English Pamphlet Series No. 77
Institute of Population Problems
September 18, 1972

The Demographic Transition and Fertility Decline in Japan

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FOREWORD

The Japanese demographic transition started around one hundred years ago and passed through the almost same pattern as the demographic transition in West European countries. The most important characteristics of the Japanese demographic transition are found in the final stage, that is, the phase of declining fertility in postwar years. In this paper the author attempts to explain various factors which are considered to have contributed to decline fertility in this important phase, after describing the general pattern of the Japanese demographic transition from the early period.

This paper was presented as a contributed paper to the Second Asian Population Conference held 1-13. November, 1972 in Tokyo.

September 18, 1972

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I Demographic transition in Japan

Crude birth rate in Japan declined very fast in postwar years. It was halved in only ten years. This fact often draws special attention of foreign demographers. But it should be noted that this phase of declining birth rate in postwar years is one stage of the whole process of demographic change, often called as "demographic transition". At this stage of studies of the Japanese population history, the demographic transition in Japan is thought to have started at the Meiji Restoration one hundred years ago and to have arrived at its final stage in recent years. Therefore the demographic transition in Japan should be viewed as a long process of population changes as in other western advanced countries.

Needless to say demographic data in early times are not reliable and special estimation by demographic techniques is needed. Several demographers attempted to make their own estimation for birth and death rates in the pre-census period. Of course their results do not necessarily show the same but they show as a common result that the rising trends of birth and death rates appearing in official statistics reflect only effects of improvement of vital registration.

According to the author's estimated vital rates, birth and death rates during the pre-census period are like as shown in the following table.

Period	Birth rate 0/00	Death rate 0/00	Rate of increase 0/00
1870-1875	36.3	31.3	5.0
1875-1880	36.4	31.3	5.1
1880-1885	33.9	28.3	5.6
1885-1890	33.7	28.1	5.6
1890-1895	34.3	27.3	7.0
1895-1900	36.3	27.0	9.3
1900-1905	35.2	24.2	11.0
1905-1910	37.0	25.3	11.8
1910-1915	35.6	22.1	13.5
1915-1920	33.2	22.3	10.9

As shown in this table, birth rates remained almost unchanged during the observed period and death rates declined gradually. Birth rates started to decline at around 1920 and death rates continued to decline. Therefore we can conclude that the Japanese pattern of demographic transition shows the same pattern of West European demographic transition. But we can point out the following points as characteristics of the Japanese demographic transition.

Firstly, Japan passed through the whole process of demographic transition faster than other West European countries like England and other advanced countries. This would approve the thesis that the earlier a country starts its demographic transition, the faster she passes through it.

Secondly, the level of birth rates was not so high as found in recent developing countries. The highest birth rate

in the table is 37.0 per thousand of population and this is much lower than birth rates in developing countries today. Already in the feudal society they practised some fertility controls by limiting marriages and also by birth control within marriages. The level of birth rates was lower than the biological fecundity even in the early stage of modernization.

Thirdly, because birth rates were relatively low and death rates were not so low as in developing countries today rates of increase of population were considerably low. Particularily low level of increase rates of population at the early stage of economic development had a favorable effect upon growth of the national economy.

Fourthly, as death rates were declining gradually with unchanged birth rates rates of population increase were gradually rising. This increase of population played not as a hindering force but as a driving force for economic development. In this connection it should be pointed out that there is quite a big difference between population increase experienced in the demographic transition in advanced countries and population increase experienced in developing countries today. The former should be defined as the endogenous increase because it was induced by economic development and the latter should be defined as the exogenous increase because it was introduced

rather independently of economic development by introduction of advanced techniques in medicine which contributed effectively to decline death rate.

The biggest feature of the Japanese demographic transition is that decline of birth rates was very fast at the latter part of the transition. Here we should shift to this interesting point.

II Decline of birth rate in postwar years

As in most countries Japan experienced a postwar baby-boom shortly after the end of the War. Both the number of births and birth rate jumped up to an abnormally high level. Because we do not have reliable data of birth and death in several years of the final stage of the War we can not define exactly what years were in the baby-boom but it is generally recognized that the years of 1947, 1948 and 1949 were in the baby-boom and birth rate returned to the normal level in 1950 which corresponds to the long-range trend line of birth rate from prewar years. But birth rate did not stop at the normal level of 1950 but continued to decline.

