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THE LABOUR FORCE IN JAPAN
VIEWED FROM ITS SUPPLY SIDE

(Preliminary)

by

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FOREWORD

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The Restoration Government of Japan established in 1868 decided it as its permanent policy to modernize Japan by introducing the western industrial revolution. The government conducted a national count of population in 1872. According to its result, the population of Japan with necessary adjustments was around 36 million and the population density was as high as 91 persons per square kilometer. Furthermore, the area of arable land was only one-seventh of the total area because of the country's mountaneous landform. The population engaged in the primary sector of industry was as large as 80% of the total gainful workers^{1/} and only 4% were in the secondary

1/ In Japan, prior to 1950, population censuses and similar surveys based on the "gainful worker" approach. Since 1950, population censuses and the monthly labour force survey based on the "labour force" approach (see Selected References, No.1).

In the labour force approach, all persons 15 years old and over are classified their labour force status as follows, according to the type of activity during the "survey week", one week just before the census and survey: Employed persons "at work" refer to all persons who did any work during the survey week for pay or profit. Employed persons "with a job but not at work" comprise those who did not work at all during the survey week though they had a

sector, the remaining 16% in the tertiary. Japan was at that time a predominantly agricultural country with a large population and considerably densely populated for an agricultural country. Moreover, the population growth of Japan before the Restoration was stagnant at 32 million level during a period of 150 years or so under the centralized feudal system. The Japanese agriculture was conspicuously petty containing a large amount of underemployment^{2/}, the population pressure was severe, and there was no other way for Japan to support her large population than to start industrialization.

1/ (continued) job or business from which they were temporarily absent. "Unemployed" persons refer to those who did not work, and had no job, though were able to work and actually seeking work during the survey week. Persons "not in labour force" comprise all persons who did not do any work and had no job, and, further, did not make any positive effort to find a job during the survey week or were unable to work. Exceptionally, 1950 Census covered the persons 14 years old and over.

2/ Here, R. Nurkse's definition of "disguised unemployment" may be suitable. That is, "even with unchanged techniques of agriculture, a large part of the population engaged in agriculture could be removed without reducing agricultural output". (See Selected References, No.3, p.32.)

In general, "underemployment" may be defined as such employment of which marginal labour productivity is very low against its national normal level. In practice, "underemployment" may be defined as such employment which can not get income of normal level, and works shorter hours than normal working hours.

Until about 1885 when the industrial revolution started in Japan, the annual average rate of population increase had been so low as around 0.5% according to an estimate worked by Y. Okazaki (see Selected References, No.9). This leads to a suggestion that the annual average increase rate of working age population (from 15 to 64 years old) had been also considerably low. As the industrial revolution went on, it absorbed a vast amount of underemployment existed in the agricultural sector or rural villages. On the contrary, however, there was a gradual rise in the rate of population increase reaching beyond an annual average rate of 1.1%. In 1920, by when the industrial revolution is regarded to have had come to end, the first modern population census was taken. According to the results, the

Table 1. Population and Annual Average Vital Rates, 1870-1920

Year	Population (in millions)	Rates per 1,000 Population		
		Increase Rate	Birth Rate	Death Rate
1870	36.3	5.1	36.4	31.3
1880	38.2	5.6	33.8	28.2
1890	40.4	8.1	35.3	27.2
1900	43.8	11.5	36.1	24.6
1910	49.1	12.3	34.4	22.3
1920	55.4			

Source: Estimates worked by Y. Okazaki (Selected References, No.9).

Table 2. Working Age Population and Annual Average Increase Rate, 1870-1920

Year	Working Age Population (in millions)	Annual Average Increase Rate (%)
1870	23.6	- 0.0
1880	23.5	0.5
1890	24.5	0.8
1900	26.6	0.8
1910	28.8	1.1
1920	32.5	

Source: Same to Table 1.

total population of Japan was 55 million and the population 14 years old and over was 36 million, of whom 26 million were gainfully occupied. Of these gainfully occupied, 54% were engaged in the primary sector of industry, 21% in the secondary and 24% in the tertiary. This suggests that there was still a large amount of underemployment, especially in the primary sector of industry.

