

COMMITTEE
ON
POPULATION AND
DEMOGRAPHY

REPORT NO. 14

The Determinants of Fertility in the Republic of Korea





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Lee-Jay Cho
Fred Arnold
Tai Hwan Kwon

Panel on Fertility Determinants
Committee on Population and Demography
Commission on Behavioral and
Social Sciences and Education
National Research Council

NATIONAL ACADEMY PRESS
Washington, D.C. 1982

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Available from

NATIONAL ACADEMY PRESS
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Printed in the United States of America

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PREFACE

The Committee on Population and Demography was established in April 1977 by the National Research Council in response to a request by the Agency for International Development (AID) of the U.S. Department of State. It was widely felt by those concerned that the time was ripe for a detailed review of levels and trends of fertility and mortality in the developing world. Although most people in the demographic community agree that mortality has declined in almost all developing countries during the last 30 years, there is uncertainty about more recent changes in mortality in some countries, about current levels of fertility, about the existence and extent of recent changes in fertility, and about the factors determining reductions in fertility.

In 1963, a Panel on Population Problems of the Committee on Science and Public Policy of the National Academy of Sciences published a report entitled The Growth of World Population. The appointment of that panel and the publication of its report were expressions of the concern then felt by scientists, as well as by other informed persons in many countries, about the implications of population trends. At that time, the most consequential trend was the pronounced and long-continued acceleration in the rate of increase of the population of the world, and especially of the population of the poorer countries. It was estimated in 1963 that the annual rate of increase of the global population had reached 2 percent, a rate that, if continued, would cause the total to double every 35 years. The disproportionate contribution of low-income areas to that acceleration was caused by rapid declines in mortality combined with high fertility that remained almost unchanged: the birth rate was nearly fixed or declined more modestly than the death rate.

Since the earlier report, however, the peak rate of growth in the world's population has apparently been passed. A dramatic decline in the birth rate in almost all the more developed countries has lowered their aggregate annual rate of increase to well below 1 percent, and the peak rate of increase has also apparently been passed in the less-developed parts of the world as a whole. A sharp decline in fertility in many low-income areas has more than offset the generally continued reduction in the death rate, although the rate of population increase remains high in almost all less-developed countries.

The causes of the reductions in fertility--whether they are the effect primarily of such general changes as lowered infant mortality, increasing education, urban rather than rural residence, and improving status of women, or of such particular changes as spreading knowledge of and access to efficient methods of contraception or abortion--are strongly debated. There are also divergent views of the appropriate national and international policies on population in the face of these changing trends. The differences in opinion extend to different beliefs and assertions about what the population trends really are in many of the less-developed countries. Because births and deaths are recorded very incompletely in much of Africa, Asia, and Latin America, levels and trends of fertility and mortality must be estimated, and disagreement has arisen in some instances about the most reliable estimates of those levels and trends.

It was to examine these questions that the Committee on Population and Demography was established within the Commission on Behavioral and Social Sciences and Education of the National Research Council. It was funded for a period of five and one-half years by AID under Contract No. AID/pha-C-1161 and Grant No. AID/DSPE-G-0061. Chaired by Ansley J. Coale, the committee has undertaken three major tasks:

1. To evaluate available evidence and prepare estimates of levels and trends of fertility and mortality in selected developing nations;
2. To improve the technologies for estimating fertility and mortality when only incomplete or inadequate data exist (including techniques of data collection);
3. To evaluate the factors determining the changes in birth rates in less-developed nations.

Given the magnitude of these tasks, the committee decided to concentrate its initial efforts on the first two tasks; it initiated work on the third task in October 1979 when the Panel on Fertility Determinants was established.

As of early 1982, 168 population specialists, including 94 from developing countries, have been involved in the work of the committee as members of panels or working groups. The committee, the commission, and the National Research Council are grateful for the unpaid time and effort these experts have been willing to give.

The committee approaches the first task through careful assessment, by internal and external comparison, and through analysis, by application of the most reliable methods known, of all the data sources available. Each of the country studies therefore consists of the application of a range of methods to a number of data sets. Estimates of levels and recent trends judged to be the best that are feasible with available resources are then developed on the grounds of their consistency and plausibility and the robustness of the individual methods from which they were derived.

The committee's second task, refinement of methodology, is seen as a by-product of achieving the first. The application of particular methods to many different data sets from different countries and referring to different time periods will inevitably provide valuable information about the practical functioning of the methods themselves. Particular data sets might also require the development of new methodology or the refinement of existing techniques.

The third task of the committee, evaluation of factors determining birth rates, is the most difficult. Research on the determinants of fertility change has been carried out by scholars from several disciplines, and there is no comprehensive accepted theory of fertility change to guide the evaluation. Because of this state of knowledge of the causes of reductions in fertility and the difficulty of the task, the committee and the Commission on Behavioral and Social Sciences and Education established the separately funded Panel on Fertility Determinants, which includes scholars from anthropology, demography, economics, epidemiology, psychology, sociology, and statistics. Three committee members serve on the panel.

This report is one of the panel's country studies. It has been prepared by Lee-Jay Cho, director, East-West Population Institute, East-West Center; Fred Arnold,

assistant director for Professional Education, East-West Population Institute; and Tai Hwan Kwon, director, Population and Development Studies Center, College of Social Sciences, Seoul National University.

Much of the work on this study was carried out at the East-West Population Institute. Tai Hwan Kwon visited the Institute for two extended periods during 1981 to work on the study. In addition, work on the study was conducted at the Population and Development Studies Center, Seoul National University. The panel and the committee are grateful to these institutions for logistical support provided to the authors.

The authors, panel, and committee would like to thank Jae-Young Park, Soon Choi, Hee-Pyo Lee, and Nam-Il Kim for their assistance and suggestions; Jane Menken and John Knodel for comments on an earlier draft of this report; Robert Hearn for editorial assistance; and Kathy Martinez for typing the draft manuscript. The draft report was discussed at a country studies workshop organized by the panel in January, 1982, with financial assistance from the Rockefeller Foundation. Authors of the several panel country studies provided ideas and commented on the Korea study at that workshop. Finally, panel and committee reviewers provided advice and suggestions.

Several members of the panel and committee staff assisted in the preparation of this report. Appreciation is expressed to Carole Turley and Irene Martinez, who helped type the text and tables, and to Rona Briere, who edited the report. Elaine McGarraugh handled the production editing details with her usual precision and alacrity.

W. PARKER MAULDIN, Chair
Panel on Fertility Determinants

SUMMARY

Until the turn of the century, Korea was basically a traditional agricultural society, maintaining political and social stability with virtually no external contact, and frequently referred to as a "hermit kingdom." From the perspective of the demographic transition, this period (characterized by high mortality and fertility levels resulting in almost negligible growth) was the pre-transitional stage. Historical records show that from the sixteenth to the nineteenth century the population fluctuated between 5 and 7 million.

The beginning of the demographic transition in Korea may be considered as covering the several decades prior to the end of World War II. The level of mortality slowly declined with the benefit of Western medical technology and the introduction of public health measures under Japanese colonial rule. This moderate reduction in the death rate and the continued high birth rate contributed to significant population growth. In 1944, toward the end of the Japanese occupation, the size of the population in the Korean peninsula was approximately 25 million.

The period from the partition in 1945, which divided Korea along the thirty-eighth parallel, to 1955, when the first simplified census was conducted, embraced post-World War II political and social unrest and confusion, heavy return migration from abroad, the destruction and disruption caused by the Korean War, and the consequent dislocation and movement of the population. This period may be regarded as a "dark age" in the availability of population data. Although Korea's vital registration statistics are still incomplete and deficient, demographers have recently developed, refined and generated other types of demographic statistics, based

largely on census and survey data, that have permitted adequate fertility and mortality measurements. A series of censuses, taken almost regularly every five years from 1955, has provided a sufficient basis for refining own-children fertility estimates; numerous KAP and specialized demographic surveys conducted in the 1960s and 1970s have served as a useful check on these census estimates, and have also provided a rich source of information on fertility determinants. The high quality of age data from Korean censuses, combined with this intense technical demographic analysis of census, survey, and vital registration data, has permitted accurate estimates of fertility and of its differentials over time.

The present examination of available fertility data has shown that the TFR changed little from 1930 to 1960; due to balancing trends in the proportions married among women of childbearing ages and marital fertility. The rather low level of marital fertility during the 1930s, which was only 54 percent of Hutterite fertility, increased by almost 25 percent by 1960; apparently changing breastfeeding practices, in particular the abandonment of very long nursing, contributed to reducing long birth intervals and hence to increasing marital fertility. During the same period, the proportion married as measured by Coale's I_m index declined by 21 percent. The Korean War years (1950-1953) witnessed a slightly lower birth rate, which continued until 1957. Fertility then increased in the late 1950s, reaching its highest level around 1960 with a TFR of about 6, which is equivalent to the level observed for the pre-World War period of 1925-1945. After the Korean War the level of mortality, especially infant and child mortality, declined precipitously, and population growth peaked at an explosive rate of 2.7 percent during the intercensal period of 1955-1960. By 1960, the population of the Republic of Korea had increased to 25 million.

Between 1960 and 1980, a major demographic transition took place in the midst of rapid social and economic change. After 1960, fertility took a dramatic downturn; despite this decline, however, by 1980 the population had increased to 38 million, representing a growth of 52 percent in 20 years. The rapid fertility decline continued until 1967 and then slackened for the next five years; there was another sharp decline in the period 1972-75, but for the most recent intercensal period of 1975-80, the decline has been less rapid. The resulting 1980 TFR of 2.9 and CBR of 22 were both about half their respective levels in 1960.

Roughly paralleling these fertility declines, ideal family size has been cut in half in slightly more than two decades. The ideal range of three to five children common in the 1960s has now dropped to a norm of only two to three; more than three fourths of women who already have two children do not want any more. Moreover, women now prefer to have their children in rather quick succession after marriage and to complete childbearing at a relatively young age.

During the latter half of the 1960s, first, second, and third birth intervals decreased sharply. Estimates of fertility by duration since first marriage indicate that birth rates rose sharply at shorter durations and fell precipitously at higher durations during the 1960s and the first half of the 1970s.

The decline of cohort fertility has been less dramatic than that of either period fertility or ideal family size. For real cohorts of women who reached aged 45-49 in 1975, the peak childbearing years below age 30 occurred before 1960, when marital fertility was still very high and had not yet begun to decline. Therefore, completed family size at ages 45-49 for real cohorts, based on census data on children ever born, did not decrease nearly as dramatically as the TFR based on period fertility measures. The figures on children ever born show considerable inertia since they embody, particularly for older women, a good deal of high-fertility experience that occurred prior to the onset of the marital fertility decline in the 1960s.

In examining areal differentials, the present study found that although fertility declines occurred in all localities, these were only slight in some places, particularly in the least modernized part of the country along the east coast and in the rural areas of the less-developed southwestern regions. In the 1960s, both socioeconomic factors and IUD acceptance had a negative impact on marital fertility in rural areas; however, the effect of socioeconomic status is not discernible among younger women; and IUD acceptance had a greater negative impact on fertility in communities with relatively low levels of socioeconomic development.

Applying a decomposition procedure, this study has examined the two principal components of change in the TFR from 1960 to 1975: changes in population composition by marital status and changes in marital fertility. The results show that the decline in marital fertility after age 30 accounts for most of the change in the TFR; for

the period 1966-70, a rise in marital fertility at ages below 30 acted to increase the TFR. Changes in the proportions married were responsible for about one fourth of the fertility decline over the period 1960-75. It is interesting to note that decreases in the proportions married at ages below 30 contributed to the TFR reduction, while increases in the proportions married at ages 30 and over acted in the opposite direction over the entire period. The fact that most of the decline in the TFR since 1960 is accounted for by the reduction of marital fertility is consistent with the fact that age at marriage was already quite late by 1960 and increased only moderately after that time.

When the variables of education and residence were added in the decomposition of the TFR change from 1960 to 1975, it was found that the reduction in marital fertility contributed heavily to the TFR decline (73 percent), and that most of the remaining decline was due to education. Place of residence was less important than education, and changes in marital status had a negligible contribution. Much of the explanatory weight of changing marital status shifted to education; this is plausible since the rise in educational levels resulting from longer schooling tends to delay age at first marriage.

Many factors have been suggested as influencing Korea's fertility decline over the last two decades. These include rapid urbanization, socioeconomic development, declining infant and child mortality, the changing status of women, increasing female labor force participation, rising educational attainment (especially of women), high educational aspirations for children, a rise in consumer aspirations, improved transportation and communication, increasing family nucleation, rising age at marriage, the diffusion of modern contraceptives, the easy availability of abortions, a decrease in the value of children as productive agents and sources of old age security, and the high cost of raising children. Since massive economic, social, and demographic changes have been occurring simultaneously in Korea, it is not easy to sort out clearly which of these factors have been most influential in the country's rapid decrease in fertility levels. In the present study, it was found that among the proximate determinants of fertility, family planning, abortion and, to a lesser extent, rising age at marriage share substantial responsibility for Korea's fertility decline, although social and economic changes have also contributed

to the fertility decline. These three primary factors are discussed below.

FAMILY PLANNING

The national family planning program was first established in 1962, and the government set a target of reducing the annual rate of population growth from 2.8 to 2.0 percent by 1970. The program initially concentrated on motivation and a "massive enlightenment" campaign and subsequently developed a national network of family planning field workers to promote program acceptance. The predominant method used at first was the IUD because it was the only effective method known to the program administrators, because it was relatively simple to administer, and because its acceptance marked a serious decision by the individual to control births, hence initiating an important behavioral change. By 1967, over one million loops had been inserted, and the annual number of IUD acceptors had risen to 229,000. Distribution of oral contraceptives began in 1968 when the IUD drop-out rate was rising and there was an increasing need for alternative methods; women who discontinued the IUD were eligible to receive the pill after three months. Pill acceptance increased, and by the end of 1970, 276,000 women were using this method. The upsurge in sterilization, which was particularly marked in urban areas, occurred only after 1972. A dramatic surge occurred in female sterilizations during the period 1975-77, when the sterilization rate rose from 11 to 53 tubal ligations per 1,000 ever-married women aged 20-39; this increase can be attributed to the introduction of laparoscopy in the government program and a tripling of government payments to physicians performing the procedure.

From 1968 to 1978, the Planned Parenthood Federation of Korea established and operated "Mothers Clubs" in the rural areas, basically to overcome traditional resistance to smaller families and to encourage modern contraceptive practice. Specifically, the Mothers Clubs facilitated family planning communication, recruited acceptors, provided better access to contraceptives, created a favorable community climate for the acceptance of contraception, and assisted in the work of family planning field workers. When actively functioning, these clubs played an important role in the successful implementation of the national family planning program, especially in rural areas.

The contraceptive practice rate for currently married women increased 2.7 times (from 20 percent to 54 percent) from 1966 to 1979. During this same period, a rapid urban-rural convergence in contraceptive practice was taking place; currently, there is virtually no urban-rural differentiation in contraceptive practice rates. The dramatic increase in family planning practice in rural areas is largely due to the fact that the national program was oriented toward the traditionally high-fertility rural areas. There has also been a gradual disappearance over time of educational differentials in contraceptive practice in both urban and rural areas.

By 1978, among currently married fecund women who wanted no more births, 26 percent were sterilized, another 29 percent were using other efficient methods such as the pill and the IUD, and the remaining 45 percent were either using inefficient methods or not using contraception at all. Many women in the last group had an abortion to prevent the birth of an unwanted child, as discussed below.

INDUCED ABORTION

Induced abortion has been a very important factor in Korea's fertility transition, at least since 1960; before the national family planning program in 1962, abortion was the only effective method of fertility control, but was rarely practiced. Induced abortion has contributed to the fertility decline in two ways: it has been practiced as a direct means of avoiding unwanted births, and it has been used as the final resort when other contraceptive methods failed. The success of the Korean family planning program has been due significantly to easy access and the absence of cultural and social barriers to induced abortion. Abortion has been particularly effective in conjunction with contraceptive practice. In fact, the increasing acceptance of induced abortion in the face of rising contraceptive use suggests that abortion is highly compatible with other means of fertility control. This study found that the patterns of abortion practice among various age and socioeconomic groups are distinct from those of contraceptive use and sterilization: abortion has occurred in a wider range of ages, but has been more selective in terms of the couple's socioeconomic status. Moreover, although contraception and abortion are compatible, a considerable proportion of

women rely entirely on abortion to limit their family size.

The contribution of induced abortion to Korea's fertility decline was most pronounced in the early 1960s; since that time, family planning has had more of an impact. One estimate indicates that impact of induced abortion on fertility reduction was equivalent to 3 percent of the actual TFR in 1960, 14 percent in 1965, and 18 percent in 1970, and that the impact was greater in urban than in rural areas.

AGE AT MARRIAGE

With modernization and the mortality transition, the marital composition of the Korean population has changed substantially. The proportion of currently married women (as well as men) has decreased rapidly in the early reproductive ages (up to age 24) due exclusively to the postponement of marriage, and has increased substantially at later ages as a result of a continuous reduction in the spouse's risk of dying. Both of these changes have implications for fertility, although the impact of the former is far more significant.

On the other hand, there is evidence that this postponement of marriage has caused an increase in fecundability in the early years of marriage. In addition, the transition of early to late marriage has been accompanied by a growing incidence of premarital pregnancy. These two forces have tended to counteract the depressing influence of a rising age at marriage on the level of fertility in Korea.

Changes in basic marriage institutions, aside from the timing of marriage have been very minor. In traditional Korea, "familism," derived mostly from the neo-Confucian principles of Chu-shi, governed every aspect of social life. Universal marriage is still strongly endorsed and the extent of divorce and remarriage has changed little during the last twenty years of the fertility transition in Korea. The Korean family is still characterized by a patriarchal, patrilineal and patrilocal system, and strong solidarity among family or kinship members. These characteristics have in turn generated a strong son preference and orientation toward large families. Among sons, the first son is most valued since he alone can fulfill most of the son's customary functions. The rapid shift in family-size and fertility attitudes in Korea

without concomitant changes in son preference may be explained by the fact that only one or two sons are necessary to ensure the fulfillment of these functions and that daughters are often considered unessential.

OTHER DETERMINANTS OF FERTILITY

Rapid urbanization has played an important role in Korea's fertility decline, but will probably be less important in the future. As in many other countries, fertility declined more rapidly in urban areas in the early stages of the fertility transition; more recently, however, rural fertility has declined at a considerably faster pace. As noted above, rural-urban fertility differentials have been converging over time, and contraceptive use rates for both areas are now nearly identical. Although educational attainment exhibits the usual strong inverse relationship with fertility, there has been some convergence in these differentials as well. Income does not seem to have much of an effect on fertility once other factors are controlled.

