in a less advantageous position in foreign trade. Thus, there seems to be some serious difficulty with Japan's foreign trade.

Finally, many Japanese seem to be less interested than they were in economic growth. The Japanese are becoming more interested in leisure and the non-material aspects of life. As Japanese firms grow in size and complexity, the practice of permanent employment has begun to disappear. Furthermore, the shortage of labor relative to demand has begun to break down the "family" type industrial organization. Lengthy work stoppages are likely to occur in the future.

This study shows that some of the factors influencing Japan's economic growth have become increasingly unfavorable for future growth. There are

many unsettled economic and political problems surrounding Japan, and some of which are already serious. On the other hand, it should be recognized that it may take some time for these problems to have major impact on Japan's economic growth rates. As a result, compared with other advanced industrial nations, Japan's growth rates may still be higher during the coming years. But the gap in growth rate seems sure to become smaller.

In any case, it can be said for certain that it will be increasingly difficult for Japan to maintain 10-14 per cent economic growth rates of the past in the future. Toward the end of this decade (1970's), for the reasons discussed in this report, it is reasonable to predict a gradual slowdown in the rates of Japan's economic growth.

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by

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**AN ABSTRACT OF A MASTER'S REPORT**

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## ABSTRACT

The purpose of this report as described in Chapter I is to study some of the major factors contributing to Japan's rapid economic growth in the past, and to offer conjectures as to whether Japan is likely to continue to have such rapid growth in the future. The factors studied in the report include: (1)Personal saving, (2)Technological progress, (3)Foreign trade, and (4)Human resources.

Chapter II examines some possible factors for Japan's high personal saving ratio of the past. The factors analyzed in the chapter include: (1)Growth-rate effect, (2)Bonus-payment effect, (3)Age-composition factor, (4)Inadequate public social security system, (5)Higher education, and (6)Housing. The acceptance by the public and government of the objectives of a better social security system and high mass-consumption has become increasingly apparent in Japan. These objectives tend to increase the spending of consumers and government, and to reduce their savings. Thus the huge personal saving, which was once a readily available source of investment funds, is less likely to be so important in the future.

Chapter III describes the impact of technological progress upon Japan's economic growth. The Japanese have been able to obtain American and European technology at advantageous rates and conditions in the past. However, the technological disparities between Japan and other industrial nations have been rapidly closing. As a result, the gains in the future from foreign technology are likely to be smaller.

Chapter IV examines Japan's foreign trade situation. Japan's



rapid export expansion has begun to threaten the prosperity of other industrial nations in recent years. The United States and other industrial nations have acted to limit the increasing flow of the Japanese goods into their economies. At the same time, Japan's import situation has become extremely unfavorable, due to the recent large increases in the prices of oil and other raw materials.

Chapter V describes three main characteristics of human resources in postwar Japan: (1)The desire of the Japanese for material affluence, (2)"Permanent employment" system, and (3)Increasingly "tight" labor market. However, many Japanese now seem to be less interested than they were in economic growth. The practice of the "permanent employment" has begun to disappear, as Japanese firms grow in size and complexity. Furthermore, shortage of labor relative to the demand has begun to break down the "family" type industrial organization, thus causing some unrest between workers and management. Work stoppages are likely to occur in the future.

Chapter VI summarizes and evaluates the implications stemming from the analysis of these factors determining Japan's economic growth. The analysis show that the factors have become increasingly unfavorable for its future growth, thus making it extremely difficult for Japan to maintain the rapid growth rates of the past in the future.