The population increase rate in Japan went up still higher after 1920 to be over 1.5% per annum on average. The rate of increase in the working age population also accelerated. According to the results of the 1930 population census, the gainfully occupied population was 29 million or 69% of 42 million population aged 14 years and over. This percentage was

a little less than that in 1920. Forty-nine percent of the gainfully occupied population were engaged in the primary sector, 20% in the secondary and 30% in the tertiary sector. Influenced by the world-wide depression in the 1930's, there appeared in cities a great number of unemployed, many of whom moved to other jobs in the secondary or tertiary sectors, especially to medium and small scale establishments in the tertiary sector, where they became "disguised unemployed".

Table 3. Total and Working Age Population and Annual Average Increase Rates, 1920-1985

Year	Total Population		Working Age Population	
	Real numbers (in millions)	Increase Rate ^{1/} (%)	Real numbers (in millions)	Increase Rate ^{1/} (%)
1920	55.4	1.4	32.3	1.5
1930	63.9	1.3	37.5	1.4
1940	72.5	1.4	43.0	1.5
1950	83.2	1.4	50.0	2.0
1955	89.3	0.9	54.7	1.9
1960	93.4	1.0	60.0	2.2
1965	98.3	1.1	67.0	1.4
1970	103.7	1.2	71.7 ^{2/}	0.9
1975	110.0 ^{2/}	1.1	74.9 ^{2/}	0.8
1980	116.0 ^{2/}	0.8	77.8 ^{2/}	0.8
1985	120.8 ^{2/}		81.1 ^{2/}	

^{1/} Annual average increase rate.

^{2/} Estimates prepared by the Institute of Population Problems (medium variants).

Source: Population Census Reports of Japan, and Institute of Population Problems, Research Series, No.192, Sept. 1, 1969.

In the course of economic development in Japan prior to World War II since the start of the industrial revolution, there was a gradual rise in the increase rate of working age population, the fertility rate in rural areas turned to be higher than in urban (Table 4), there were found many under-employed in agriculture or rural villages, and the labour

Table 4. Urban and Rural Standardized Vital Rates,
1920-1965

(per 1,000 population)

Year	Urban (All Shi)			Rural (All Gun)		
	Birth Rate ^{1/}	Death Rate	Increase Rate ^{2/}	Birth Rate ^{1/}	Death Rate	Increase Rate ^{2/}
1920	26.1	28.3	-2.2	36.9	24.9	11.9
1925	26.5	21.8	4.6	36.0	19.9	16.1
1930	24.8	18.8	6.0	34.9	18.0	16.9
1935	25.5	17.0	8.4	36.6	17.0	19.5
1940	25.5	16.2	9.2	36.2	16.8	19.5
1950	26.4	9.9	16.6	32.7	11.5	21.2
1955	19.2	7.6	11.6	24.5	8.7	15.8
1960	17.8	7.5	10.3	19.0	8.5	10.5
1965	19.0	6.6	12.4	17.6	8.2	9.4

Standard population: All Japan population for 1930.

Method: Indirect method.

^{1/} Standardized rates basing on age structure and fertility of presently married women.

^{2/} Standardized natural increase rate.

Source: Institute of Population Problems, Standardized Vital Rates by Urban and Rural Areas for All Japan: 1920-1965, Research Series No.186, 1968.

market was abundantly supplied cheap labour force of relatively good quality thanks to the dissemination of compulsory or other educations. These facts are regarded as one of major factors which promoted the economic development of the country extremely poor in natural resources (see Selected References, No.13).