Mortality appears to have had a substantial impact on fertility in the past, although direct empirical evidence is generally lacking. The rapid decline in infant and child mortality has undoubtedly contributed to the fertility decline, although further changes in mortality are unlikely to have much effect; infant mortality has now reached such a low level (less than 40 per 1,000) that the fear of child mortality is no longer a major factor in childbearing decisions.

Female labor force participation rates are rising, and Korean women work longer hours on average than women in any other country in the world. The effect of women's work on fertility, however, is somewhat inconclusive. The kind of work a woman engages in and the degree of compatibility between her work and childrearing are more important than whether she works or not. Although women have often been able to rely on their extended family or hired domestic help to care for children while they work, the increasing nucleation of Korean families and the high cost of maids in urban areas are beginning to limit these options.

The productive utility of children as workers for the family farm or business or as family income producers is declining in Korea. Although parents still expect a moderate amount of economic and practical help from their

children, this is generally viewed as a normal concomitant of raising children rather than a reason for having them. The security utility of children, particularly for support in old age, is still strong but declining; children are often expected to provide supplemental help rather than total support.

On the cost side, parents are acutely aware of the high costs of raising children (particularly the educational costs) and these can be an important factor in fertility decisions. The urban poor seem particularly vulnerable in this respect because of their low incomes and the high cost of living in the cities. Although the opportunity costs of raising children are not large, these will probably increase over time. Parents often mention the emotional and physical burdens that they would have to cope with if they had more children; however, there is evidence that these burdens are not entirely anticipated before couples have begun childbearing.

In addition to the many factors discussed above, this study has also explored some countervailing forces that may have kept fertility from falling even more rapidly and that may make future declines more difficult to attain. During the last several decades, there have been significant changes in breastfeeding practices. The abandonment of very long breastfeeding apparently began early in the fertility transition; presently, only a small proportion of women continue very prolonged nursing, although the majority continue to nurse for moderately long periods of nine months or more. Associated with this phenomenon is the fact that birth intervals at early parities have become substantially shorter as more educated and higher-income couples have accepted bottle feeding. It is expected that declines in either the incidence or length of breastfeeding in the future would tend to increase fertility rates.

The likely effect of continued son preference is more ambiguous. Fertility has declined precipitously in Korea in the face of no more than a gradual decrease in this traditional attitude. Some speculate that there is no reason for son preference to provide a drag on further fertility declines; others feel that the greatest effect of boy preference will be at the second and third parities (i.e., in decisions about whether to have a third or fourth child), and that additional fertility declines are therefore unlikely.

Evidence on the influence of community and ecological factors is mixed. Studies adding community-level

variables to individual records on survey data files have been unable to prove a link between these variables and fertility, although flaws in the design of these studies may be responsible for this result. Aggregate-level analyses relating areal characteristics to areal fertility levels have been more successful. The most significant results have been derived from an anthropological study that highlighted structural and institutional factors in comparing different communities.

PROSPECTS FOR FUTURE FERTILITY TRENDS

A rapid fertility transition has been observed in a number of Asian countries in addition to Korea, including Japan, Taiwan, China, Hong Kong, Singapore, and the Chinese population in Malaysia. All of these populations share the so-called Chinese cultural influence. Japan, an industrial state, has completed its demographic transition, while the newly industrializing countries of Korea, Taiwan, Hong Kong, and Singapore have all experienced rapidly falling levels of fertility along with rapid economic and social development. It is basically a matter of time before these countries also complete their demographic transitions. Although it is extremely difficult to isolate the cultural factors that have contributed to this common pattern of fertility change, such shared characteristics as the absence of barriers to ready acceptance of abortion and sterilization and the universality of marriage might be highlighted. Other shared characteristics include cultural homogeneity in ethnicity, language, and religious tradition, and geographic and political unity. These characteristics in turn promote social integration in the form of efficient communication and shared values, norms, and institutions. In this way, Korea meets the conditions proposed by Retherford (1981) as conducive to a sudden and rapid fertility decline.

In general, economic and social development results in lower mortality and in the reduced productive and security utility of children. These changes are accompanied by a smaller desired family size, creating the conditions for fertility decline even in the absence of a national family planning program; thus economic and social development may be the fundamental cause of fertility transition. However, although this developmental change has facilitated Korea's fertility decline, the family planning

program has expedited the process. Korea's national family planning program was initially very effective in legitimizing family planning, and consequently in reducing the "normative costs" of birth control in a short period of time; family planning leaders subsequently worked successfully to diffuse birth control throughout the country.

Prospects for future fertility trends are uncertain. All of the variables examined in this report indicate favorable conditions for further fertility decline, except for three factors: (1) the universality of marriage, (2) the reduction of the incidence and duration of breast-feeding, and (3) the continued strength of son preference. The impact of these three factors can be expected to be significant, especially in the fertility transition from a TFR of three to the replacement level; however, this impact will probably be insufficient to entirely curtail the fertility decline. The course of fertility in the last two decades has not been uniform: there was a sudden fall in the early 1960s, followed by a temporary slackening in the late 1960s, another rapid decline in the early 1970s and a moderate decline in the last few years. Korean fertility will complete its transition to the replacement level in the years to come, although, because of the three factors mentioned above, further declines are not likely to be achieved without some temporary setbacks.

CHAPTER 1

INTRODUCTION

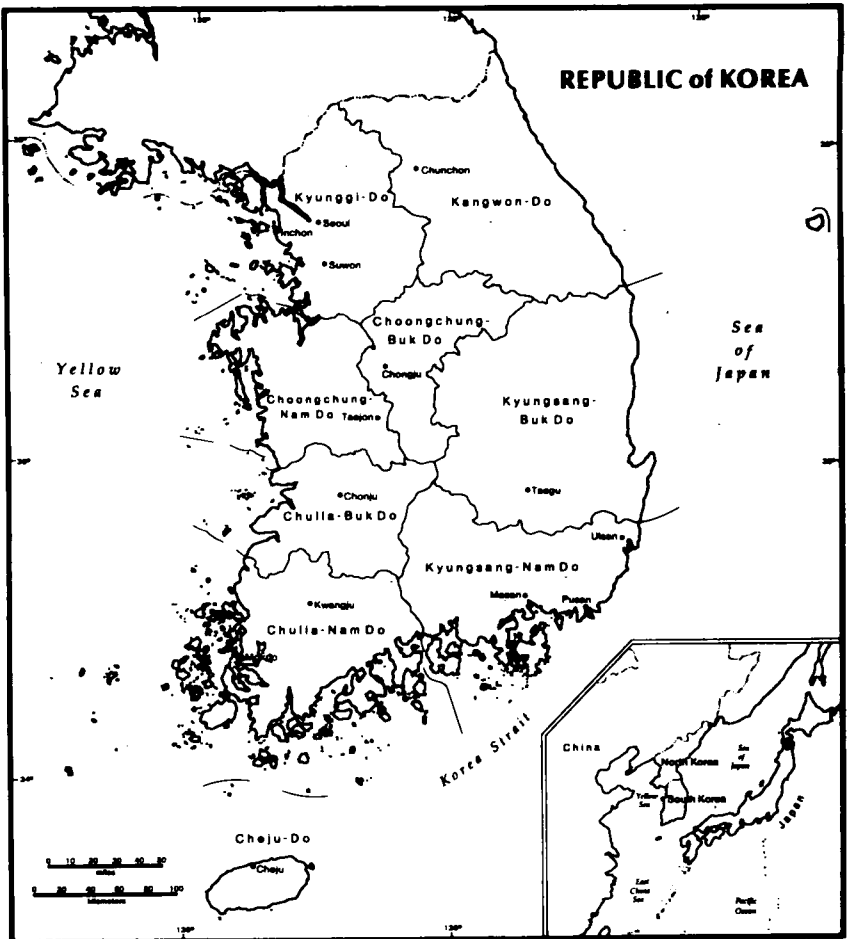
In the last several decades, Korea has experienced great political, economic, and social changes. It has also witnessed one of the fastest fertility transitions in the world. Research on Korea's rapidly changing fertility has proliferated during the last two decades. This study will review the relevant research and organize the data in such a way as to (1) put this fertility transition into a proper perspective; (2) shed light on some of the important questions that remain unanswered; (3) examine, at both the micro and macro levels, various determinants of fertility and factors contributing to rapid fertility change; and (4) make some generalizations about the past and provide some speculation and perspective on Korea's future fertility trends. The following are some of the questions addressed in this report:

1. What was Korea's fertility level in the past, and what is that level today?
2. How fast has the fertility change occurred?
3. What factors have determined or are associated with past and current levels of fertility?
4. What are the explanations for the observed changes in fertility?
5. What are the prospects for fertility change in the future?
6. Has the observed demographic change been independent of economic and social changes?
7. Can fertility change be induced?

BACKGROUND

Korea, a small peninsula off Manchuria, China, in North-east Asia, has a national history going back thousands of years. Located among the major historical powers in Asia, the country has on several occasions suffered from foreign invasion and domination; nevertheless, it has succeeded in maintaining and preserving its culture, language, values, and traditions. Its people are ethnically, culturally, and linguistically homogeneous.

The Yi dynasty began at the end of the fourteenth century and ended when Japan succeeded in annexing the Korean peninsula in 1909. Japan's occupation lasted 36



years and ended with the defeat of the imperial forces in World War II. At that time, the Soviet Union occupied the country north of the 38th parallel, and the ideological struggle emerged that finally led to the political division of the peninsula. In 1950, the Korean War broke out and destroyed what was left of the colonial industrial base developed by Japan.

The devastation of the war during the years 1950-53 left the nation on the edge of survival. By 1961, recovery had still been modest and per capita income stood at U.S. \$82 (see Table 1). Demands of minimum living standards left little room for investment out of this small income, and fixed capital formation averaged a mere 10 to 12 percent of the GNP, levels about as low as those in the poorest nations of the world (Korea, Economic Planning Board, 1980). In less than five years, however, the economy began a spiral of rapid growth that continued until 1979. By 1968, nearly a quarter of the Korean GNP was being channeled into a massive program of capital expansion and modernization. The result has been growth in productivity averaging 6.1 percent per year. This increase in productivity, combined with a labor force increasing at 3.6 percent annually and the gradual reduction of unemployment, has produced an annual growth rate in real GNP of over 10 percent, a rate that rivals even that of booming, prosperous Japan.

A number of indicators provide evidence of the profound changes that took place during the last two decades (see Table 1). The population increased by 50 percent between 1960 and 1980, with the average annual intercensal growth rates declining substantially from 2.7 percent during 1960-66 to 1.5 percent during the 1975-80 period. Despite this substantial population growth, the country has experienced rapid modernization and improvement in living standards. Improvements in medical and public health facilities contributed greatly to a dramatic reduction in infant and childhood mortality and a substantial increase in life expectancy. Female life expectancy, already quite high at 61 years in 1960, increased to 69 by 1978-79.

The urban population in Korea rose from 28 percent in 1960 to 57 percent in 1980. Rising urban demand for farm products, coupled with modern farming methods and government support for agricultural prices, has now raised farm income to levels comparable to those in the city. Still, the movement of people from rural to urban areas continues at a rapid rate even today.

TABLE 1 Selected Socioeconomic Indices: Republic of Korea

Index	1960	1966	1970	1975	1980
Population (millions)	25.0	29.2	31.4	34.7	37.4
Average annual population growth rate since previous census (percent)	--	2.7	1.8	2.0	1.5
Density (per km ²)					
Overall	256	299	327	357	385
Arable land	1,166	1,262	1,339	1,477	1,592
Female life expectancy (years)	61	64	67	70	69 ^a
Percent urban	28	34	41	48	57
Percent of women aged 15-49 who have more than a primary education	12	21	30	42	--
Percent of children aged 6-11 who attend school					
Urban	80	88	87	89	--
Rural	72	84	88	90	--
Per capita income (U.S. \$)					
Current prices	82 ^b	125	243	574	1,597 ^a
1975 prices	241 ^b	307	408	574	810 ^a
Percent of employed population working in secondary and tertiary industry	37 ^c	42	50	54	66
Electric power (KWH) per person	69 ^b	132	284	562	946 ^a
Radios per 1,000 households	121 ^b	214 ^d	525	857 ^e	--
TV sets per 1,000 households	5 ^b	9	65	259	850
Telephones per 1,000 households	28 ^b	61	93	173	242

^aValue is for 1979 instead of 1980.

^bValue is for 1961 instead of 1960.

^cValue is for 1963 instead of 1960.

^dValue is for 1965 instead of 1966.

^eValue is for 1974 instead of 1975.

Source: Cho and Retherford (1981).

Traditionally, Koreans have placed a high value on education and literacy. They are also noted for their work ethic. Since almost everybody has a basic education, the vocational skills and professional training needed by a growing economy are easily acquired. During the last three decades, there has been great progress in the education of the population. The proportion of women in reproductive ages with more than a primary education (six years) increased from 12 percent in 1960 to 42 percent in 1975. The proportion of children age 6-11 attending school increased from 72 percent in rural areas and 80 percent in urban areas in 1960 to about 90 percent in both areas in 1975. Girls had much lower attendance rates than boys in 1960, but this sex difference had virtually disappeared by 1975.

Despite the growing population during this transition period, the increase in productivity has kept output per person expanding at a phenomenal 8.3 percent per year. Real per capita income more than tripled between 1960 and 1979. Today, per capita GNP stands at over U.S. \$1500. Rapid economic growth has contributed to rising real incomes at all levels. The real monthly earnings of manufacturing workers, for example, rose at a rate of 4.3 percent annually, and overall income has been more equally distributed among families than in other nations of equivalent income.

The proportion of employed persons working in secondary and tertiary industries increased from 37 percent in 1963 to 66 percent in 1980. From 1961 to 1979, per capita electric power consumption increased more than 13-fold; per capita radio ownership more than 7-fold, to almost one radio per household in 1974; per capita television ownership more than 170-fold, to almost one set per household in 1980; and per capita telephones more than 8-fold, to almost one telephone for every four households in 1980.

The female work force has also contributed to Korea's development. The overall female labor force participation rate rose from 38 to 42 percent in the ten years between 1968 and 1978; the rate for farm females rose from 45 to 51 percent, and for nonfarm females rose from 30 to 36 percent. The participation rate for males remained constant at 76 percent (Korean Institute for Family Planning, 1978:255-256).

Korea has one of the highest population densities in the world. Population density on arable land increased from 1,166 per square kilometer in 1960 to 1,592 in 1980

(see Table 1). By way of comparison, density on arable land was about 50 in the United States and 793 in Bangladesh in 1974 (United Nations, Food and Agricultural Organization, 1975). These figures indicate the strong population pressure on Korea's agricultural resources.

ORGANIZATION OF THE REPORT

The remainder of this Introduction provides a brief demographic history of the country, followed by a review of available sources of population data. Chapter 2 focuses on estimates of fertility levels and trends during the last two decades and the decomposition of fertility change into its components. Chapter 3 brings together the information contained in the first two chapters to examine the relationship between changing socioeconomic conditions and changes in fertility attitudes and behavior. The importance of changes in family structure and marriage patterns is explored in Chapter 4, and the changing value of children and the influence of son preference on fertility are discussed in Chapter 5. Chapter 6 outlines the development of Korea's family planning program, highlighting changes in family planning practices and the use of abortion services. The summary at the beginning of this report discusses what is known about the determinants of fertility and speculates about the future course of fertility trends in Korea.

Korea's Demographic History

Korea's early historical records indicate that some form of registration of households and population was carried out for purposes of taxation and military conscription. Evidence of more systematic, census-like registration is available for the Yi dynasty, beginning in the fourteenth century. It is obvious that early in this period, household registration covered only part of the country and was subject to a great number of omissions and evasions, largely due to efforts to avoid taxation and conscription.

Apparently, by 1672 registration had become country-wide and considerably more complete. The census in that year counted 1,205,000 households and a population of 4,720,000, or 3.9 persons per household (Eisuke, 1925). As shown in Table 2, the population trend was consistent over numerous census periods from 1672 up to the turn of

TABLE 2 Households and Population, 1672-1920

Year	Households	Population	Male and Female Population
1672	1,205,866	4,720,815	
1681	1,376,842	6,218,342	
1690	1,514,000	6,952,907	
1699	1,333,330	5,774,739	
1708	1,406,610	6,206,554	
1717	1,560,734	6,788,789	
1726	1,614,598	6,995,400	
1738	1,672,184	7,096,565	
1747	1,759,692	7,340,318	
1756	1,771,349	7,318,359	
1765	1,675,267	6,974,642	
1774	1,703,030	7,098,441	
1783	1,733,757	7,316,924	males: 3,563,685 females: 3,753,239
1807	1,764,504	7,561,403	
1864	1,703,450	6,828,521	
1910 (end of year)	2,804,103	13,313,017	males: 7,057,458 females: 6,255,559
1915 (end of year)	3,117,692	16,278,389	males: 8,370,940 females: 7,907,449
1920 (end of year)	3,297,126	17,264,119	males: 8,903,000 females: 8,361,119

Source: Eisuke (1925).

this century, although the quality of the last few censuses must have deteriorated considerably because of the domestic and international political turmoil. Over this roughly 200-year period the Korean population showed a very low rate of growth--0.25 percent per annum. In 1777, the census counted males and females separately for the first time, enumerating 3,537,786 males and 3,700,737 females (a sex ratio of 95.6); this low ratio may well be attributable to census evasion on the part of younger men who feared military conscription.

From the historical records, there is no way to determine the levels of fertility and mortality prior to the first modern census in 1925. It is known from the Yi dynasty household registration that the average household size fluctuated between 3.9 and 4.6, which is lower than today's level. It is also known that marriage was nearly universal, and that age at marriage for both males and females was very young. As mentioned earlier, population

growth was insignificant during the eighteenth and nineteenth centuries. Based on these facts it may be speculated that the fertility level was quite high, but that the level of mortality was also high, resulting in virtually no population growth. A large collection of Yi dynasty household registration records is available, showing household relationships, age, and sex. Historical demographic analysis of the Korean data, such as that done by Hanley (1979), has shed some light on the levels of fertility, family size, and mortality during this period.