The cause of the baby-boom is considered that postponed marriages and births from war time were realized at once in these years. But this interpretation of the baby-boom is not approved by statistics. The balance sheet of excess and

deficit of the number of births in the years around the baby-boom is presented in the following table. In this table the excess is calculated as the number of births that is over the normal number of births corresponding to the long-range trend line of birth rate and the deficit is calculated as the number of births that is under the normal number of births.

Year	Actual Birth Count	Trend-line Projection	Deviation
	,000	,000	,000
1944	1,902	2,082	-180
1945	1,848	2,030	-182
1946	1,751	2,040	-289
1947	2,679	2,156	+523
1948	2,682	2,184	+498
1949	2,697	2,208	+489

According to this table it is apparent that they bore much more babies in the baby boom years than for compensating the deficit in the previous years. Therefore we should think that an accumulation of deferred wartime births was only a part of explanation of the baby boom and there are some other reasons explaining the baby boom. Among them of importance are a temporary loss of ability or desire, on the part of a populace suffering from a war-wrecked economy and depressed standard of living, to maintain a minimum rational level of family planning and also the general unavailability of modern birth control methods at the time.

Thus after an abnormal, chaotic period passed through they noticed that they bore too many babies and realized the necessity to control further births although it was too late. For the younger generations some other factors have had influences to control their births, as explained in the next section.

Whatever the reasons are, birth rates continued to decline very fast up until 1957 when the crude birth rate became 17.3. Since 1957 birth rates have stayed at almost unchanged level, suggesting that the declining trend of birth rates has touched bottom. If we look at the movement of a more precise index of fertility, net reproduction rate, than crude birth rate, we would understand that the Japanese fertility has already reached the minimum level to decline. Net reproduction rate was 1.51 in 1950 and declined to 1.06 in 1955. Since then it has remained at the level of 1.00 with small flactuations.

Net reproduction rate of 1.00 means that the potential rate of population increase is exactly zero and that the population of Japan has attained the target of "zero population growth" although the population of Japan will continue to increase in future because of its young age composition.

Needless to say the reason why the population of Japan can maintain its replacement by such a low fertility is that death rate has become very low. Life expectancy at birth was 59.6 years for male and 63.0 years for female for 1950-1952 and lengthened to 69.8 years for male and 75.0 years for female for 1970-1971. Behind these improvements decline of infant mortality was particularily important. Owing to very low level of infant and child death rates the probability to survive up to 15 years of age is very high, 97.6 per cent for male and 98.2 per cent for female for 1970-1971 and also the probability to survive up to 65 years of age is high, 72.9 per cent for male 82.2 per cent for female.

Thus the pattern of population dynamics that there are few births and few deaths has been firmly fixed in Japan. Then the main problems of the population of Japan would be influences from the drastic changes in vital events of population, more concretely the aging of population.

III Factors affecting birth rates in postwar years

The Japanese birth rate declined at an unprecedented speed in only ten years after the end of the War. This must be a very interesting phenomenon not only for demographers but also for policy-makers in developing countries where control of births is one of the most urgent policy targets.

It should be admitted that it is difficult or impossible to separate out one or two reasons to explain the rapid decline of birth rates in Japan. There must be several factors affecting fertility and they are interwoven. Among various factors the following can be considered most important factors.

Firstly, the idea of controlling births was not strange for the Japanese because there were social customs affecting births directly or indirectly already in the feudal society. Although the government took pronatalistic attitudes and prohibited to disseminate knowledge of birth control and to sell contraceptives for a long time until the end of World War II, some social groups, particularily white-collars in urban areas practised contraception already in prewar years. Results of Opinion Survey on Family Planning by Population Problems Research Council, Mainichi Newspaper Company show that 6 per cent of couples whose wife's age is under 50 years practised contraception in 1936 and 6.6 per cent in 1945. And they show that the regional difference in 1945 is 8.8 per cent in the six biggest cities, 7.4 per cent in other cities and 5.4 per cent in rural areas.