The sign of demographic transition in Japan was shown as early as in the beginning of the 1900's when the industrial revolution was already coming to end, but the demographic transition advanced very slowly during the period before the World War II. Just after the termination of the war, however, the level of living of the Japanese people measured in terms of per caput real national income dropped by half. Such an economic trouble gave a strong motivation to the Japanese people to limit their family size. Thus, after the postwar "baby boom" between 1947 and 1949, the Japan's fertility rate experienced an unprecedentedly rapid decline and the demographic transition proceeded rapidly. Since 1955 upto date the annual average rate of population increase has been keeping up a level of around 1%.

The national economy of Japan had completed nearly its reconstruction by 1955 since the end of the war in 1945 and shifted to a stage of self-sustaining economy. The high

Table 5. Crude Vital Rates, 1920-1970

Year	(per 1,000 population)		
	Birth Rate	Death Rate	Natural Increase Rate
1920-29	34.5	21.3	13.2
1930-39	30.5	17.7	12.7
1947-49	33.6	12.6	20.9
1950	28.1	10.9	17.2
1955	19.4	7.8	11.6
1960	17.2	7.6	9.6
1961	16.9	7.4	9.5
1962	17.0	7.5	9.5
1963	17.3	7.0	10.3
1964	17.7	6.9	10.7
1965	18.6	7.1	11.4
1966	13.7	6.8	7.0
1967	19.4	6.8	12.7
1968	18.6	6.8	11.8
1969	18.5	6.8	11.8

Source: Vital Statistics Reports.

economic growth commenced around 1958 and the medium and small scale industry which had depended on many young unskilled labour force began to complain its "shortage of labour force". Looking at the annual average rate of working age population, however, it rose from 1.5% in 1940-50 up to 1.9% in 1955-60 and reached a peak of 2.2% in 1960-65 (see Table 3).

The annual average rate of increase in the labour force population 15 years old and over kept up 1.9% from 1955 to

1970 (see Table 6). The annual increase rate in either cases has been maintaining a relatively high level.

Table 6. Labour Force Population, 15 Years Old and Over, 1955-1985

Year	(in millions)		
	Total	Male	Female
1955 ^{1/}	39.9	24.4	15.5
1960 ^{1/}	44.0	26.8	17.2
1965 ^{1/}	48.3	29.5	18.8
1970 ^{2/}	53.1	33.1	20.1
1975 ^{2/}	55.0	35.1	19.9
1980 ^{2/}	56.1	36.7	19.4
1985 ^{2/}	57.1	38.0	19.1

^{1/} Results of the 1% sample tabulation of population censuses.

^{2/} Estimated in December 1966 by the Institute of Population Problems (medium estimates).

Source: Bureau of Statistics, Population of Japan, 1965 Population Census of Japan, Abridged Report Series 1, Part 1, 1970, and Institute of Population Problems, Research Series, No. 174, January 20, 1967.

The high economic growth during that period absorbed almost fully the labour force which increased at this relatively high rate of increase (see Table 7). The high economic growth was accompanied by considerable changes in the industrial structure of the employed population. That is to say, workers in the primary sector of industry rapidly

Table 7. Percentage Distribution of Labour Force Status, 1955-1970

Year	Population 15 Years Old and Over	Labour Force			Not in Labour Force
		Total	Employed	Unemployed	
1955	100.0	67.3	66.0	1.3	32.7
1960	100.0	67.4	66.9	0.5	32.6
1965	100.0	66.0	65.1	0.9	33.9
1970 ^{1/}	100.0	65.4	64.6	0.7	34.5

^{1/} Annual average of the results of Monthly Labour Force Surveys.

Source: Population Census Reports and Reports of Labour Force Survey of Japan.

decreased absolutely as well as relatively and those in the secondary and tertiary sectors, especially; in the former, increased to a considerable extent (see Table 8). Viewing

Table 8. Number of Employed Persons by Industrial Sectors, 1955-1970

Year	Employed Persons (in millions)				Percentage Distribution		
	Total	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
1955	39.3	16.1	9.2	13.9	41.0	23.5	35.5
1960	43.7	14.2	12.8	16.7	32.6	29.2	38.2
1965	47.6	11.7	15.4	20.5	24.6	32.3	43.0
1970 ^{1/}	50.9	8.9	17.9	24.1	17.4	35.2	47.3

^{1/} Annual average of the results of Monthly Labour Force Surveys.