In 1909, subsequent to Japanese annexation, the colonial authority made a year-end population count that showed a population of 12.9 million; this is a substantially higher figure than the last count of the Yi dynasty, especially considering the fairly large exodus of migrants out of Korea into China, Russia, and other places. From 1910 to 1923, the year-end population counts showed population growth in the range of 13.3 million to 17.9 million. The year-end count is not a census, but an administrative count based on the canvassing of households and also on police and civil registration records (Choe, 1967:29-30). Although these counts did not achieve complete coverage (in the period 1911-25, coverage varied from 92 to 97 percent), they have provided a sufficient basis for estimating trends in population size and growth.

By 1925, when the first modern census was conducted by the Japanese colonial government, the population in the Korean peninsula was 19 million. Even with substantial migration out of Korea in the two decades following the 1925 census, the Koreans in the peninsula increased their number, and by 1944, according to the last colonial census conducted, the population was 25.1 million. From 1925 to 1944, the Korean population showed only moderate growth (1.4 percent), as indicated in Table 3.

Estimates of fertility have been made for the colonial period from the censuses of 1925 through 1940 by Chang (1966) and also by Kwon (1977: Chapters 5 and 7). The level of fertility was very high: the crude birth rate was estimated to be 46 per thousand during 1926-30, declining gradually over the next 15 years to 42 (see Table 4). During the colonial period, there was virtually no change in the total fertility rate (TFR), only a slight decline from 6.2 to about 6.1. An examination of estimated age-specific fertility rates reveals that women in all age groups except the youngest (15-19) maintained the same high fertility level during

TABLE 3 Population and Intercensal Growth Rates:
All Korea, 1925-44 and Republic of Korea, 1949-80

Year	Population	Intercensal Growth Rate (percent)
<u>All Korea</u>		
1925 (October 1)	19,020,030	1.44
1930 (October 1)	20,438,108	1.66
1935 (October 1)	22,208,102	1.17
1940 (October 1)	23,547,465	1.41
1944 (May 1)	25,120,174	
<u>Republic of Korea</u>		
1949 (May 1)	20,166,756	1.20
1955 (September 1)	21,502,386	2.70
1960 (December 1)	24,954,290	2.49
1966 (October 1)	29,159,640	2.16
1970 (October 1)	31,438,768	1.96
1975 (October 1)	34,678,000	1.54
1980 (November 1)	37,500,000	

Sources: Cho (1973); and calculations based on the 1975 and 1980 census reports from the National Bureau of Statistics, Economic Planning Board, Seoul.

the four intercensal periods. Thus the minor decline in the birth rate can be attributed to the gradual rise in the age at marriage during this period. In traditional Korea, marriage took place at very young ages; between 1925 and 1940, mean age at first marriage for females rose from 16.6 to 17.8, while the proportion of females single in the age group 15-19 increased from 27 percent in 1925 to 37 percent in 1935.

TABLE 4 Estimated Completeness of Birth and Death Registration, 1910-65: Korea

Period	Birth Rate		Completeness of Birth Registration	Death Rate		Completeness of Death Registration	Natural Increase (per 1,000)
	Recorded Rate	Estimated Rate		Recorded Rate	Estimated Rate		
1910-15	24.6	45.3	54.3	15.7	33.7	46.6	11.6
1916-20	31.5	47.5	66.3	24.7	31.6	78.2	15.9
1921-25	36.3	48.0	75.6	20.8	29.5	70.5	18.5
1926-30	35.9	45.9	78.2	21.6	26.4	81.8	19.5
1931-35	30.9	45.5	69.9	20.3	23.3	87.1	22.2
1936-40	32.6	43.3	75.3	18.4	21.4	86.0	21.9
1941-45	35.3	42.1	83.9	19.2	19.5	98.5	22.6
1946-50	18.9	39.9	47.4	10.1	15.8	63.9	24.1
1951-55	23.9	41.0	58.3	7.3	14.3	51.0	26.7
1956-60	31.1	43.0	72.3	6.9	12.8	53.9	30.2
1961-65	30.9	39.5	78.2	7.5	10.5	71.4	29.0

Note: Data for 1910-45 are for all Korea; data for subsequent years are for South Korea only.

Source: Choe (1967).

The three colonial censuses of 1925, 1930, and 1935 for which data on marital status are available illustrate a remarkable phenomenon of universal marriage. By age 20 almost all females were married--only between 1 and 3 percent remained single--and beyond age 30 the proportion of women unmarried was insignificant. Koreans have traditionally placed a high value on marriage and family formation, both for men and women; remaining single beyond the so-called marriageable age has been greatly frowned upon and considered a great disservice to parents and family.

World War II and the end of Japanese colonial rule in 1945 brought about a great deal of change, including a substantial volume of migration across the new national boundaries. The Korean War (1950-53) caused further destruction, chaos, and social change. Because of the paucity of useful demographic or other relevant quantitative data, very little is known about social and demographic change during the years 1945 to 1954. In addition, since 1945, when Korea was divided along the thirty-eighth parallel, it has not been possible to follow population trends of the entire peninsula. For South Korea, the population increased between the 1944 and 1949 censuses from 16.2 to 20.2 million, indicating an annual growth rate of 4.4 percent. This unusually high growth rate was largely due to the return of Koreans from Japan and Manchuria following World War II and to heavy migration from the North during the period. The 1955 census, however, indicated only a slight increase in population size from 20.2 to 21.5 million, representing an average growth rate of 1 percent per year from 1949 to 1955. This period overlaps the Korean War, during which mortality was extremely high and there was a large volume of migration from the North to the South; the lower growth rate may also be due to lower fertility during the war.

The 1960 census enumerated 25.0 million persons; based on figures from the 1955 and 1960 censuses that have been adjusted for underenumeration, the estimated annual rate of intercensal population growth was 2.7 percent. The 1966 census enumerated 29.2 million; based on adjusted figures for both 1960 and 1966, the annual intercensal growth rate for the six-year period was 2.5 percent. The population grew to 31.4 million by 1970, with an intercensal growth rate, again using adjusted figures, of 2.2 percent. The 1975 census and the recent 1980 census enumerated 34.7 million and 37.5 million, respectively, implying intercensal growth rates of 1.96 and 1.54 percent for 1970-75 and 1975-80.

Data Sources

In Korea, there are basically three types of data available for the measurement and analysis of fertility: vital statistics derived from the registration system; indirect measurements of fertility from census data; and specialized fertility surveys and other surveys to which questions on fertility have been added.

Vital Statistics

As briefly mentioned earlier in this chapter, Korea has had some form of population registration from the earliest historical times; however, this was mostly confined to simply canvassing households and counting population for purposes of taxation and military conscription. The modern civil registration system and the collection of data on vital events date back only to 1910, and until 1937, vital statistics were compiled only as a by-product of the civil registration system. This statistical information covered only the number of vital events; the detailed vital statistics on births, deaths, and marriages that are available today were not collected.

Although a modern system of vital statistics was established in 1938 by the Japanese colonial government, it did not function as completely as the system in Taiwan under the same colonial rule. As shown in Table 4, birth registration was far from complete. During the ten years prior to the end of World War II, birth registration was relatively more complete: 75 percent in 1936-40, and 84 percent in 1941-45. Death registration was even better: 86 percent and 99 percent during the same periods.

After the liberation in 1945 and subsequent partition of the country, political and social instability prevented the new government from improving vital statistics. In fact, during the years 1946-50, the system deteriorated substantially; it is estimated that less than 50 percent of births and 64 percent of deaths were recorded in this period. During the Korean War, from 1950 to 1953, the system remained woefully inadequate and incomplete. Death registration further deteriorated during the postwar period. Although a number of factors contributed to incomplete vital registration, three that deserve mention are delayed registration of vital events, problems associated with the general use of the lunar calendar, and the inconvenience of obtaining certification of cause of death from a medical doctor.

The vital registration system gradually improved over the two decades from 1960 to 1980. Delayed registration of births and deaths became much less frequent, and the general public became more cooperative. Nevertheless, except for the last few years, birth and death statistics are not sufficiently complete and reliable to permit adequate fertility analysis. However, data for the 1980s should be sufficiently complete to serve as a basis for the measurement and analysis of Korean fertility and mortality.

Censuses

The first modern Korean census was conducted in 1925 under Japanese rule. From 1925 to the end of World War II in 1945, five censuses covering all of Korea were taken at intervals of five years, except for the last one, which was taken after four years. These censuses were of high quality and were consistent over the regular census intervals, and provide valuable data for demographic analysis. Two types of censuses were administered by Japan: a simplified census conducted in quinquennial years (those ending in a five), and a full census taken in years ending in zero. The former was limited to collection of basic demographic information such as age, sex, marital status, and nationality, while the full census covered additional socioeconomic characteristics such as education, occupation, and industry.

The census data on age in the colonial period were unusually accurate for a fascinating reason: Korea followed the Chinese dating system, using the lunar calendar--a 12-year cycle of 12 different animals--to determine age, and traditionally placed great significance on the date and time of birth. The Western solar calendar was introduced with the Japanese colonial occupation in the early part of this century; it has gradually been replacing the lunar system, but still has not done so completely because of cultural resistance. The early assumption of Westerners that rural Koreans would not know their exact ages is wrong. Korean parents record their children's dates of birth (and in most cases the hour as well) for the following purposes:

(1) Sajoo (literally translated as "the four pillars of a person"), meaning that the time, day, month, and year of birth determine a child's future. In the past,

some mothers would try to postpone a birth until a propitious hour of the day, although this practice is rare today.

(2) Samchil (literally, "three-seven"), meaning that for 21 (three times seven) days after birth, visitors other than close relatives are not allowed in the house. This was probably meant to minimize the child's exposure to disease. Although not strictly observed in the cities at present, the practice is still generally observed in the rural areas.

(3) Paegil (literally, "the hundredth day"), meaning that on the hundredth day after birth, close relatives and friends are invited to share food and drinks to celebrate the birth and survival of the child.

(4) Tol (translated as "first birthday"), meaning that the child has survived a full year since birth, an event that calls for celebration. The first and sixtieth birthdays are the two most eventful birthdays celebrated.

(5) Gunghap, meaning that, for a happy marriage, the sajo of the bride and groom should be matched to see whether the combination is favorable. This custom is still widely practiced.

(6) Hwangap, meaning that on one's sixtieth birthday a man or woman has completed five twelve-animal-year cycles. This occasion calls for a big celebration.

These customs require an accurate record of the age of each member of the family. As in Japan, age heaping--a kind of age misreporting in which certain ages (often those ending in a specific digit), such as 5, 10, 15, 20, 25, are overreported, while others, such as 19, 23, 37, are underreported--is probably less common in Korea than in the United States.

There are, however, some complications involved in the Korean age-recording system. First, according to both the Koreans and the Chinese, a child is one year old at the time of birth (implying that the nine-month gestation period is one year of life). Furthermore, age in Korea is not reckoned from the individual's last birthday, but from the New Year (January 1). Thus, if a child is born on January 1, 1970, he will be considered two years old on January 1, 1971, exactly one year after birth. Therefore, if one simply asks how old a person is, the information obtained will be substantially different from the age in completed years at last birthday. In the extreme case, a child born on December 31, 1969, would be two years old on January 1, 1970 (the child is one day

old in age in completed years). A further complication in calculating age statistics with a lunar calendar is that the length of the year varies depending on whether it is a normal or a leap year. A normal lunar year has 12 months consisting of 354 days. The lunar calendar is kept in phase with the evolution of solar years by the insertion at irregular intervals of a leap year with an additional lunar month. If vital events such as births and deaths are evenly distributed over time, lunar leap years contain 13/12 as many events as normal years, or 8.33 percent more events. One leap year is usually followed by two normal years.

During the colonial period, census enumerators canvassed households and collected dates of birth, virtually all of which were expressed according to the lunar calendar. Ages were then derived from these birth dates. With proper conversion and adjustments, sufficiently accurate age distributions from all five colonial censuses can be obtained, and from these both the birth and death rates can be estimated. Yun-Shik Chang and Tai-Hwan Kwon have used these census data to provide plausible estimates of fertility and mortality for these periods (Chang, 1966; Kwon, 1977).

The situation became more complex after the war because of the gradual shift to the Western calendar. There are no data available on the changing proportion of the population reporting their birth dates using the Western calendar.

The Republic of Korea was established in the south in 1948, and from that time to the present the government has conducted seven censuses (in 1949, 1955, 1960, 1966, 1970, 1975, and 1980). The returns of the 1949 census were totally destroyed during the Korean War, leaving only a limited set of data on population (unfortunately, a detailed age-sex distribution is not available). The 1955 census was the first complete enumeration of the population after the Korean War. The single-year age distribution is available for geographic and administrative divisions of the country; in addition, marital status, employment and industry, occupation, and education cross-classified by age and sex are available for different areal subdivisions, as are data on refugee status from the North.

A comparison of the data from the 1955 and 1960 censuses reveals that the former considerably underenumerated the population (Cho, 1971). The National Bureau of Statistics at the time was not equipped with

the technical or financial resources to execute a high-quality census. In 1960, a major effort was made to conduct a large-scale census. Foreign technical assistance was enlisted. Many aspects of the census operation were modernized: pretests, postenumeration surveys, and modern data processing equipment were introduced; the quality of the operation improved substantially over the previous censuses, and the enumeration was more complete. The 1960 census for the first time incorporated items on age at first marriage and children ever born, items which subsequent censuses have continued to carry.

Unfortunately, however, foreign technical input in the design of the 1960 census resulted in a major technical blunder. Instead of following the well-established practice of computing age from birth dates, the foreign advisors introduced the U.S. census question simply asking the age of each person. The result, revealed by the postenumeration survey, was that over 75 percent of the population indicated age according to the lunar system. This left a negligible number in the age category under one year, and redistributed the numbers in the other categories. Various efforts have been made to convert the lunar age into age in completed years, but none has so far produced satisfactory results for refined demographic analysis.

Because of budgetary problems in 1965, no census was conducted in that year, but a simplified census was conducted in 1966. Proper caution was used in the section dealing with age determination. For the first time in the history of the Korean census, respondents were given the choice of indicating their birth dates by either the lunar or the Western calendar. In addition, respondents could indicate their "animal" of the 12-year zodiac for their birth year. The coding staff at the central office, using a conversion table, then computed the exact age in completed years. In addition to asking for children ever born, the 1966 census asked for the first time the number of children surviving. According to Cho (1971), the 1966 census was one of the better censuses in recent decades.

Similar census procedures were repeated for the 1970, 1975, and, most recently, 1980 censuses. In Korea, the data from these censuses serve as the principal basis for measuring and analyzing fertility and mortality in the absence of complete and reliable vital statistics. These data are amenable to refined demographic procedures that can help detect and measure changes in fertility and

mortality levels and age distribution over time. The existence of six census counts of the population in 25 years enhances the detection of errors, especially in age distributions, through demographic analysis; experience with other populations has shown that if the same enumeration procedures are used, similar patterns of overstatement and understatement of numbers at different ages will occur over consecutive censuses (Coale, 1955; Coale and Zelnick, 1963; Coale et al., 1979).

Surveys

Specialized population surveys were not conducted in Korea until the 1960s. With the introduction of family planning in 1960, and the beginning of the national program in 1962, the need for statistical information on attitudes toward and knowledge and use of family planning greatly increased. The earliest family planning survey was begun in 1961 in Koyang by the Family Planning and Population Center of Yonsei University (see Yang et al., 1965); in 1964, an interesting study of differential fertility was conducted in the town of Ichon (see H.-Y. Lee, 1965). Both of these surveys covered only small areas of the country. The first National Survey on Family Planning was conducted in 1965. Since then, nationwide surveys have been conducted every year or two (a partial listing appears in Table 5). These national surveys have been characterized by large (generally 4,000 to 8,000) samples of currently or ever-married women in their childbearing years. Their scope has included questions on cumulative fertility; complete pregnancy histories; family planning knowledge, attitudes, and practices; and specific experience with IUDs, oral pills, and abortion. Several contained questions that followed up on earlier surveys.

As a part of the 1966 census evaluation program, a postenumeration survey (PES) was planned by the Bureau of Statistics. To meet the growing need for demographic statistics, the scope of this survey was expanded to include questions designed to estimate not only current levels of fertility and mortality, attitudes on ideal family size, and the practice of contraception, but also population movement and migration. For this reason, the 1966 PES is also called the 1966 Special Demographic Survey. Extensive tabulations from this survey are available in Choe and Park (1969). Beginning in 1972,

TABLE 5 National Fertility Surveys, 1965-78: Republic of Korea

Year	Survey	Sample
1965	National Survey on Family Planning	4,000 currently married women aged 15-44
1966	National Survey on Family Planning	5,000 currently married women aged 15-44
1967	National Family Planning KAP Survey	5,000 ever-married women aged 15-49
1968	National Family Planning and Fertility Survey	7,477 ever-married women aged 15-49
1971	National Fertility-Abortion Survey	6,000 ever-married women aged 15-49
1973	National Family Planning KAP and Fertility Survey	2,400 ever-married women aged 15-49
1974	Korean National Fertility Survey (WFS)	5,417 ever-married women aged 15-49
1976	Korean National Fertility and Family Planning Evaluation Survey	6,000 ever-married women aged 15-49
1978	National Family Planning KAP Survey	8,000 ever-married women aged 15-49

Note: List is not exhaustive.

the Bureau of Statistics began conducting quarterly the Current Demographic Survey (CDS) covering a sample of about 22,000 households. The purpose of this survey is to estimate the number of births, deaths, and cases of migration; in its earlier years, it generally underestimated births and deaths. In 1974, the Bureau of Statistics conducted a major employment survey covering about 130,000 households. The principal objective was to provide various statistics on employment and the economically active population, using the labor utilization approach. The survey also contained some questions that can be used to derive basic demographic measures. In 1978, another major project on evaluation of vital statistics began in which the vital events enumerated by the CDS were matched with the vital events registered in the same survey areas. This project has been producing very useful results. Because of these efforts at the Bureau of Statistics, the CDSs in recent

years have improved substantially and have become an important source of vital statistics.

In 1979, the Korean Institute for Family Planning conducted a survey on contraceptive prevalence designed to assess the impact of the national family planning program (K.S. Koh et al., 1980b). The sample of 20,000 households was large enough to provide provincial-level data on contraceptive prevalence, fertility, and use-effectiveness. The Korean Institute for Research in the Behavioral Sciences conducted two surveys of the Value of Children (VOC), which also included information on fertility and family planning (Lee and Kim, 1979). A small pilot study with 378 respondents was completed in 1973; in 1976, a larger national sample of 2,050 married women and men was conducted which covered the entire country except for the province of Cheju Island. Cheju Island is, however, the geographical focus for an intensive study of fertility and family planning entitled the Korean Population Policy and Program Evaluation Study (C.B. Park et al., 1980). From 1975 to 1981, the study was jointly conducted by the East-West Population Institute, Korea's National Bureau of Statistics, and Dong-A University. This project has completed two large-scale benchmark surveys on Cheju's population of about 400,000, conducted simultaneously with the 1975 and 1980 censuses. In addition, one prevalence survey using only a small sample was conducted in 1978.