Secondly, the motivation to control births is very strong among the public. For several years just after the end of the

war the general condition was very bad and everybody felt the necessity to limit the number of births to survive. At that time the level of living was only half of the normal prewar level according to the National Income Statistics. Also the Japanese economy recovered very fast, not only recovered but also grew higher and higher. As the level of living has reached a new, higher stage, the nature of motivation to limit births has changed but motivation itself to limit births has not been lost. In the process of high economic growth the following two factors had influences to control births.

(1) As the level of living became higher, new attractive products appeared and absorbed the purchasing power. Thus marginal utility of having child diminished relatively. Camera, transistor radio, TV set and automobile are among these new, attractive products.

(2) Because educational career is considered as an important factor to get a good job and to promote in occupational career and that parents have responsibility to give their children education, even post-compulsory education, the cost of children is felt considerably heavy.

Thirdly, restraints against dissemination of ideas of birth control and selling contraceptives were removed after the

end of the war. Many articles about methods to control births appeared in magagines, particularily women's magagines. As shown in results of opinion surveys such as Opinion Survey on Family Planning by Population Problems Research Council, Mainichi Newspaper Company, roles of these mass communication media in disseminating ideas and knowledge of birth control was very important. Needless to say such an effectiveness of roles of mass communication media was supported by the very high literacy among the populace. Literacy rate was very high already in prewar years and it is almost one hundred per cent today. In addition to roles of mass communication media it should not be missed that guidance about birth control for pregnant women and nursing mothers in hospitals and health centers and touring guidance of public health nurses in rural areas are also effective.

Fourthly, liberalization of induced abortion played an important role in controlling births. Strictly speaking induced abortions are permitted to perform only subject to regulations of "Eugenic Protection Law" but as this law has been amended several times since its enactment the operation of induced abortion has been largely liberalized. According to estimates by experts about 70 per cent of averted births was by induced abortion in 1960 when the number of reported

induced abortions reached the peak, one million one hundred and seventy thousand cases and the remaining 30 per cent was by contraception. Although the number of reported induced abortions is declining since 1960 roles of induced abortions in controlling births are still large. In Japan oral pills and IUD have not yet sanctioned and the most popular methods of contraception are rhythum method and condom. Therefore there is not room for doubt that the Japanese birth rate could not decline at such a high speed without liberalization of induced abortion.

IV Perspectives of future trends of birth rates

As already mentioned the Japanese fertility in terms of net reproduction rate remains almost unchanged at the level of just maintaining replacement of population since 1960. On the other hand crude birth rate is gradually rising during the same period but this is only due to that a larger number of young generation are entering childbearing age. So the key question is whether the Japanese fertility measured by net reproduction rate will remain at the current level or will rise a little in future. Because the current level of the Japanese fertility is considered at the bottom of fertility the possibility for the fertility to decline further seems to be negligible.

According to results of the Eleventh Opinion Survey in Family Planning conducted by the Mainichi Newspaper Company in 1971, the average ideal number of children among Japanese couples today is calculated as 2.61. This is a little larger than the average actual number of children of 2.17. Therefore we can say that Japanese couples want to have a little more children but they do not have a thoughtless plan to have so many children, say five or so. Also vital statistics recently show that the ratio of the number of births of the third child to the number of female population in childbearing age is slightly rising with unchanging ratios for the first and second children. This can be interpreted as an evidence that Japanese fertility will rise to some extent in future.

It is generally admitted that one of the biggest obstacles for couples to have more than three children is shortage and poorness of housing. Now the governmental economic policies are shifting from the former growth-oriented policy to the new welfare-oriented policy, including housing policy. In this direction of economic policies the basis for realization of the ideal number of children, a little more than the actual number, will be provided.

If the Japanese fertility rises a little through welfare-oriented policies, size of the population of Japan will

become fairly large. Under the assumption that net reproduction rate will rise from 0.96717 in 1975 to 0.99635 in 1980 and 1.05181 in 1985, the population of Japan is estimated to reach 109,925,000 in 1975, 115,972,000 in 1980 and 120,798 in 1985 by Institute of Population Problems, Future Population Estimates for Japan by Sex and Age. What kinds of problems will be brought by large populations and what policy measures should be adopted for these problems; these questions are in a different dimension of discussion from a simple prespective of the future populations.

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