Source: Population Census Reports, and Labour Force Survey Reports of Japan.

from the aspect of economic types of ordinary households, there was a remarkable decrease in the number of "agricultural workers' households", in which all employed household members are engaged in agriculture, forestry and/or fishery, while there was an increase in the number of "agricultural and non-agricultural workers' mixed households", that is, households consisting of both agricultural and non-agricultural workers. These "agricultural and non-agricultural workers' mixed households" can be classified into the following three minor groups of households on the basis of the census tabulation: (1) "agricultural employed's mixed households" with head who is an employed of agriculture, forestry or fishery, (2) "non-agricultural self-employed's mixed households" with head who is a self-employed of non-agricultural industry, and (3) "non-agricultural employee's mixed households" with head who is an employee of non-agricultural industry. Although these households as a whole showed an increase in number, there was a considerable decrease in the number of households of the second group, while the first and third groups increased. Thus, the number of the "agricultural workers' households" decreased and household members in many agricultural households tended more and more to be engaged in non-agricultural industries. On the other hand, there was seen a remarkable

increase in the number of "non-agricultural workers' households", that is, households in which all employed persons are engaged in non-agricultural industries (see Table 9). These tendencies may indicate that the high economic growth depended on the primary sector of industry, agricultural households and rural villages for the supply of a great amount of labour force. It will be additionally pointed as to changes in the composition of employed persons by class of workers that

Table 9. Changes in the Number of Ordinary Households by Economic Types, 1955-1965^{1/}

Economic Types	Number of Households (in thousands)		Increase Rate in 10 Years(%)
	1965	1955	
Total Ordinary Households ^{2/}	23,117	17,398	32.9
Agricultural Workers' Households	2,996	4,108	-27.1
Agricultural and Non-Agricultural Workers' Mixed Households	2,463	2,193	12.3
Agricultural Employed's Mixed Households	1,547	1,315	17.6
Non-Agricultural Self-Employed's Mixed Households	134	239	-43.9
Non-Agricultural Employees' Mixed Households	782	639	22.4
Non-Agricultural Workers' Households	16,562	10,304	60.7
Households without Worker	1,080	791	36.5

^{1/} Results of the 1% sample tabulation of population censuses.

^{2/} Include households whose economic type is not classifiable.

Source: Population Census Reports of Japan.

percentages of both self-employed and unpaid family workers show a decreasing tendency, while employees show an increasing tendency of their percentage (see Table 10).

A high economic growth rate exceeding 10% in real term has been continuing until today in Japan, but there has been, on the other hand, an increasingly severe complain of shortage of labour force. The New Economic and Social Development Plan resolved in the Cabinet Council in 1970

Table 10. Number of Employed Persons by Class of Workers, 1955-1970

Year	Employed Persons (in millions)				Percentage Distribution		
	Total	Self-employed	Unpaid Family Workers	Employees	Self-employed	Unpaid Family Workers	Employees
1955	39.3	9.4	11.9	18.0	23.9	30.3	45.8
1960	43.7	9.6	10.5	23.6	22.1	24.0	54.0
1965	47.6	9.3	9.3	28.9	19.6	19.5	60.7
1970 ^{1/}	50.9	9.8	8.1	33.1	19.2	15.8	64.9

^{1/} Annual average of the results of Monthly Labour Force Surveys.