In conclusion, although Korea's registration of vital statistics has been incomplete and deficient, the country has in recent years developed other types of demographic statistics, such as census and survey data, from which both direct and indirect measurements of fertility can be made. As a result, there are now more than enough data to make analysis of fertility and family planning behavior possible; in fact, in some ways there may be more data than can be adequately analyzed.

CHAPTER 2

FERTILITY LEVELS AND TRENDS

This chapter presents estimates of fertility levels and trends during the last two decades and examines fertility changes; it also briefly discusses natural fertility and some of the factors influencing it. As suggested in Chapter 1, Korea's registration of vital events has been incomplete and insufficiently reliable for most of the period of interest; measurement of fertility must therefore be based on census or survey data. Recent population censuses conducted at fairly regular five-year intervals provide an extremely useful data base for indirect fertility and mortality estimation.

Application of the own-children method to the censuses of 1966, 1970, 1975, and 1980 has allowed the estimation of fertility for a period of nearly three decades, with multiple estimates for the years 1956-75. This method, when applied to a particular census, generates fertility estimates for each of the 15 preceding years; thus, when applied to censuses taken at five-year intervals, it produces more than one set of estimates for the overlapping periods. This is extremely important because these sets of fertility estimates for the same periods, derived from different censuses and subject to different biases, are largely independent and thus serve as a check on one another. The basic elements of the estimation method are outlined below.

The essence of the estimating procedure is reconstruction of the fertility experience of the women enumerated in a survey or census for the preceding period. Retrospective fertility estimates are usually made for the single-year cohorts of women aged 15-59 at the time of enumeration. By simply interpolating these estimates, and by translating the woman's age at the time of the census to that at the reference period, one can derive

the conventional period measures of age-specific fertility. The principal demographic adjustments needed are allowances for (a) mortality of children and their mothers, and (b) children not living with their mothers.

Applying this method, for most practical purposes, does not require that special questions be added to normal census schedules. All that is needed are simple tabulations of young children by the single-year age of the child and mother; these tabulations can be based on census or survey data on age and relationship to head of household. Because such information is usually coded as a part of regular census data processing, the work required to produce a basic tabulation of children simply entails locating the mother of the own children and transcribing the age of each child and mother. Other characteristics of the mother and father may be included for more detailed studies of differential fertility.

Since the own-children estimation of fertility involves reverse projection, estimation of mortality is an intrinsic part of the procedure. Census data on children ever born and children surviving, if sufficiently accurate, can be used to provide internally consistent adjustment factors for mortality of children. The own-children procedures were developed to estimate current fertility solely from census data without having to rely on independent mortality estimates from noncensus sources. The Brass procedure of estimating infant and childhood mortality from the proportion dead among children ever born recorded in censuses leads to an apparent underestimation; hence, for the present analysis, mortality estimates derived from the Survey of Fertility and Abortion were accepted and served as the basis for adjustments for later periods.

When census data are used, an additional adjustment must be made for the undercount of children and women; detailed discussion of the methodology necessary to make this adjustment is presented in other publications (Cho, 1973; Cho and Feeney, 1978; Cho and Retherford, 1978). Own-children fertility estimates cannot be more accurate than the census or survey data on which they are based. The most important requirement is the accuracy of age reporting for young children. Because of Korea's accurate age reporting, the own-children technique is particularly appropriate here. Although the resultant estimates from data from different sources are not perfectly consistent, they do provide an adequate basis for measuring and analyzing fertility levels and trends.

FERTILITY LEVELS AND TRENDS

Table 6 presents standard measures of fertility: the crude birth rate (CBR), or births per 1,000 population; the general fertility rate (GFR), or births per 1,000 women aged 15-49; and the total fertility rate (TFR), the number of children that would be born per woman reaching age 50 if women were subject to the age-specific fertility rates of the year in question.

Fertility estimates for the period 1955-75 presented in this table are from the National Academy of Sciences, Committee on Population and Demography, report on Korea (Coale et al., 1980), which was built upon much prior analysis of own-children data from Korean censuses done by Cho and others at the East-West Population Institute. The estimates for the 1976-80 period are from collaborative research conducted by the Korean Bureau of Statistics and the East-West Population Institute.

As discussed earlier in this report, the decade 1945-55 may be characterized as a demographic "dark age" in South Korea: not only was vital registration inadequate, but the 1949 census records were also destroyed in the course of the Korean War. The birth rate probably declined somewhat during the war, but the necessary data to support this inference are as yet unavailable. Contrary to the view of many demographers that a postwar baby boom began to take place in the South immediately after the cease-fire in 1953, it may be hypothesized that the lower birth rate continued until 1957, when most of the soldiers returned from the front. It should be remembered that, after the cease-fire in 1953, the South Korean army sent more of its own troops to the front to compensate for the withdrawal of United Nations and American forces. Officially, no members of the armed forces were discharged until 1957, although there were brief periods of leave for individuals after the cease-fire. This meant that normal family life for a large number of men in their twenties and thirties was disrupted from 1950 to 1957. Estimates of the fertility of this period are currently being derived from 1960, 1966, and 1970 census data.

Table 6 shows that there was an increase in fertility during the late 1950s, reaching the highest level around 1960 with a TFR of almost 6. This is equivalent to the level observed during the colonial period 1925-45. After 1960, a dramatic decline took place that continued until 1967, followed by a slackening until 1972. Another sharp decline is indicated for the period 1972-75. Between

TABLE 6 Summary Indices of Fertility: Republic of Korea

Year	CBR ^a	GFR ^b	TFR ^c	SMGFR ^d	MAC ^e
1955	39.5	164	5.46 ^f		
1956	38.2	160	5.33 ^f		
1957	38.4	162	5.40		
1958	41.9	178	5.94		
1959	41.8	179	5.93		
1960	42.1	182	5.98	251	30.5
1961	39.6	172	5.62		
1962	38.1	166	5.41		
1963	37.6	165	5.35		
1964	34.0	150	4.86		
1965	32.2	142	4.61		
1966	31.9	141	4.59	198	30.2
1967	30.3	134	4.34		
1968	31.2	137	4.42		
1969	30.8	134	4.39		
1970	29.8	129	4.24	185	29.8
1971	29.8	128	4.26		
1972	29.3	124	4.18		
1973	27.3	114	3.86		
1974	25.9	107	3.62		
1975	22.8	92	3.14	154	28.7
1976	23.1	90	3.1		
1977	22.6	87	3.0		
1978	21.8	83	2.8		
1979	23.1	87	2.9		
1980	22.4	84	2.7	151	27.4

Note: Fertility estimates for the last five years are based on unpublished own-children data from the 1980 census.

^aThe crude birth rate is calculated as the general fertility rate times the quantity (mid-year female population 15-49/mid-year total population) taken from uncorrected census data.

^bGFR = (2,075 x female births)/female population 15-49.

^cCalculation of TFRs is based on reported own-children schedules (see Coale et al., 1980).

^dSMGFR denotes the standardized marital general fertility rate (calculated as $\sum P_x^m \times F_x^m$ where P_x^m is the proportion aged x to $x + 5$ of married women aged 15-49 in a standard population, taken here as the 1975 census populations, F_x^m is the observed age-specific marital birth rate in this same age group, and the summation ranges over ages 15-49). Values of SMGFR are taken from Retherford and Cho (1981).

^eMAC is the mean age at childbearing calculated from the age-specific birth rates. Values of MAC are taken from Coale et al. (1980:3).

^fTFRs for 1955 and 1956 estimated from trend in GFRs 1955-57.

1975 and 1980, the fertility level continued to drop but at a much slower pace, reaching a TFR of 2.7 and a CBR of 22 in 1980.

In Figure 1, the TFRs from 1960 to 1974 are compared with two sets of fertility estimates based on data from the Korean National Fertility Survey (KNFS) of 1974: own-children estimates from the household data, and estimates obtained from pregnancy histories collected in the survey. On the whole, the agreement is quite good, except for the somewhat higher levels of fertility from 1968 to 1972 indicated by the survey. Because of problems associated with the limited sample size and

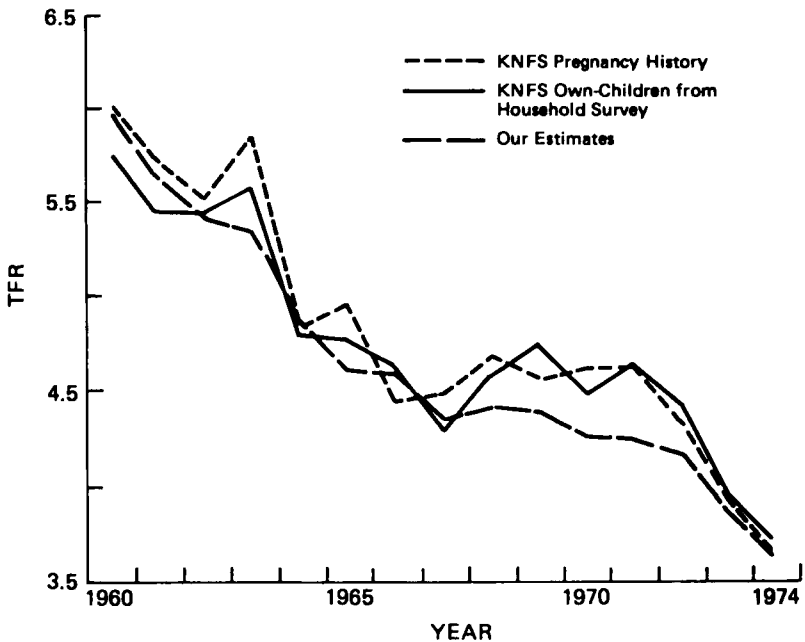


FIGURE 1 Estimated Total Fertility Rates, 1960-74: Republic of Korea

Note: KNFS pregnancy history and own-children tabulations are based on unpublished data from the Korean National Fertility Survey. Our estimates are adjusted census-based own-children estimates.

Source: Coale et al. (1980:6).

possible bias in the survey, the census estimates seem to be more robust. The most precise corroboration of the own-children fertility estimates is the validation of the average level and the average age pattern of fertility with estimates based on registered births adjusted for incomplete registration. As shown in Figure 2, the average age-specific fertility schedules for 1971-75 from these two independent sources are virtually identical. Because of the accurate age reporting in the Korean

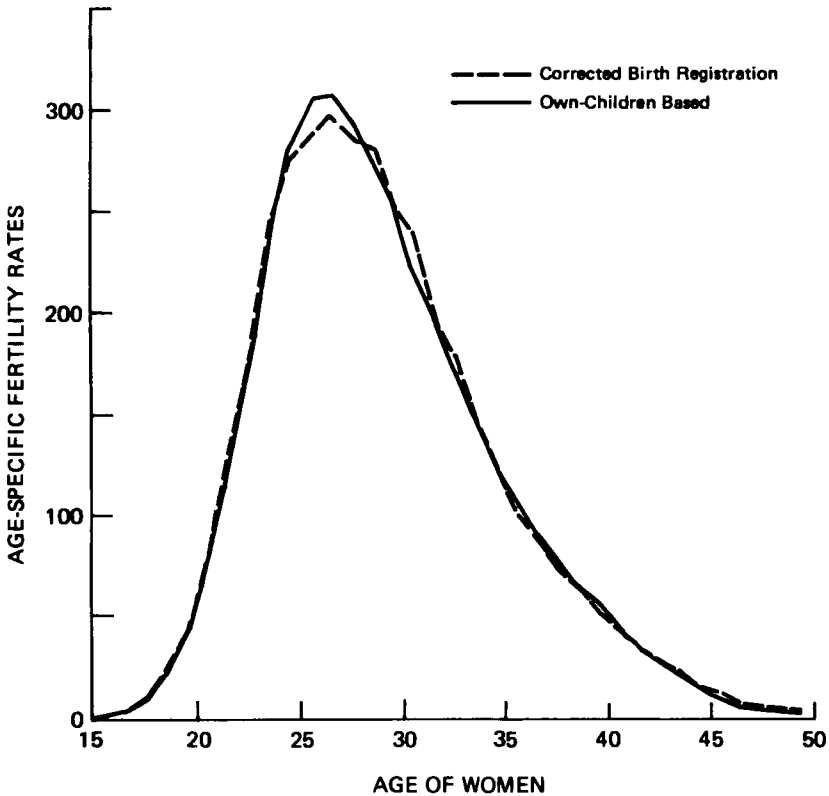


FIGURE 2 Age-Specific Fertility Rates (per 1,000 women), 1971-75: Republic of Korea

Note: Calculated from corrected birth registration and from own-children estimates.

Source: Coale et al. (1980:4)

censuses, the indication of a peak total fertility rate in 1960 and subsequent sharp decline can be accepted as genuine; these patterns are attested to by the differences in the number of children at the appropriate ages found in the censuses of 1966, 1970, and 1975. The summary of fertility rates presented in Table 6 and the changing age patterns of fertility in Table 7 are confirmed by estimates from independent sources.

From 1960, when fertility was at its highest, to 1980, the CBR, the TFR, and the GFR each fell by about 50 percent. The standardized marital general fertility rate (SMGFR), which effectively substracts out the effects of rising age at marriage, fell somewhat less drastically, by slightly less than 40 percent. The mean age at childbearing fell by more than three years during the

TABLE 7 Age-Specific Birth Rates, 1960-80: Republic of Korea

Year	15-19	20-24	25-29	30-34	35-39	40-44	45-49
<u>All Women</u>							
1960	35	249	323	273	204	96	16
1966	19	193	290	207	131	61	17
1970	13	174	298	207	111	43	8
1975	12	153	256	131	55	18	3
1980	5	130	264	111	31	7	1
<u>Currently Married Women</u>							
1960	460	378	347	298	232	117	22
1966	500	405	323	220	147	74	23
1970	460	411	337	219	121	51	10
1975	460	411	295	139	59	20	4
1980	a	350	304	118	33	8	1

Note: Age-specific birth rates for all women for 1960, 1966, 1970, and 1975 are taken from Coale et al. (1980:3) and are consistent, to within rounding errors, with the TFRs in Table 2.1; birth rates for married women for the same years were estimated by dividing age-specific birth rates for all women by corresponding age-specific proportions currently married. Rates for the age group 15-19 for currently married women are accurate only to two significant figures and are thus rounded to the nearest multiple of ten. Rates for both all women and currently married women for 1980 are preliminary own-children estimates calculated from the 1980 census.

^aThe estimate for currently married women aged 15-19 in 1980 is based on too small a number of women to provide a reliable figure and, hence, it is not shown in the table.

same period, as childbearing became more concentrated at younger reproductive ages. Table 7 provides further detail by showing trends in age-specific birth rates, both for all women and for currently married women. The rates for all women in the upper panel of the table show substantial declines at all ages, with proportionate declines that are especially large at the youngest and oldest ages. The picture is somewhat different in the second panel of the table, which shows rates for currently married women only. Except in the last intercensal period, birth rates for these women remained virtually constant below age 25. The trend in fertility at ages 25-29 has been gradual and somewhat erratic. Birth rates for currently married women age 30 and over fell steadily throughout the period, with declines of about 90 percent in the three oldest age groups.

The reason birth rates at ages 15-19 and 20-24 fell for all women but remained relatively constant for currently married women is that age-specific proportions married fell at these ages. The proportions currently married fell substantially at ages 15-19 and 20-24, and moderately at ages 25-29 (see Chapter 4 for a more detailed description of trends in proportions married). Proportions married rose at ages above 30, however, mainly because of a reduction in widowhood associated with mortality decline. The influence of mortality and widowhood is also apparent in the age gradient of proportions currently married, which declines with age after age 30 as adult male mortality increases to significant levels.

The decline of cohort fertility has been less dramatic than that of period fertility. For the cohorts of women who reached ages 45-49 in 1975, the peak childbearing years below age 30 occurred before 1960, when marital fertility was still very high and had not yet begun to fall. Thus their completed family size at ages 45-49, based on the census question on children ever born, does not show nearly as dramatic a decline as the TFR based on current age-specific birth rates. The slower decline of children ever born is illustrated in Table 8, which shows the average number of children ever born for all women and for ever-married women. The number of children ever born actually rose at many ages, particularly in rural areas, between 1960 and 1966, before falling in subsequent years. The declines after 1966 are moderate compared with those in current fertility measures shown earlier in Tables 6 and 7. One could say that the

TABLE 8 Mean Number of Children Ever Born, 1960-75: Republic of Korea

Age 1975	Whole Country			Urban			Rural					
	1960	1966	1970	1975	1960	1966	1970	1975	1960	1966	1970	
All Women												
15-19	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
20-24	0.8	0.6	0.4	0.4	0.6	0.3	0.3	0.3	0.8	0.7	0.6	0.5
25-29	2.3	2.2	2.0	1.9	2.1	1.8	1.6	1.7	2.4	2.5	2.3	2.1
30-34	3.8	3.8	3.5	3.2	3.5	3.3	3.0	2.8	3.9	4.1	3.9	3.6
35-39	4.8	4.7	4.5	4.1	4.4	4.1	3.9	3.6	5.0	5.0	5.0	4.6
40-44	5.4	5.5	5.3	4.8	5.0	4.9	4.6	4.2	5.6	5.8	5.7	5.2
45-49	5.5	6.1	5.6	5.2	5.2	5.5	5.0	4.7	5.6	6.3	6.0	5.6
Ever-Married Women												
15-19	0.9	0.4	0.5	0.6	0.9	0.5	0.5	0.6	0.9	0.3	0.5	0.6
20-24	1.3	1.1	1.0	1.1	1.4	1.0	0.9	1.0	1.3	1.2	1.1	1.1
25-29	2.4	2.4	2.2	2.0	2.3	2.0	1.8	1.9	2.5	2.6	2.4	2.3
30-34	3.8	3.8	3.6	3.2	3.5	3.3	3.1	2.9	3.9	4.1	3.9	3.6
35-39	4.8	4.7	4.6	4.1	4.4	4.2	4.0	3.6	5.0	5.0	5.0	4.6
40-44	5.4	5.5	5.3	4.8	5.0	4.9	4.6	4.2	5.6	5.8	5.7	5.3
45-49	5.5	6.1	5.6	5.3	5.2	5.5	5.0	4.7	5.6	6.3	6.0	5.6

Source: Cho and Retherford (1981:4).

TABLE 9 Ever-Married Total Fertility Rates by Province, 1966-70 to 1976-80: Republic of Korea

Province	1966-70	1971-75	1976-80	Percent Decrease 1966-70 to 1976-80
Kyonggi Do	4,851	4,269	3,013	37.9
Kangwon Do	5,854	5,025	3,747	36.0
Chungchong Pukdo	5,838	5,006	3,643	37.6
Chungchong Namdo	5,753	5,224	3,731	35.1
Cholla Pukdo	6,374	5,647	3,971	37.7
Cholla Namdo	6,486	5,683	4,043	37.7
Kyongsang Pukdo	5,468	4,713	3,285	39.9
Kyongsang Namdo	5,638	4,891	3,473	38.4
Cheju Do	5,954	5,206	3,516	40.9

Source: Retherford et al. (1982).

children ever born figures show a great deal of inertia, since they embody, for older women, a good deal of high-fertility experience that occurred prior to the onset of the marital fertility decline in the 1960s.

LOCAL AREA FERTILITY DIFFERENTIALS

Table 9 shows recent estimates of ever married total fertility rates (EMTFRs) for all Korean provinces (excluding the metropolitan areas of Seoul and Pusan). In each of the three time periods shown, fertility differentials are apparent, with the lowest fertility province (Kyonggi Do) registering an EMTFR 25 percent below the highest fertility province (Cholla Namdo). These differentials appear to be related to the percentage of the population in each province living in rural areas (Retherford et al., 1982). The fertility declines over the ten-year period have been of the same magnitude in every province. It is possible to examine areal fertility trends in more detail by looking at county level data. Figure 3 shows the Coale index of marital fertility (I_g) for all counties in 1960 and Figure 4 shows the extent of the decline in I_g between 1960 and 1970. The lowest fertility in 1960 was found in the urban centers, particularly in the metropolitan areas of Seoul in the north and Pusan in the south. High fertility was clustered in counties situated away from the major urban centers and in the mountainous interior section of the country. Counties with an intermediate

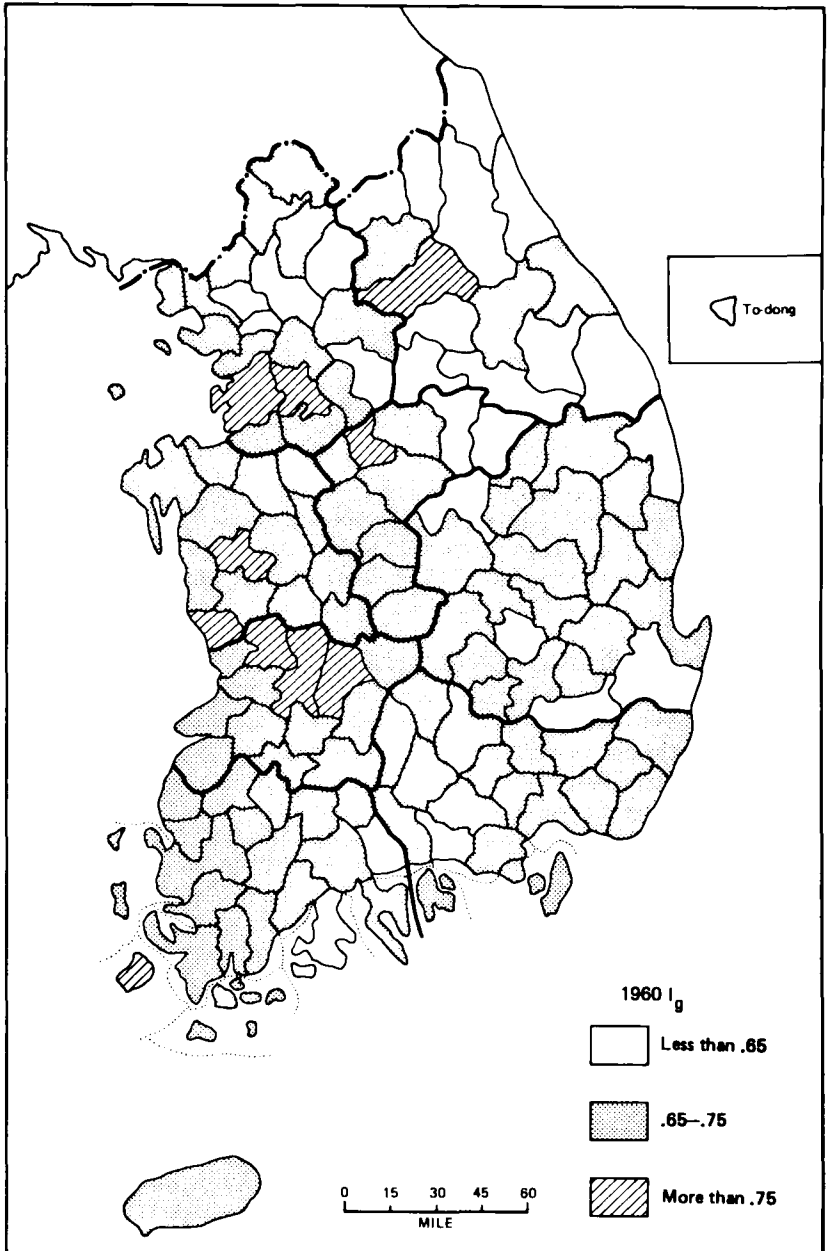


FIGURE 3 Coale's Index of Marital Fertility (I_g) for Counties, 1960: Republic of Korea

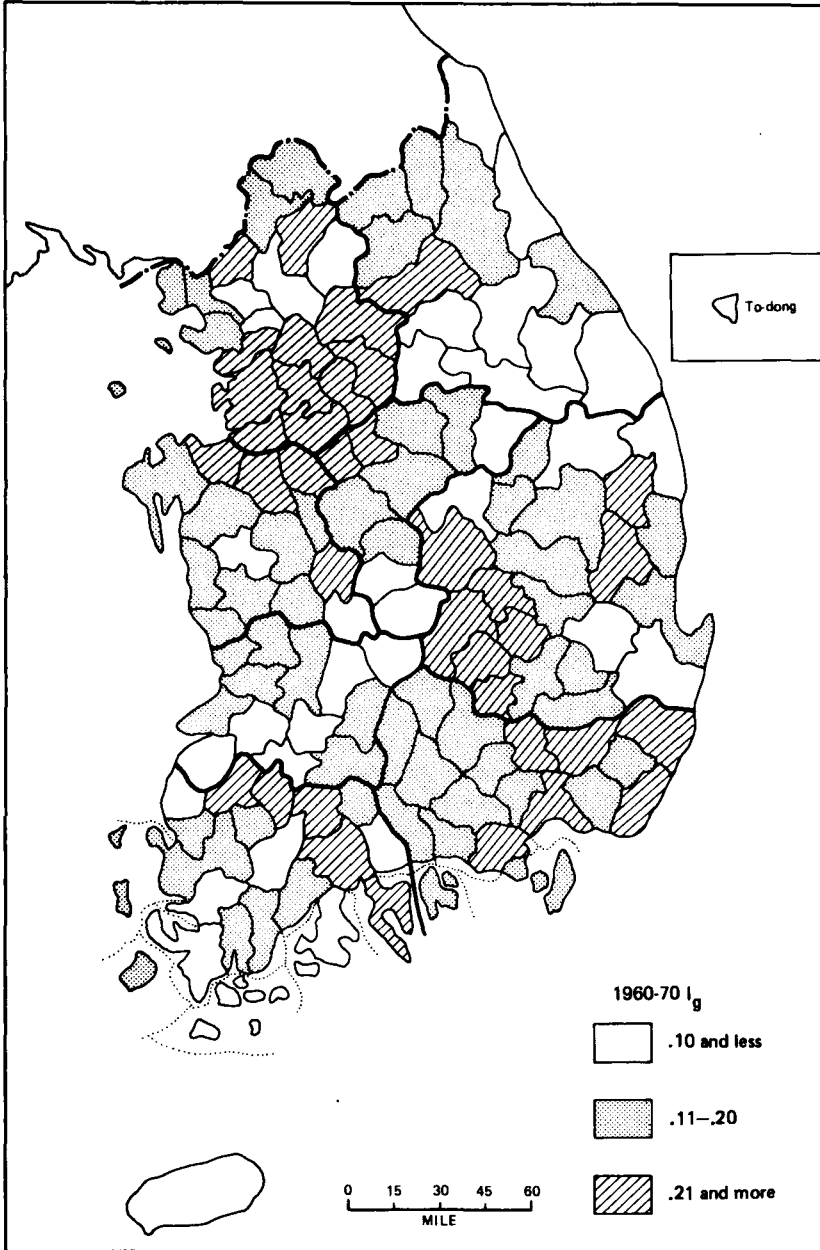


FIGURE 4 Decrease in Coale's Index of Marital Fertility (I_g) for Counties, 1960-70: Republic of Korea

level of fertility were found along the coast and near major transportation and communication lines (Retherford et al., 1982).

A majority of counties had a substantial reduction in fertility between 1960 and 1970, with the largest declines taking place in the major metropolitan areas of Seoul, Pusan, and Taegu. Nevertheless, every province had some areas that experienced little or no fertility decline. Counties with only slight fertility declines were largely in the least modernized part of the country along the east coast and in the rural areas of the less-developed southwestern provinces (Cho and Perry, 1979).

DEMOGRAPHIC ANALYSIS OF FERTILITY DECLINE

The import of the detailed tabulations of total fertility rates, age-specific birth rates, and age-specific proportions married presented above can be analyzed more concisely by decomposing the change in the TFR into its components. The particular decomposition methodology used here has been described earlier by Cho and Retherford (1981), Retherford and Ogawa (1978), and Retherford and Cho (1981).

Table 10 shows decompositions that break down the change in the TFR into two principal components: changes in population composition by marital status and changes in marital fertility. Each of these two principal components is in turn broken down by age. The total change in the TFR, as computed from Table 6, is shown in parentheses at the lower right of each of the four panels in the table. The percent contribution to change is given in the body of each panel, with 100 percent corresponding to the total change in TFR shown in parentheses.

It is evident from Table 10 that the decline in marital fertility after age 30 accounts for most of the change in the TFR. In fact, for 1966-70, a rise in marital fertility at ages below 30 acted to increase the TFR. The contribution of changes in proportions married was also substantial in the 1960s, but relatively small in 1970-75. Decreases in proportions married at ages below 30 acted to reduce the TFR, while increases in proportions married at ages above 30 acted in the opposite direction during all three periods. The preponderance of marital fertility contributions to the decline in the TFR is consistent with the observation

TABLE 10 Simple Percent Decomposition of the Change
in the Total Fertility Rate: Republic of Korea

Period and Age	Marital Status	Marital Fertility	Total
<u>1960-66</u>			
15-29	36.1	1.6	37.8
30-49	-3.1	65.4	62.2
Total	33.0	67.0	100.0 (-1.39)
<u>1966-70</u>			
15-29	49.2	-22.6	26.6
30-49	-10.7	84.1	73.4
Total	38.5	61.5	100.0 (-0.32)
<u>1970-75</u>			
15-29	11.9	16.4	28.3
30-49	-0.9	72.6	71.7
Total	11.0	89.0	100.0 (-1.13)
<u>1960-75</u>			
15-29	27.6	5.2	32.7
30-49	-3.2	70.5	67.3
Total	24.4	75.6	100.0 (-2.84)

Note: Because of rounding errors, rows and columns do not always add precisely to marginal totals. Numbers in parentheses in the lower right of each panel indicate change per woman in the TFR over the period indicated.

Source: Cho and Retherford (1981:43).

made above that age at marriage was already quite late by 1960 and increased only moderately after that time.

As explained in Retherford and Ogawa (1978), the decomposition method can be extended to more variables. Because the results depend on the order in which variables are introduced, some caution is necessary in interpreting the results. For Table 11, the variables entered, in order, were education, residence, marital status, and marital fertility. Education consists of three categories (none, some primary, more than primary); residence of two (urban and rural); and marital status of two (currently married and not currently married). As before, it was assumed that all births occur within marriage, an acceptable assumption in view of Korea's low rate of illegitimacy.

The education component represents the contribution to changes in the TFR from changes in the educational composition of the population; the residence component represents the contribution from changes in residence composition within education categories; the marital status component represents the contribution from changes in marital status composition within education-residence groups; and the fertility component represents the contribution from changes in education-residence-marital status-specific birth rates. Over the period 1960-66, during which the TRF fell substantially (by about 1.4 children per woman), changes in educational composition accounted for 28 percent of the change in the TFR, as shown in the first panel of Table 11. With education controlled, changes in residence composition did not account for much additional change. With both education and residence controlled, changes in marital status composition acted to increase the TFR by 7 percent, thus reversing the sign of the marital status contribution in Table 10 and braking the overall TFR decline. Declines in education-residence-marital status-specific fertility accounted for more than three-fourths, or 79 percent, of the TFR decline; this contribution was concentrated at ages above 30, where major declines in age-specific fertility occurred.

The pattern for 1966-70, shown in the second panel of Table 11, is somewhat similar to that for 1960-66, except that compositional contributions were proportionately more important relative to the fertility contribution; this is not surprising, since the TFR declined much less during the last four years than during the first six years of the decade. During 1966-70, changes in

TABLE 11 Elaborated Percent Decomposition of the Change in the Total Fertility Rate: Republic of Korea

Period and Age	Education	Residence	Marital Status	Marital Fertility	Total
<u>1960-66</u>					
15-29	14.1	1.1	-5.4	15.6	25.3
30-49	14.1	-0.8	-1.8	63.2	74.7
Total	28.1	0.3	-7.2	78.8	100.0 (-1.38)
<u>1966-70</u>					
15-29	31.1	10.1	-6.9	-21.5	12.8
30-49	39.5	-2.5	-13.9	64.1	87.1
Total	70.5	7.6	-20.8	42.7	100.0 (-0.34)
<u>1970-75</u>					
15-29	6.1	0.6	18.9	1.7	27.3
30-49	7.5	0.5	-0.7	65.5	72.7
Total	13.6	1.1	18.1	67.2	100.0 (-1.05)
<u>1960-75</u>					
15-29	11.2	2.3	4.5	6.7	24.5
30-49	12.9	-0.2	-3.3	65.9	75.5
Total	24.0	2.1	1.3	72.6	100.0 (-2.77)

Notes: Results are based on own-children fertility estimates derived from a 10-percent sample from the 1960 census, a 1-percent sample from the 1966 census, a 10-percent sample from the 1970 census, and a 5-percent sample from the 1975 census. Because of rounding errors, rows and columns do not always add precisely to marginal totals. Numbers in parentheses in the lower right of each panel indicate change per woman in the TFR over the period indicated. Base data for 1960 were adjusted for errors arising from the way the 1960 census question on age was asked.

Results in Tables 10 and 11 must be interpreted cautiously. The two tables are not strictly comparable, because they are based on slightly different input data. Moreover, the reader should be aware that the percent contributions in the decompositions are sensitive to data errors, especially when the total change in the TFR is small, as during 1966-70. This sensitivity is evident in the age marginals in the right-most column of Tables 10 and 11, which show substantial disagreement between the two tables; the disagreement stems from the above-mentioned differences in input data.

Source: Cho and Retherford (1981:44).

educational composition accounted for 71 percent of the change in the TFR. Again, with education controlled, changes in residence composition contributed little. Changes in marital status composition acted to increase the TFR by 21 percent, reflecting a continued increase in proportions married within education-residence groups. Declines in education-residence-marital status-specific fertility during this period accounted for less than half, or 43 percent, of the TFR decline.

The third panel of Table 11 shows a rather different picture for 1970-75. During this more recent period, the education contribution was only 14 percent. The residence contribution was again small. Changes in marital status composition within education-residence subgroups contributed to, rather than subtracted from, the overall TFR decline; indeed, the marital status contribution of 18 percent (note its concentration at ages below 30) exceeded the education contribution. The fertility contribution was about two-thirds of the total. The fourth panel shows a summary decomposition over the entire period 1960-75.

When residence is introduced before education, the contribution of changes in education composition and residence composition are about evenly split instead of concentrated on the education side; the other contributions are virtually unchanged. This alternative decomposition is discussed in more detail in Retherford and Cho (1981). In interpreting the decompositions in Tables 10 and 11, the reader should be aware that the percent contributions are sensitive to errors in the input data, especially when the total TFR change to be analyzed is small, as between 1966 and 1970; therefore, too much significance should not be attached to precise numerical values.

Earlier, in Table 7, it was shown that age-specific marital birth rates rose at younger ages and fell at older ages between 1960 and 1975. This finding is reflected in the decompositions in Tables 10 and 11. Analysis of child spacing data indicates that the rise in marital fertility at younger ages was associated with a substantial decline in the interval between marriage and first birth during the 1960s and the first half of the 1970s (Rindfuss et al., 1982). Consistent with these changes, estimates of birth rates by duration since first marriage indicate that birth rates rose dramatically at short durations and fell sharply at long durations over the same period (Cho and Retherford, 1978).

The above-mentioned child spacing data, obtained from several national fertility surveys in Korea, indicate that first, second, and third birth intervals decreased sharply during the latter half of the 1960s, and that higher birth intervals, which increased in the early 1960s and the early 1970s, tended to plateau during the late 1960s. These findings are consistent with the census-based fertility estimates in Table 6, which also indicate a slowdown in fertility decline during the late 1960s, and with the decompositions in Tables 10 and 11. This consistency indicates that the slowdown of fertility decline during the late 1960s was real and cannot be attributed to estimation error.

Why did marital fertility increase at younger ages and shorter marriage durations, and why did lower-order birth intervals get shorter? Rindfuss et al. (1982) have demonstrated that the answer is not improved fecundity associated with better nutrition, nor is it improved fecundity resulting from age at first marriage rising out of the teen years when fecundity is lower. A major reason appears to be, instead, that a rapidly increasing proportion of first births within marriage were conceived before marriage. This is evident from the upward trend in the proportion of first births that occur within the first six to nine months of marriage. The deteriorating fit of Coale-Trussell model fertility schedules to the Korean data at younger ages since 1965 (Coale et al., 1979) supports this finding. Rindfuss et al.'s findings suggest also that some of the explanation of shorter birth intervals after the first birth lies in shorter breastfeeding. They find, moreover, that birth intervals of a given order are shorter when most of the previous children have been girls rather than boys; thus boy preference may result in consciously weaning girls earlier in order to try to get a boy sooner, although it is also possible that some birth control is used for spacing purposes, and that less spacing control is used when there is a shortage of boys. It is perhaps more important that among the younger generation of couples in general, a greater emphasis is placed on contracting birth intervals to enable the couples, especially the wives, to pursue career options beyond childbearing and childrearing.