Source: Population Census Reports, and Labour Force Survey Reports of Japan

assumed that the annual average real economic growth rate will be 10.6% during a period of 1970-75 fiscal years (see Selected References, No. 20). The annual average increase

rate of working age population after having passed its peak of 2.2% in 1960-65, however, is expected to decline, due to the rapid fertility decline after 1950, down to 1.4% in 1965-70, 0.9% in 1970-75, and 0.8% in 1970-75 and 1975-80, according to the medium variant of the future population estimates for Japan worked by the Institute of Population Problems, Ministry of Health and Welfare (See Table 3). The medium variant estimates of future labour force population for Japan by the same Institute also indicate that the annual average increase rate of labour force population will be declining very rapidly from 1.9% in 1965-70 to 0.7% in 1970-75, 0.4% in 1975-80 and further down to 0.3% in 1980-85 (see Table 6). This prospective remarkable decline is regarded as the results of future declining rate of increase of working population in younger ages due to the fertility decline, and also the results of such a recent tendency that the proportion of those entering senior high schools among junior high school graduates (junior high school education is compulsory in Japan) has risen to 80% in recent years from about 40% around 1950 and the proportion of those entering colleges and universities among senior high school graduates is as high as 24% or so recently.

Owing to this tremendous rise of proportions of those entering senior high school, colleges and universities, there has been a rapid decline in both sexes in the labour force population ratio in ages 15 to 19, i.e., the ratio of labour force population aged 15-19 to the total population in the same age group. As to the age group 20-24, the labour force population ratio has been declining in males, while remaining on the same level of around 70% in females. The labour force population ratio in males tended to increase in age groups 25 to 64 and decrease in ages 65 and over. In females, the labour force population ratio tended to decline in age groups 25 to 34, increase in age groups 35 to 64 and decline in ages 65 and over (see Table 11). As stated already, the high economic growth obtained a great amount of supply of labour force population from the primary sector of industry or agricultural households. This corresponds to the fact that the employed population ratio in ages 15 and over, i.e., the ratio of employed population to total population in ages 15 and over, has been declining rapidly in the primary sector for both sexes and rising rapidly in the secondary and tertiary sectors. It is noted that the employed population ratio in the primary sector is almost same between males and

Table 11. Labour Force Population Ratios by Sex and Age, 15 Years Old and Over, 1955-1970

Age	Male				Female			
	1955	1960	1965	1970 <u>1/</u>	1955	1960	1965	1970 <u>1/</u>
Total	85.3	85.0	83.4	81.8	50.6	50.9	49.8	49.9
15-19	54.3	51.6	38.6	31.4	50.1	49.7	37.6	33.6
20-24	88.1	87.9	87.1	80.5	68.2	69.4	69.7	70.5
25-29	96.2	96.9	97.9	97.2	51.8	50.1	46.4	45.6
30-34	97.0	97.8	98.6	98.0	49.6	51.3	48.0	48.2
35-39	97.3	97.7	98.4	97.7	53.4	55.1	58.3	57.5
40-44	97.4	97.7	98.3	97.0	55.5	56.7	62.1	61.8
45-49	97.0	97.1	98.0		54.4	56.8	62.6	
50-54	95.5	96.0	97.2	86.7	51.3	51.7	57.3	44.4
55-59	91.1	90.5	93.8		45.7	46.7	50.1	
60-64	82.4	82.5	85.3		38.4	39.1	39.3	
65+	56.4	54.4	55.1	49.4	20.6	20.9	17.5	18.0

1/ Annual average of the results of Monthly Labour Force Surveys.

Source: Population Census Reports, and Labour Force Survey Reports of Japan.

females, while in the secondary and tertiary sectors the ratio for females is as low as a half of that for males. This will suggest how female workers hold the majority in the primary sector of industry in recent Japan. This fact is indicated by the so-called "feminization" of the employed population in the primary sector in recent Japan. The

employed population ratios in the secondary and tertiary sectors in almost all age groups show a tendency to rise rapidly. In the primary sector, on the contrary, the ratio in any age group tends to decline in both males and females and this tendency is more drastic in younger age groups. It will be conjectured from these trends that the employed population in the primary sector is rapidly aging (see Table 12). A comparison of employed population ratios between agriculture and non-agriculture also indicates the similar tendency (see Table 13). In short, the high economic growth which commenced in 1958 or so has absorbed the labour force which increased at a high rate and the secondary and tertiary sectors of industry have absorbed a large male labour force population relatively young in ages from the primary sector or agriculture.