NATURAL FERTILITY

Although fecundity is high in Korea, natural fertility appears to be low relative to other countries. There are indications, however, that natural fertility has been increasing, possibly in response to a change in breastfeeding practices, discussed below. Since most demographic research in Korea deals with the post-1960 period, information on natural fertility is very rare. Only two sets of fertility estimates are known to exist for earlier time periods when it can be safely assumed that reproductive behavior was not affected by any deliberate attempt to control family size (Kwon, 1977; Y. Kim, 1966). Since these two sets of estimates are in close agreement, only Kwon's are shown in Table 12. The relatively constant TFR between 1925 and 1960 is a consequence of age-specific fertility rates that rapidly decreased at ages 15-19 (because of a rising age at marriage) and increased at ages 25-49 (see Figure 5). Age-specific marital fertility rates, on the other hand, increased steadily throughout this period, in spite of extreme political upheavals, social unrest, and economic deterioration; in the ten years following 1945-50, these rates increased nearly 20 percent.

More recent fertility data are confounded by differing degrees of contraceptive use, although some suggestive information is available from the 1965 Ichon survey, which is regarded as the only reliable data relevant to the analysis of natural fertility in Korea. The mean number of children ever born to currently married women in Ichon was 1.2 at ages 20-24, 2.7 at ages 25-29, 4.3 at ages 30-34, 5.9 at ages 35-39, and 6.7 at ages 40-44. These averages were somewhat higher than 1966 census data for middle-sized towns because the census was subject to a greater degree of underreporting. Although the proportion of women who reported ever using contraception was fairly high for women aged 25-39 in Ichon, most such use was both ineffective and of short duration. The first effective family planning method to be introduced into the area, the IUD, was not available until early 1965, when the survey was conducted; therefore, its use could not have had any effect on cumulative fertility at that time. It is reasonable to assume, then, that the level of fertility for women aged 30 and over is a fair reflection of natural fertility in that area. The average completed family size of fewer than seven live births is relatively low, especially considering the

TABLE 12 Selected Measures of Fertility, 1925-60: Korea

Measure	1925-30	1935-40	1945-50	1955-60
Crude Birth Rate	45	44	42	45
Total Fertility Rate	6.2	6.2	6.0	6.3
Age-Specific Fertility Rates				
15-19	189	158	96	38
20-24	324	323	305	308
25-29	269	281	292	335
30-34	214	225	234	270
35-39	153	161	167	194
40-44	74	80	83	96
45-49	14	15	15	18
Age-Specific Marital Fertility Rates^a				
15-19	276	283	300	357
20-24	340	350	369	440
25-29	283	292	308	367
30-34	230	237	250	298
35-39	171	176	185	221
40-44	90	93	98	117
45-49	18	19	20	24

Note: Data for 1925-40 are for all Korea; data for subsequent years are for South Korea only.

^aThe changes in age-specific marital fertility rates over time are assumed to be equal for all age groups.

Source: Kwon (1977:125-139 and 346-353).

customs of early and universal marriage and the stability of Korean marriages. No fertility survey conducted in Korea since the mid-1960s has found any woman reporting more than 14 pregnancies or 12 live births. Therefore, even at its extreme, Korean natural fertility appears to be relatively low.

FECUNDITY

Data on fecundity are often unreliable; however, according to all available data on both reported fecundity

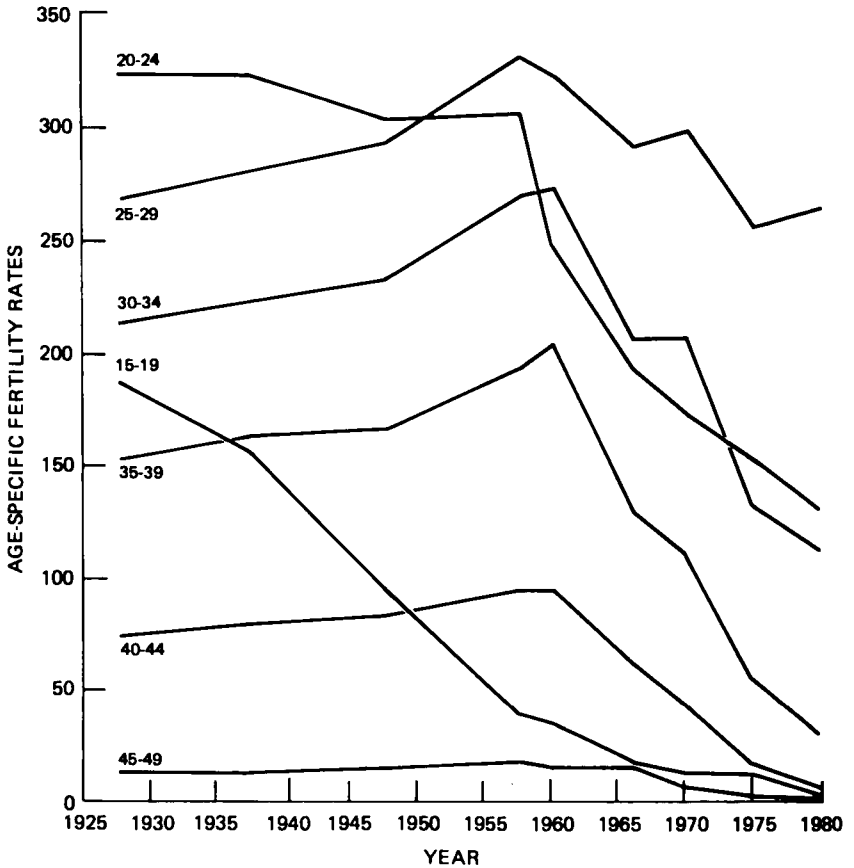


FIGURE 5 Age-Specific Fertility Rates, 1925-30 to 1980: Korea

impairments and the incidence of childlessness, the level of infecundity in Korea is quite low and has been decreasing over time in all age groups. Although early national surveys (1965-68) of married couples in which the wife was aged 15-44 found a nearly constant proportion of 86 to 88 percent who reported that they were fecund, this overall figure masks vast differences by age (see Table 13). In recent years, infecundity has rarely been reported by younger married women (under age 35). In 1976, the proportion reporting themselves to be fecund was still well above 90 percent in the 35-39 age

TABLE 13 Percentage of Couples Reported as Definitely Fecund, 1968-76: Republic of Korea

Age of Woman	Year of Survey						
	1968	1971 ^a	1971 ^b	1974 ^a	1974 ^b	1976 ^a	1976 ^b
25-29	97	99.0	98.9			99.4	99.3
30-34	92	96.8	96.2	98.0	97.8	98.8	98.5
35-39	83	93.0	87.5			94.5	93.7
40-44	66	55.3	48.7	84.6	83.9	85.1	84.2

^aThose sterilized for contraceptive purposes are treated as fecund.

^bThose sterilized for contraceptive purposes are proportionately distributed as fecund or sterile under the assumption that the proportion fecund among those who were sterilized is the same as among those who were not sterilized.

Sources: Koh and Smith (1970); Korean Institute for Family Planning (1973); B.T. Park et al. (1979); Korea, NBOS and KIFP (1977).

group and remained high, at about 85 percent, at ages 40-44 (although these reported figures are not likely to be a realistic appraisal of actual fecundity at these ages). Since the latter half of the 1960s, fecundity has increased in all age groups, but the gain has been most dramatic in the later reproductive ages.

This rapid increase in fecundity in the later reproductive ages has been attributed largely to a rising age at menopause, although this trend is not well documented. In the 1976 National Fertility and Family Planning Evaluation Survey, the proportion of women who had experienced menopause was reported to be 0.6 percent at ages 35-39, 3.5 percent at ages 40-44, and 27.9 percent at ages 45-49. At the other end of the spectrum, fecundity in the very early reproductive ages increased substantially between 1960 and 1980, as evidenced by the onset of menstruation at an earlier age in recent years.

The quality of the above data on fecundity impairments may be called into question for two reasons: (1) the self-reporting nature of the questions, and (2) the variable quality of the surveys in general. The basic results, however, can be corroborated with more reliable data on the incidence of childlessness in Korea. In less-developed countries, the incidence of childlessness can be used as a rough estimate of the incidence of

sterility, since voluntary childlessness is rare (Nag, 1980). According to the 1974 KNFS, "Involuntary childlessness, reflecting primary sterility, seems low in Korea: less than 3 percent of women in any duration of marriage category above 5 years have been without any children to date" (Korea, NBOS and KIFP, 1977:95). Furthermore, only 11 percent of women with no children reported any fecundity impairment. The 1974 survey indicated that only 1.3 percent of currently married women at the end of the childbearing years (ages 45-49) had not had a live birth, compared with 2.5 percent reported in the 1971 Fertility-Abortion Survey.

The proportion of couples with no live birth is even lower in the 35-44 age group, while it is somewhat higher at younger ages. In the earlier age groups, the probability of having married more recently is greater, so that many childless couples will eventually bear children. The older age groups are likely to include a larger proportion of remarried women with no children from their previous marriages; sterility of the husbands of remarried women is also likely to be high since the husbands are usually much older than their wives. Of course, it is possible that women without children are more likely to get divorced and not remarry (thereby artificially inflating the level of fecundity of currently married women), but reliable data on such a phenomenon are not available.

BREASTFEEDING

Breastfeeding is still nearly universal in Korea, although differentials in both its incidence and length are beginning to appear. Except when physiologically incapable, nearly all women still breastfeed their babies (B.T. Park et al., 1979). The 1974 KNFS found that 94 percent of women reported breastfeeding their babies in the last closed birth interval (Korea, NBOS and KIFP, 1977:127). These calculations were based on women with a last closed birth interval of at least 33 months. The mean length of breastfeeding was 19.2 months, with most breastfeeding for 1 to 2 years; only 16 percent breastfed for more than 2 years, and only 12 percent reported weaning their babies in less than 1 year.

Bottle feeding has now become popular among educated women in urban areas. The overall proportion breast-feeding is somewhat lower among city residents and better

educated women, especially younger women who have fewer than four children. These women are also more likely to breastfeed their children for shorter periods of time. Shorter durations of breastfeeding have resulted in shorter postpartum nonsusceptible periods, which, together with general health improvements, have led to substantially shorter interbirth intervals, at least for early parities.

Figure 6 shows the proportion of women who nursed their first child for various durations. Around 1950, almost half of these women were breastfeeding for more than 24 months. This proportion dropped to about one third of women in the early 1960s and to less than 20 percent by 1970. The proportion breastfeeding more than 18 months followed a similar pattern, falling by 43 percent between 1956 and 1970. Very little change can be detected, however, in the proportion breastfeeding more than 9 months, except for a slight decline since 1964. In the case of breastfeeding more than 1 year, there is a slightly greater decline in more recent years. Apparently, the abandonment of very long breastfeeding began quite some time ago, and recently, only a small proportion of women have continued very prolonged nursing, although the large majority of women continue to nurse their children for moderately long periods of 9 months or so.

Before 1960, when the practice of family planning and abortion was very limited, these changes in breastfeeding apparently contributed to a reduction in the frequency of long interbirth intervals, and consequently to the rise in marital fertility from 62 percent to nearly 90 percent of standard natural fertility, the average of ten schedules listed by Henry (Coale et al., 1979). The effect of breastfeeding on fertility in Korea is, however, still open to question. Between 1960 and 1970, Bongaarts (1978:123) noted that the total natural fertility rate increased as a result of a decline in lactation. However, this small increase was more than offset by substantial increases in the use of contraception and induced abortion and a decline in the proportions married. The KNFS data showed that women who wanted no more children breastfed significantly longer than women who wanted more children (Nemeth, 1981). The same survey found a strong positive association between the length of breastfeeding and the length of the last closed birth interval for women who did not use contraception (Korea, NBOS and KIFP, 1977); however, the

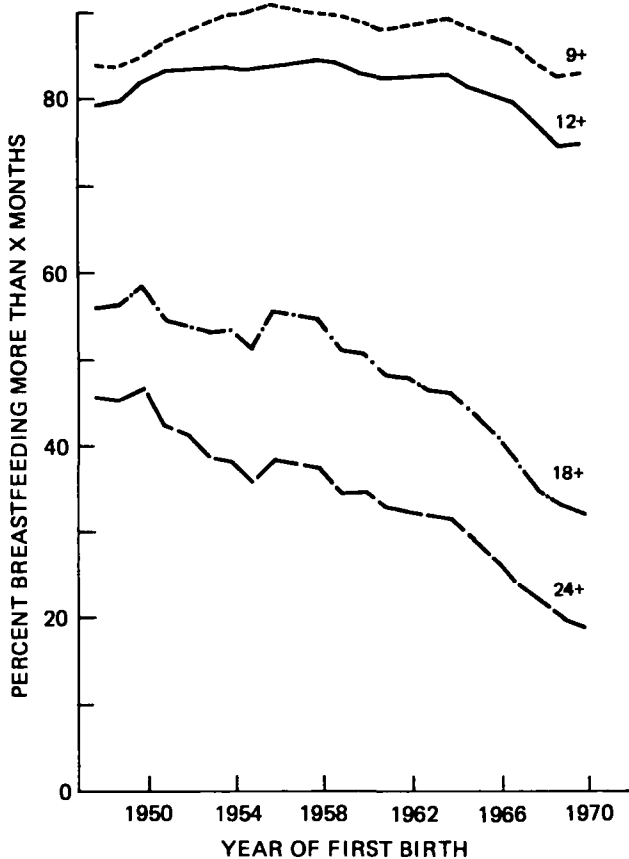


FIGURE 6 Percent of Women Who Breastfed for More Than 9, 12, 18, and 24 Months After First Birth, by Year of First Birth: Republic of Korea

Note: All values are five-year moving averages.

Source: Coale et al. (1979:20).

factors leading to that relationship are not entirely clear. Although there would appear to be some causal influence of breastfeeding on pregnancy, at least part of this influence is in the opposite direction since many women breastfeed their babies until they become

pregnant. In an earlier study in Ichon, the small differences between the average length of breastfeeding and the length of the interval between a birth and subsequent pregnancy for women in the older age groups were found to be due primarily to greater foetal wastage. Practically every woman in the Ichon survey area breastfed her children until the start of the next pregnancy, regardless of her age. In Korea today, if widespread breastfeeding practices have been one factor keeping fertility below its maximum level biologically, any changes in these practices will tend to work against further declines in fertility.

CHAPTER 3

SOCIOECONOMIC CONDITIONS AND FERTILITY

The previous two chapters dealt separately with rapidly changing economic and social conditions in Korea and the fertility transition. The present chapter examines the relationship between these changes. The methodology used encompasses several related approaches, including macro-, micro-, and community-level studies. The relatively large number of micro- and macro-level studies conducted in the last several years have shown clearly the impact of modernization and socioeconomic development on fertility levels in Korea: demand for children has been reduced by a decrease in their net utility (Cho et al., 1977); moreover, consumer aspirations have been raised by the variety of goods and recreational activities that are becoming available. This general rise in expectations, combined with a growing feeling of relative deprivation generated by rapid economic development and urbanization, has put growing pressure on large families (Kwon et al., 1975). While it is recognized that socioeconomic development in general can be instrumental in producing a fertility decline, it is more useful to examine the individual facets of that development. These include urbanization, declining infant and child mortality, rising educational attainment (especially for women) and educational aspirations for children, the changing status of women, increasing female labor force participation, a rise in consumer aspirations, and improved transportation and communications.

These various factors are discussed in relation to fertility in the subsections below. This is followed by a review of the mixed evidence on the fertility impact of community and ecological factors. Although some empirical studies have been unable to demonstrate this impact, the discussion below reviews a detailed anthropological study

and an areal analysis that found these factors to be of critical importance.

URBANIZATION AND MIGRATION

Since the Korean War, Korea has been transformed from a heavily rural, agricultural society to one in which the majority of the population lives in urban areas (see Chapter 1). Although this rapid rate of urbanization has proven to be an important factor in the country's fertility decline (Moon, 1972; Kwon et al., 1975; C.B. Park, 1978), it may prove to be less important in the future. Rural women currently have considerably higher fertility than urban women; however, rural fertility has declined at a slightly faster rate than urban fertility and remains higher only because it started at a much higher level. In 1960, the TFR for rural women was 6.6 compared with a rate of 4.5 among urban women (see Table 14); by 1975, urban total fertility had dropped by 39 percent to 2.8, while rural total fertility had declined by 44 percent to 3.7. However, these declines were not uniform over this period. From 1960 to 1966, total fertility in urban areas declined by 30 percent, compared with a decline of 17 percent in rural areas. During the next decade, however, rural fertility fell almost three times as rapidly as urban fertility (declining by 32.4 percent in rural areas and 11.8 percent in urban areas).

Although contraceptive use rates have been consistently higher in urban than in rural areas throughout the history of the Korean family planning program, the most recent national survey shows virtually no difference in use rates (Koh et al., 1980b). Differentials in ideal family size between urban and rural areas have remained nearly constant for at least the last fifteen years (Stoeckel, 1975; Cheong et al., 1979). In recent surveys, rural women in Korea say they want about one half child more on average than women in large cities, although they actually expect to have about one child more on the average (Cheong et al., 1979; B.T. Park et al., 1979).