In the New Economic and Social Development Plan higher labour force population ratios of female labour are assumed for future than the ratios estimated in the before-mentioned labour force projections by the Institute of Population Problems, but even according to the Plan's prospects, the annual average increase rate of labour force population, which rose from 1.2% in 1960-65 up to 3.8% in 1965-68, will show a rapid decline after 1968 to a level as low as 1.1% in

Table 12. Employed Population Ratios by Sex,
Age, and Sectors of Industry,
1955-1965

Age	Primary Sector			Secondary and Tertiary Sectors		
	1955	1960	1965	1955	1960	1965
	Male					
Total	28.0	21.8	16.1	55.3	62.5	65.8
15-19	17.2	8.6	3.8	34.9	42.1	33.4
20-24	23.6	14.1	6.4	61.6	72.7	78.9
25-29	25.3	18.3	10.2	68.5	77.6	86.1
30-34	26.1	21.4	14.7	69.0	75.6	82.2
35-39	27.0	23.1	18.6	68.8	74.1	78.6
40-44	27.2	24.3	20.7	68.7	72.8	76.5
45-49	30.5	25.0	22.5	65.0	71.7	74.4
50-54	36.6	28.7	23.8	57.2	66.4	72.0
55-59	42.0	35.6	28.8	46.7	53.8	62.4
60-64	45.3	39.4	34.4	36.1	42.5	49.3
65+	38.1	33.6	28.4	17.5	20.9	25.9
	Female					
Total	26.2	21.8	16.0	23.7	28.7	33.3
15-19	16.0	8.2	2.5	32.3	40.7	34.5
20-24	24.9	16.8	7.0	41.6	51.6	61.3
25-29	26.9	20.9	12.8	24.6	29.2	33.2
30-34	28.0	25.3	18.0	21.1	25.4	29.9
35-39	29.4	27.1	22.7	23.1	27.3	34.4
40-44	31.5	28.2	24.7	23.8	28.8	37.2
45-49	33.0	29.5	25.7	21.1	27.1	35.9
50-54	33.5	29.6	26.4	17.1	22.3	31.1
55-59	32.5	29.0	25.7	13.4	16.8	24.1
60-64	29.3	26.9	22.8	9.8	12.2	16.7
65+	16.8	16.1	10.9	4.4	5.3	6.8

Source: Population Census Reports of Japan.

Table 13. Employed Population Ratios by Sex,
Age, and Agriculture and Non-Agriculture,
1960-1970

Age	Agriculture			Non-agriculture		
	1960	1965	1970 <u>1/</u>	1960	1965	1970 <u>1/</u>
Male						
Total	20.9	15.1	10.5	63.1	66.0	70.3
15-19	12.6	5.6	3.0	39.4	30.2	27.6
20-24	16.1	6.2	4.3	74.4	79.0	74.9
25-29		9.3	4.5		86.5	91.7
30-34	23.3	14.4	6.8	76.7	82.0	90.0
35-39			10.3			
40-54	28.2	19.7	14.9	63.5	76.2	81.2
55-64		29.5	21.7		56.4	63.4
65+	35.6	29.8	20.6	20.9	26.1	28.4
Female						
Total	21.8	16.6	10.9	32.0	33.5	38.4
15-19	10.1	3.8	1.3	38.0	31.5	31.8
20-24	18.9	8.0	3.2	42.8	61.3	65.8
25-29		13.7	6.1		34.4	38.7
30-34	27.5	20.6	10.1	29.7	33.7	37.6
35-39			14.3			
40-54	29.2	24.5	18.4	25.7	35.2	43.1
55-64		24.2	17.7		20.8	26.6
65+	18.9	14.1	9.1	6.7	7.8	8.8

1/ Annual average of the results of Monthly Labour Force Surveys.