Rapid urbanization affects both those born in cities and those who move to cities from rural areas, but the effect on the migrant can be particularly profound. In describing urbanism as a way of life, Wirth (1957) observed that it is characterized by secularization, secondary-group relationships, voluntary association, increased segmentation of roles, and poorly defined

TABLE 14 Own-Children Estimates of Total Fertility Rates per Woman, 1960, 1966, 1970, and 1975: Republic of Korea

Residence and Year	Education			Total
	None	Primary	More than Primary	
<u>Whole Country</u>				
1960	6.72	5.45	3.96	5.98
1966	5.79	4.56	2.92	4.60
1970	5.17	4.38	3.49	4.26
1975	3.80	3.51	2.77	3.21
<u>Urban</u>				
1960	5.27	4.51	3.53	4.50
1966	3.72	3.38	2.58	3.13
1970	3.84	3.80	3.36	3.58
1975	3.08	3.05	2.59	2.76
<u>Rural</u>				
1960	7.00	6.15	5.24	6.60
1966	6.23	5.30	3.99	5.50
1970	5.57	4.79	4.02	4.81
1975	4.10	3.85	3.35	3.72

Source: Retherford and Cho (1981).

social norms. For Korea, Moon (1972) noted that urban life is accompanied by a decline in primary relationships and traditional kinship values because the migrant is removed from the traditional milieu of the agricultural population. While it is generally true that migrants have a smaller number of children than nonmigrants,¹ it is not clear to what extent this can be attributed to urban adaptation. Ro and Ahn (1977) feel that urban exposure does tend to reduce fertility, but that migrants also possess certain attitudes and motivations that predispose them to having fewer children. B.S. Lee et

al. (1981) constructed an autoregressive fertility model to control for selectivity of migrants and to test for adaptation. They found that migrants from rural areas to Seoul would have 2.9 fewer children than comparable rural stayers, those moving to other large cities would have 1.9 fewer children, and those moving to small cities would have 1.2 fewer children. Concluding that adaptation to urban life is significant in explaining the reduced fertility of rural-urban migrants, the authors estimated that rural-urban migration was responsible for averting 2.6 million births during the decade 1965-75.

SOCIOECONOMIC STATUS

Although Cochrane (1979) has found that the traditional negative relationship between education and fertility is not as universal as previously thought, increases in education in Korea are without doubt one of the major causes of fertility decline (N.H. Cho et al., 1977; Moon, 1972). Fertility has been found to be negatively related to education (particularly wife's education) in both rural and urban areas and for all time periods for which data are available (S. Hong, 1978; Kwon et al., 1975; Cho and Retherford, 1981). This relationship generally holds for a variety of fertility-related variables (number of children ever born, TFR, ideal family size, and nonuse of contraception and abortion), even after controls are introduced for numerous other sociodemographic variables. However, this inverse relationship between education and fertility has shown some tendency to weaken over time, and there has been considerable convergence in contraceptive behavior between educational groups (Korea, NBOS and KIFP, 1977; Cho and Retherford, 1981). Own-children fertility estimates for 1960-1975 (Table 14) show that rapid fertility decline in both urban and rural areas started in all educational groups simultaneously. These estimates also confirm both the inverse relationship between education and fertility throughout this period and the convergence between educational groups over time.

This pattern is consistent with the transitional hypothesis of differential fertility (Cho et al., 1970:282-285), which states that a population in the early stage of its demographic transition begins to exhibit a sharp inverse relationship between fertility and educational attainment (as well as other components of social status). This relationship is the result of a

transformation of the traditional value of children as productive units to their new value as consumer goods. Since individuals of higher socioeconomic status are the first to adopt new life styles, their fertility begins to decline earlier than that of lower socioeconomic groups.

The KNFS reported that the TFR dropped monotonically from 4.8 for women with no schooling to 2.5 for women with a college education (Korea, NBOS and KIFP, 1977:91). Much of the educational differential, however, was due to differences in the proportion of women married at ages under 25. This is evidenced by the fact that the total marital fertility rate varied between only 5.3 and 4.4. Mason and Phananimai (1981) used an elaborate economic-demographic model to examine marital fertility and found, quite surprisingly, that more education leads to higher marital fertility. Part of the explanation for this puzzling relationship is that more highly educated women of a given age have a shorter duration of marriage than those with less education. However, a significant positive relationship persisted even after controlling for marital duration. The authors do caution that women with higher education will not necessarily have higher completed fertility since they tend to marry later.

Although some of the impact of education on fertility is direct, there are also undoubtedly indirect effects through such intervening variables as educational aspirations for children, media exposure, female employment, breastfeeding, infant mortality, occupation, and income. Predictably, income does not appear to have much net effect on fertility (Mason and Phananimai, 1981). Couples with higher income do express less dependence on their children for old age support, but the overall effect of income tends to wash out when other factors are introduced.

Occupation appears to have some impact on fertility, although its effect is also attenuated when controls are introduced. The KNFS found that, within education groups, women whose husbands worked in agriculture had the highest level of fertility (Korea, NBOS and KIFP, 1977). The same study found that professionals and managers were distinctive for their high level of contraceptive use, while farmers and manual laborers were distinctive for their low level of use. These findings would suggest that as Korea's economy continues its industrial transformation and Korean men and women shift to jobs with higher occupational prestige, continuing fertility decline will be favored.

FEMALE EMPLOYMENT

In the last two decades, there has been considerable improvement in the status of women in Korea, accompanied by an increasing propensity of women to join the labor force. Korean women also have a longer average work week (53.5 hours) than women in any other country in the world (according to a recent report of the International Labor Organization cited in the Honolulu Star-Bulletin, January 22, 1982). In a 1976 national survey, B.T. Park et al. (1979) found that the percentage of married women who had been employed before marriage decreased monotonically with age, from 44.5 percent for women under age 25 to 9.3 percent for women aged 45-49. Moreover, about 23 percent of women were working at the time of the survey (30 percent in large cities and 18 percent in rural areas). Although female labor force participation has been rising, it is not clear whether women's work per se has been partly responsible for Korea's fertility decline.

The KNFS found no clear pattern of association between women's work experience and either current contraceptive use or cumulative fertility (Korea, NBOS and KIFP, 1977; Koo, 1979). Data from the 1970 census indicate that employed women had higher fertility than nonemployed women in every age group (United Nations, ESCAP, 1975). However, in a more restricted sample of women aged 26-30 in 1970, Ro (1979) found that women's economic activity had the largest (negative) impact on the number of children ever born of any variable included in a multivariate model. In fact, women who were regularly employed had an average of .57 fewer children than those who were economically inactive, after controlling for education, literacy, migration status, occupation of household head, industry, and urban-rural residence.

As might be expected, the type of job seems to be more important in determining fertility than economic activity alone. Certain jobs are more compatible with raising children than others. Although S. Hong (1978) did not find much of a fertility differential between working and nonworking women, she found that women whose jobs were incompatible with housekeeping had much lower fertility than those whose jobs were compatible. Low fertility has also been found to be characteristic of women in professional and technical occupations and women with high opportunity costs of earnings (United Nations, ESCAP, 1975; S. Hong, 1979).

The mere act of working, therefore, seems unlikely to cause reduced fertility in a country where many jobs are entirely compatible with childrearing and alternatives to caring for children during the workday are readily available. However, the increasing nucleation of the family, the continuing evolution in the structure of job opportunities, and the changing status of women may all combine to facilitate a further reduction in fertility rates in the future.

INFANT AND CHILD MORTALITY

One measure of socioeconomic conditions in a country is the state of health of the population in general, and the level of mortality in particular. Since the Korean War, mortality rates have declined precipitously in Korea: the infant mortality rate declined from 100 to 122 in 1955-60 to 37 in 1978-79 (Korea, Bureau of Statistics, Economic Planning Board, 1980; Cho and Feeney, 1976). In the past, infant mortality appears to have had a substantial influence on fertility rates, although there are almost no empirical studies to support this link (S. Hong, 1978); both changing attitudes toward family size and the country's overall fertility decline have been attributed to the decline in infant and child mortality (Kwon and Lee, 1976; N.H. Cho et al., 1977).

However, mortality has now reached such a low level that it is evidently no longer a major factor in child-bearing decisions. In 1976, N.H. Cho et al. (1977) reported that only 13.1 percent of married women mentioned worry about child mortality as a disadvantage of a small family. In the same year, the Value of Children study found that not a single respondent (out of more than 2,000) spontaneously mentioned mortality risks as a reason why it is undesirable to have only one child (Bulatao, 1979:87). C.B. Park et al. (1979:564) estimate that at this point in time, the complete elimination of infant mortality would lead to only a one point reduction in the crude birth rate. The authors conclude that "the effect of infant mortality may be of micro-level concern but may not have much impact on the macro-level."

The above discussion indicates that changing socioeconomic conditions in Korea can take much of the credit for precipitating the recent fertility decline. Rapid urbanization, increasing educational attainment (particularly for women), the increasing availability to women of

jobs that are incompatible with childrearing, and the drastic decline in infant and child mortality have all contributed to the fertility transition. While the first three factors may be expected to put continuing pressure on the birth rate in the future, infant mortality is now so low that further reductions are unlikely to have much impact on fertility.

COMMUNITY AND ECOLOGICAL FACTORS

There has been little research on the relationship between community factors and fertility behavior in Korea. Only four major studies are known to be available so far. The results of these studies seem to depend on the type of data and methodology used. Least successful in demonstrating an effect of community factors on fertility are studies that add community-level variables to individual records on survey data files. Aggregate-level analyses relating average areal fertility levels to other areal characteristics have met with some success. The type of research that has shown the strongest results is an anthropological study primarily based on field observation.

Cho and Perry (1979) conducted an areal analysis of the determinants of fertility in 140 rural counties in Korea. They found that both socioeconomic factors and IUD acceptance have a negative impact on marital fertility among rural women aged 30-44, but the effect of socioeconomic status is not discernible among younger women. Their study also demonstrated that IUD acceptance rates have a greater negative impact on fertility in areas with relatively low socioeconomic levels.

Using 1974 KNFS data, S.B. Lee et al. (1978b) examined the extent to which community differences in family planning practices are explained by community characteristics. They found that the differences were moderately associated with the aggregate socioeconomic levels of each village expressed as averages of the socioeconomic standings of individuals. The most important aggregate variables were almost identical to the variables that explained differences among individual couples. The relationship of community structure and environmental factors to the level of family planning practices in a community was found to be insignificant. S. Hong (1976:179), investigating the association between community development and the desired family size of

individuals in 53 villages in southeastern Korea, arrived at a similar conclusion,² but in her dismay at the results she stated the following:

From my own personal experience, I am certain that the social environment affects individual behavior. In the research . . . , however, few effects are discernible. Perhaps the methodological and measurement suggestions just made (in the dissertation) will lead to improved studies of the community effects on individual behavior.

Such an improvement could be made by the adoption of a holistic approach based on intensive and prolonged field observation. The anthropological research of Han and others on "social, cultural, and ecological factors affecting population processes in Korea," which was carried out during a one-and-a-half-year period between 1975 and 1976 (Han and Kwon, 1981), is typical of this approach and provides many insights into the relationships between community factors and reproductive behavior. For comparative purposes, the research selected as its observation sites four ecologically and socioculturally distinctive communities in different parts of the country: a rice-farming village, a mountainous farming village, a fishing village, and a middle-sized town. The most important finding of this research is that ecological factors such as the type of subsistence economy, the pattern of labor participation, the seasonality of labor demand, and community mortality and health conditions are critical determinants of the marriage institution, the family system, and family-building behavior and attitudes, as described in more detail below.³ The same kinds of relationships between socioeconomic background and individual fertility are confirmed as in other KAP (knowledge of, attitudes toward, and practice of contraception) types of surveys conducted in Korea; however, unlike other studies, this research discloses many striking features of community-level fertility differences and behavior.

When different types of communities are compared, no significant negative relationship is observed between the level of fertility and the average age at marriage. In the fishing village, the level of fertility was relatively low, while marriage took place at a comparatively young age; the reverse was true in the rice-farming village. Similar dissonance was seen between fertility behavior and attitudes: women in the fishing village revealed

very high family-size ideals, while their actual fertility was relatively low.

The pattern of seasonal variations in the level of births differed from one type of community to another. The mode of mate selection and meaning of marriage were distinctive in each type of community, even in the traditional setting. It is well documented that in traditional Korea, marriage was mostly arranged regardless of the opinion of those being married; though the consent of children was assumed, arranged marriage was both the preferred and dominant mode of mate selection, even in the early 1960s (J.S. Choi, 1966:438; Lee and Kwon, 1968). However, free marriage was common in the fishing village, which was most underdeveloped. Even in the case of an arranged marriage, the process of mate selection was entirely different in the farming and fishing villages: in the latter, there was hardly any significant family or community involvement in mate selection (unpublished research notes and Chun, 1977a). Marriage patterns in the town community were similar to those in the farming areas.

Patterns of fertility-related behavior therefore vary among the survey communities. The discussion that follows examines how different ecological or environmental factors have brought about these differentials.

Type of Subsistence Economy

As is obvious, fishing constitutes the major industry in the fishing village. In addition, upland farming and sea-plant cultivation form a substantial part of the subsistence economy of the area. Fishing is exclusively assigned to adult males, while women work in upland farming; during the winter, the whole family, including children, is engaged in sea-plant cultivation. The farming and mountainous villages rely entirely on rice cultivation and dry-field farming; economically, the two villages are quite similar. The people in the town community, who are no better off economically than farmers, are mostly employed in the service sector.

The relatively low level of fertility and large family-size ideal in the fishing village can be explained primarily by the type of subsistence economy. Traditional sea fishing on a small boat involves considerable risk. The close relationship between high mortality and large desired family size is already well established. More-

over, high mortality among adult males frequently causes the discontinuation of marriage for women. In addition, because boat fishing itself results in separation of the couple, abstinence is frequently observed during the fishing season. These factors have contributed to the comparatively low fertility in the community. Similarly, the high fertility in the farming villages can partly be explained by the low risk of dying involved in agriculture, the concurrent stability of marriage, and the infrequent practice of voluntary abstinence.

The high mortality of adult men of reproductive age appears to have profound implications for the marriage and family system of the fishing village. There is little social resistance against the remarriage of women in the area. The survey reveals that about 90 percent of currently married women are in their second or third marriage; the equivalent proportions in the other communities are less than 10 percent. In the fishing village, family life is highly unstable: concubinage, desertion of spouses by either side, and separation of the couple are very common. In contrast, the rice-farming village, which is also a kin (or clan) village, manifests very strong family solidarity and stability. The type of family system seems to be associated directly with the degree of family involvement in mate selection; so-called "free marriage" is found mostly in the fishing village and least in the farming village.

The major meanings or functions of marriage also vary in accordance with the ecological setting of an area. The primary concerns of married people in the farming village closely agree with the alleged traditional functions postulated by the neo-Confucian ideology, which emphasizes the succession of family name, family unity, filial piety, and so forth. These are of only secondary importance in the fishing village, where dependence in old age and personal security are primary concerns. In the fishing village, the right and duty of ancestor worship can even be traded among those who have no kinship relations at all (Chun, 1977a).

Thus it seems clear that the type of subsistence economy is closely linked with the level of fertility, the meaning and practice of marriage, and the family system of an area. However, the differences in desired family size cannot be properly explained in the same way; for this purpose, labor demand and the importance of child labor in the community economic system must be examined.

Demand for Labor

In the town community, the economic value of children is minimal, while in the fishing village, it is of much greater importance. In general, the economic value of children is partly determined by the extent of women's labor force participation in the survey communities: the value is greater when the need for women's labor force participation increases. This observation is generally valid where a traditional industry or economic system is dominant; however, the reverse may be true in a modern system where the major goal of women's economic activity is self-realization or ability and career development.

The research discloses that the proportion of women in any kind of economic activity is very minor in the town community. In contrast, in the fishing village, farming is almost exclusively assigned to women. Men rarely work on the farm or help with household jobs, even if they stay home idle, and children usually prepare supper for the family and clean the house; in other words, women's prescribed economic activity can only be properly performed if children are present. In the farming village, women's work outside the house is largely confined to dry-field farming, and rice farming is the duty of men under ordinary circumstances.⁴ In these villages, children have little economic value, but also do not constitute much of an economic burden. Older sisters and brothers usually take care of younger ones, and if not, the community provides the necessary care.

Another important observation is that in the fishing village, sea farming during the winter, which is then the most important income source, is extremely labor-intensive; the amount of farming is determined, year by year, by the number of household members available. Children who have migrated to the city and are marginally employed there often return to the village to help their family during this season. No evidence of circular migration for work is seen in the other communities (Chun, 1977a).

Such demand for both women's and children's labor in the traditional setting may explain to a significant extent community differences in desired family size. The town community exhibits both the smallest family-size ideal and the lowest demand for children's or women's labor for the household economy, with the fishing village at the other end of the spectrum. In fact, the range of differences in desired family size among the villages is

greater than that among age or major socioeconomic groups, suggesting the importance of community or ecological factors in attitudes toward family building.

The Work Cycle

In the traditional economic sector, labor intensity, the work cycle, and the division of labor generally depend upon the types and sizes of subsistence economies. In the farming villages mentioned above, intensive labor input is needed from May to July and in September and October, while the period from November through February is a slack season. In the fishing village, labor input (particularly of women) is intense in May and June in connection with upland farming, and during the winter months from November to February because of off-shore sea-plant cultivation (or sea farming). The latter is most labor-intensive, and in this season all available hands except the very young and the very old are put to work from early in the morning until late at night. Similar, though slightly less, labor intensity is observed in farming during the busy seasons. On the other hand, no such distinctive work cycle is apparent in the town community.

The research reveals that the work cycle accounts for the seasonality of births and marriages, and points to problems in the family planning delivery system in the survey communities. Chun's analysis (1977b) shows that there are marked monthly differences in the frequency of births in the farming and fishing villages, and that these patterns coincide with the work cycle (that is, pregnancy takes place most frequently in the slack season, while the rate falls abruptly during the work season).⁵ For example, the frequency of pregnancies peaks in September and October in the fishing village, and in December and January in the farming community. Similar, but more pronounced, patterns of seasonal variation are observed for marriages. According to 1974 KNFS data, about 57 percent of marriages for women aged 20-49 who grew up in rural areas are reported to have occurred during the three months from November to January; marriages during the four months from June through September account for only 5.7 percent. The corresponding figures for women who had grown up in the city are 39 percent and 14 percent, respectively.

These patterns have significant implications for family planning field services. Adequate delivery of these services is extremely difficult during the busy season. Field workers, who rotate regularly through each village, often cannot see any eligible women when they visit during the day because these women do not return home until late at night. Since the busy season extends to about six months a year, the rural work cycle should not be overlooked when family planning strategies are formulated.

Other Ecological Factors

Han and others include geographical location, housing, and the perception of community health conditions among the major ecological factors. The research found that, although the national family planning program was implemented all over the country, accessibility still constitutes a main factor in the availability of family planning services and information. For example, it was reported that field workers visited the fishing village only once a year even though they were supposed to inspect each village at least once a month. Furthermore, because of a lack of convenient transportation, compounded by geographical location, the villagers rarely visited any family planning clinic in the nearby town. A similar problem, though much less acute, was found in the mountainous village. Although a lack of contact with family planning workers was also prevalent in the town community, women there could readily obtain information and services through numerous drug stores and clinics. Accessibility was also found to be closely related to the community's general reaction to certain types of family planning methods, including sterilization: suspicion of a method was greater when accessibility was limited.