Source: Labour Force Survey Reports of Japan.

Table 14. Estimates of Future Labour Force
 Population Worked by the Labour Force
 Research Committee, Economic Council

(in millions)

Fiscal Year	Total	Male	Female
1960	45.3	26.8	18.5
1965	48.2	29.0	19.2
1968	50.8	30.7	20.1
1975	54.8	33.4	21.4

Source: Selected References, No. 18.

1968-75 (see Table 14). At any rate, it is expected that the increase rate of labour force supply will begin to reduce rapidly after around 1970 and Japan will be confronted with a really remarkable shortage of labour force. Moreover, because of a tremendous decline of labour force population ratio after 1965 due to a relative decrease of the population in ages 15-24 and a rise of the proportion of those entering schools of higher grade, the supply of younger labour force is expected to show a rapid reduction. On the other hand, the probability of living in working ages between 15 and 65 has been considerably extending owing to the improvement of mortality. Looking at the experiences for males, the probability, which was 45.8% in the prewar years, rose to 66.4% in 1955 and reached 73.9% in 1969. This indicates that

the middle and old aged labour force population has a tendency to increase rapidly in both absolute and relative senses. It may be stated in addition that the rural region had a higher natural increase rate than the urban region because of its higher fertility rate and was able to supply a large amount of younger labour force to the urban region, but the fertility rate in the rural region has been declining rapidly in recent years and the natural increase rate in the rural region has come to be almost same as or to some extent lower than that in the urban region (see Table 4). As this tendency is regarded to continue in future too, the urban region will become unable to expect the supply of so large an amount of younger labour force from the rural region as before. This fact suggests also that the secondary and tertiary sectors of industry have become unable to expect the primary sector to supply such a great amount of labour force as they could before. In this connection, it must be recalled that, as mentioned before, the employed population is feminizing and aging in the primary sector.

The economy of Japan will enter a period of shortage of labour force in its real sense after 1970, and attention is attracted to its economic implication. As the tendency of reduction in the supply of labour force is inevitable and cannot be dissolved immediately, there is no other way than

that enterprises, industries or national economy of Japan make an effort to adjust themselves to this tendency. It is desirable that the Japan's economic structure will take this opportunity of shortage of labour force to dissolve its "dual structure" and head for a higher development, and this is not regarded as impossible. The reason is that the labour productivity in Japan is still lower compared with that in highly advanced countries and also the distribution of labour force population among various sectors of industry does not seem to be proper. The New Economic and Social Development Plan also adopts such a point of view (see Selected References, No. 20).

As countermeasures to be thinkable from the above-mentioned standpoint for the tendency of a rapid reduction of labour force supply, the followings may be pointed. In the first place, labour-saving investment should be further promoted and the industry of Japan which has adapted itself to the abundant supply of labour force for a long period of time should move from its labour intensive structure to a capital intensive structure. In the second place, in view of the fact that the labour force population of Japan has been lacking so far in mobility between different sectors of industry, it is essential to raise this mobility of labour force population.

For this purpose, an expansion of vocational training is, needless to say, necessitated, and it is also needed to re-examine the permanent employment system which has developed on the basis of the abundant supply of labour force and exists still nowadays and also to re-examine the customary wage system based on a seniority rule which is closely related to the above-mentioned permanent employment system. In the third place, an active use of middle and old aged labour force population is needed, a raising of retirement age to higher ages from 55 years, which is the age adopted widely at present in many big enterprises; should be considered, and "job-redesign" should be further promoted. Lastly, for the active use of labour force of women who, in general, have become to have smaller number of children and higher education, the aspect of maternal protection should be fully considered and an expansion of facilities related to this is also needed.

The reduction of labour force supply which will go on in future over at least 15 years from now is an inevitable tendency, but we should let this very tendency be a factor to intensify the structure of Japan's economy which has developed so far in the past 100 years backed by the abundant supply of labour force.

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