Housing conditions were identified as one of the key factors explaining the relatively low level of fertility in the town community. In that area, about one third of the total households live in rented rooms, and the number of children has many immediate implications for everyday living: it is difficult for a large family to rent a room, and couples with many children are usually under psychological stress because they are afraid their children will disturb the landlord. This is more or less a common feature of life for the urban lower class; it is manifested in slightly higher fertility than that of the

urban middle and upper classes, but much lower fertility than that of rural villagers. Whereas concern about children's education is a major force limiting family size among the middle class, housing-related problems appear to exert a major pressure for low fertility among the urban lower class.

According to the anthropological type of study discussed above, individuals' perceptions of health and mortality conditions seem to mirror more the community or collective experience than their own personal history. For instance, the lower- and middle-class town community members generally have very similar perceptions of surrounding health and mortality conditions. Perceptions of the lower-class town residents are also far brighter than those of the farming villagers, who are economically better off. Undoubtedly, these perceptions are one of the important determinants of desired family size, and thus are related to motivation to regulate family size, not only in the survey communities but also in Korea as a whole.

Ecological Versus Sociocultural Factors

As discussed below in Chapter 5, various aspects of the Korean family system are closely associated with individual reproductive behavior, but the direction of these impacts is neither unidimensional nor unilinear. In the traditional family system, two mutually exclusive forces co-exist, one supporting high and the other low fertility. However, the significance of each force is not constant, but dependent upon the particular social milieu. A similar argument can be made about traditional cultural factors, though most of these are embedded in the family system. According to the findings of Han and others, observed differentials in both actual fertility and desired family size among the four communities are not substantially explained by sociocultural factors such as traditionalism, familism, and community solidarity. The ecological factors can have important implications for the community's fertility level, actual or desired. For example, the level of fertility in a community is influenced by whether the community is urban or rural and by the degree to which it is oriented toward industry, farming, or fishing. At the same time, within each community setting, sociocultural factors have behavioral implications at the individual or couple level.

Apart from the anthropological type of community study done by Han and others, most community-level analyses of fertility-related behavior have failed, as mentioned earlier, to produce any distinctive fertility differences by ecological or cultural factors. However, the persistent marked fertility differences between urban and rural areas and between large and small cities provide other indirect evidence of the importance of community and ecological factors. Confining analysis to agricultural communities, as is the case with most community-level studies done so far in Korea, seems very unlikely to lead to an accurate assessment of the ecological factors influencing fertility, since rural Korean farming villages display considerable homogeneity in their ecological and environmental characteristics, when contrasted with cities, fishing villages, mining communities, or farming villages undergoing rapid transition due to geographic proximity to expanding cities with industrial orientations. (Part of the lack of finding distinctive fertility differences by ecological or cultural factors in Korean studies, may be due to the choice of communities with little ecological distinctiveness.)

NOTES

- 1 Migrants moving from one rural area to another (rural-rural migrants) have fewer children than rural residents in general in all age groups, and migrants to Seoul from other cities have fewer children than residents of Seoul. Rural migrants to Seoul have even fewer children than Seoul residents below age 30, but not at older ages (Ro and Ahn, 1977).
- 2 The lack of a substantial effect of the community level variables in this study may be partly due to the limitations of the sampling design. The 53 villages included in the study are geographically adjacent to one another and are all in the same valley. Different results may have been obtained with a more dispersed and less well-integrated sample of villages.
- 3 Parts of the discussion below are extracted from Han and Kwon (1981); others are derived from the original, unpublished data source, if not stated otherwise.

- 4 Women's participation in rice farming has increased rapidly in the 1970s, due mainly to a severe shortage of male labor resulting from heavy rural-to-urban migration among the young.
- 5 Reliable reporting of the date of birth and the month of marriage according to the lunar calendar can easily be secured in Korea.

CHAPTER 4

MARRIAGE, THE FAMILY, AND FERTILITY

Demographic change in Korea cannot be fully understood unless it is placed in the context of marital institutions and the family system. The present chapter first examines the fertility implications of changing patterns of marital structure in Korea. The discussion then proceeds to the social norms regulating Korean marital behavior, and finally to the process of family building and organization.

PROPORTIONS CURRENTLY MARRIED

Marriage influences the reproductive behavior of individuals and determines a society's fertility level in many ways. It determines what proportion of women ultimately engage in reproduction, when reproduction starts, and how long on average a woman is exposed to childbearing. Universality of marriage, age at marriage, widowhood, divorce practices, and remarriage patterns are the major direct determinants of the marital structure of a society; however, all of these converge into the proportion of currently married individuals.

The proportion of currently married women is significant in understanding the level and structure of fertility in Korea since most births occur within wedlock. In traditional Korea, illegitimate children¹ were rare due to the custom of extremely early marriage and social approval of concubinage (D.-H. Kim, 1980:607-608). In addition, profound social and legal sanctions are known to have been exercised against illegitimate children. Recently, fertility surveys have documented an increasing proportion of premarital pregnancies, but most of these were reported as ending in live births within marriage.

According to S.B. Lee et al. (1978a), premarital pregnancy accounted for 26 percent of the total first pregnancies for 1974-76, while the premarital birth rate among first births was 6.2 percent; the corresponding figures for 1960-61 are 10.1 percent and 2.1 percent, respectively. If the premarital birth rate is calculated as a proportion of total births, it drops to about 2 percent during the years 1974-76. It should be noted that these rates do not account for births to unwed mothers, though this number is thought to be negligible. One more important observation is that the date of marriage reported in the survey frequently disagrees with the actual time at which the couple entered into a stable union: sometimes the wedding ceremony is performed after the marital union has begun. It has also been widely observed recently in Korea that many premarital pregnancies take place after the engagement. In other cases, marriage is forced because of premarital pregnancy to secure the legitimacy of the birth; if this is not successful, an abortion tends to result. Based on these observations, it may be concluded that illegitimate or premarital births are of very limited demographic significance, and that even in contemporary Korea, marriage primarily conditions reproductive patterns and behavior.

Table 15 shows that the proportion of currently married women of reproductive age has declined substantially since 1960. As would be expected, the changing pattern differs greatly according to age: the proportion decreased in the age groups below 30 and increased at ages 30 and above. The proportional decrease at younger ages is mostly explained by the rising age at marriage, and the increase at older ages by the decreasing risk of mortality. Given the relatively high marital fertility in the younger age groups and the rapidly declining marital fertility in older groups due mainly to wider use of effective fertility control methods, this changing proportion of currently married women has far greater meaning for community fertility levels at younger ages than at later ages.

NUPTIALITY AND FERTILITY²

As discussed in Chapter 2, a sharp downturn in fertility levels took place in the early 1960s. From 1925 to 1960, there was little variation in the TFR except during World

TABLE 15 Marital Status Distribution of Women by Age Group, 1935-75: Korea

Age	1935	1955	1960	1966	1970	1975
<u>Proportions Single</u>						
15-19	37.4	85.2	92.8	96.1	97.1	97.4
20-24	3.2	20.8	33.6	51.6	57.2	62.5
25-29	0.4	3.0	2.9	7.7	9.7	11.8
30-34	0.2	0.7	0.4	1.0	1.4	2.1
35-39	0.1	0.3	0.2	0.3	0.7	0.7
40-44	0.1	0.3	0.1	0.1	0.2	0.3
45-49	0.1	0.2	0.1	0.1	0.1	0.2
15-49	8.1	23.2	25.7	29.3	31.5	36.0
<u>Proportions Currently Married</u>						
15-19	61.6	14.3	7.0	3.8	2.8	2.6
20-24	94.7	75.1	65.0	47.7	42.3	37.2
25-29	96.6	89.7	93.3	89.8	88.4	86.8
30-34	95.1	89.8	91.9	93.9	94.6	94.4
35-39	91.9	87.0	88.4	89.2	92.0	93.2
40-44	86.3	81.4	82.4	82.7	84.8	88.2
45-49	78.6	73.6	76.3	75.2	76.8	79.1
15-49	85.6	67.8	67.4	64.2	62.9	59.5
<u>Proportions Currently Divorced</u>						
15-19	0.7	0.3	0.1	0.0	0.0	0.0
20-24	1.0	2.1	0.8	0.4	0.3	0.1
25-29	0.8	2.5	1.6	1.3	1.1	0.7
30-34	0.7	2.2	1.7	1.6	1.6	1.4
35-39	0.6	1.8	1.4	1.6	1.8	1.5
40-44	0.6	1.6	1.1	1.2	1.7	1.4
45-49	0.6	1.4	0.8	0.8	1.2	1.1
15-49	0.7	1.6	1.0	0.9	1.0	0.7
<u>Proportions Currently Widowed</u>						
15-19	0.3	0.3	0.1	0.0	0.0	0.0
20-24	1.0	2.1	0.5	0.3	0.2	0.1
25-29	2.2	4.8	2.1	1.2	0.9	0.7
30-34	4.1	7.4	6.0	3.5	2.4	2.1
35-39	7.3	10.9	10.1	8.9	5.9	4.6
40-44	13.0	16.8	16.5	16.0	13.4	10.1
45-49	20.7	24.8	22.8	23.9	21.8	19.6
15-49	5.5	7.3	5.8	5.6	4.6	3.8

Note: Data for 1935 are for all Korea; data for subsequent years are for South Korea only.

Sources: Kwon (1977, Appendix Table C); Korean Institute for Family Planning (1978, Section F).

War II and the Korean War, when fertility was somewhat reduced. Since fertility is a function of both the proportion married and marital fertility, the following discussion examines the relationship between these two components of overall fertility during the last few decades.

Coale (1965) has developed three indices that succinctly express the relationship between overall fertility and its components: I_f , an index of overall fertility; I_g , an index of marital fertility; and I_m , an index of the proportion currently married. These indices are defined such that when the number of illegitimate births is negligible (as in Korea), $I_f = (I_m)(I_g)$. Each index is confined to the range from zero (no childbearing, or no one married) to one (maximal fertility rates, or all women aged 15-50 currently married).

Table 16 presents values of the three indices for various dates from 1925-75 and for the urban and rural populations. The absence of a large difference between overall fertility in 1930 and 1960 is the consequence of opposing trends in the proportion married among women of childbearing ages, on the one hand, and marital fertility, on the other: the proportion married (I_m) showed an uninterrupted decline after 1930; marital fertility (I_g) was substantially higher in 1960 than in 1930. The constant trend in overall fertility until 1960 was therefore the result of counterbalancing opposite trends in I_m and I_g .

The trends in overall fertility and its two constituent components are shown graphically in Figure 7. Table 16 and Figure 7 demonstrate that I_g increased by almost 25 percent from 1930 to 1960, but fell by 23 percent over the entire period from 1930 to 1975; I_m , on the other hand, fell by 33 percent during the same 45-year period. Therefore, the decrease in proportions married contributed substantially more to the decline in overall fertility than did the decrease in marital fertility. The decline in I_m from 1930 to 1975 accounts for 60 percent of the decline in I_f . After 1960, however, I_g fell by 39 percent and I_m by 16 percent; hence 74 percent of the decline in I_f is attributable to the decline in marital fertility.³

Both the proportion married and marital fertility were consistently lower in urban than in rural areas. The extent of the decline in I_m was about the same in both areas. Urban I_g increased slightly more from 1930 to

TABLE 16 Indices of Overall Fertility (I_f), Marital Fertility (I_g), and Proportion Married (I_m), by Urban and Rural Area, 1925-75: Korea

Year	Total			Urban			Rural		
	I_m	I_f	I_g	I_m	I_f	I_g	I_m	I_f	I_g
1925a	.879	.488	.556	.789	.390	.496	.883	.501	.568
1930a	.893	.484	.538	.744	.387	.500	.900	.499	.554
1935a	.883	.488	.540	.754	.381	.505	.893	.506	.567
1940a	.856	.491	.544	--	--	--	--	--	--
1955b	.715	.427	.598	.650	.371	.571	.738	.448	.606
1960	.704	.472	.670	.626	.362	.578	.740	.521	.705
1966	.658	.369	.561	.576	.258	.448	.710	.440	.620
1970	.632	.339	.536	.576	.286	.496	.686	.390	.569
1975c	.594	.245	.412	.555	.215	.387	.645	.284	.440

^aFigures for 1925-55 encompass all Korea; figures for subsequent years are for South Korea only. Trial calculations for that period show negligible differences in the indexes for the whole country and for the area currently within the Republic of Korea.

^bBased on average number of births, 1954-56.

^cBirths for 1975 assume a correction factor for the population aged 0-1 in the 1975 census equal to the average correction factor for the 0-1 age group in the 1966 and 1970 censuses.

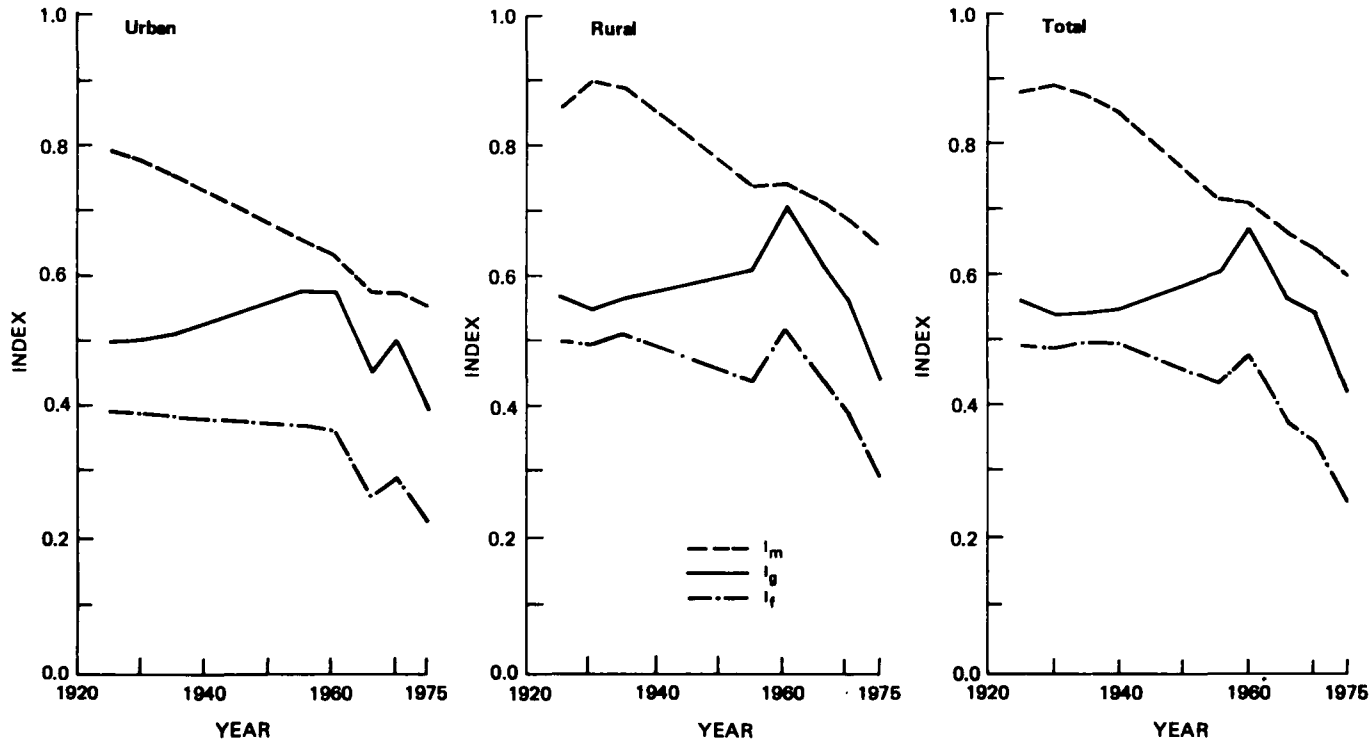
Source: Coale et al. (1979).

1955 than rural I_g , but between 1955 and 1960, urban I_g remained almost constant, while rural I_g increased by 16 percent. From 1960 to 1975, the proportionate decline in rural I_g was greater than that in urban I_g ; that is, the fertility decline among the rural population was catching up with that among the urban population. The proportionate reductions in I_f , I_m , and I_g were greater for the total population than for either the rural or the urban population; this is partly due to heavy rural-urban migration in the 1960s and 1970s and resulting changes in the proportion of the population living in urban and rural areas.

PROPORTIONS DIVORCED AND WIDOWED

According to a series of censuses up to 1975, the proportion of currently divorced women in Korea has consistently been very low (less than 2 percent) and manifests no sign of significant change in any age group. However, this cannot be interpreted as indicating little recent change in divorce practices, since the proportion currently divorced is a combined effect of the

FIGURE 7 Indices of Overall Fertility (I_f), Marital Fertility (I_g), and Proportion Married (I_m), by Urban and Rural Area, 1925-75



proportion ever divorced and the rate of remarriage among the divorced.

In Korea, at least during the last two decades, the idea has prevailed that the number of divorces is increasing year by year. However, no supporting evidence is available. On the contrary, a resurvey of a middle-sized town discloses that the proportion of ever-divorced women among the ever married declined slightly during the period between 1965 and 1974: the proportion for ages 20-44 is reported as 3.1 percent in 1965 and 2.6 percent in 1974 (H.-Y. Lee, 1965:2-3; PDSC, 1975:1-2). Though not convincing, this suggests that the traditional stability of the Korean family still remains almost intact. However, it is interesting to note, as discussed later in this chapter, that the pattern of divorce has undergone a significant change since about 1960.

Little information is available for the nation as a whole on the timing and age pattern of marriage dissolution due to divorce. The 1974 KNFS is probably the only source of such data.⁴ According to these data, the proportion of women who ended their first marriage by divorce is highest in the age group 40-44 (about 5 percent), and divorce occurs most frequently in a relatively early stage of reproduction, at an average age of 25-27 in the case of women (see Tables 17 and 18).

In contrast to divorce trends, both the proportion of widows and the probability of being widowed have been reduced greatly since 1955 in response to the rapidly declining risk of mortality regardless of age. As a result, the stability of marriage has strengthened substantially: the 1974 KNFS reveals that 95 percent of the ever-married women in the age group 30-34 are in their first marriage; the corresponding figure is 90 percent for the entire reproductive span, age 15-49, and about 80 percent for women age 40-44.

UNIVERSALITY OF MARRIAGE

As noted earlier, in traditional Korea, every man or woman was supposed to marry and set up a family. This universality of marriage was supported by the early age at marriage, and by the practice of completely arranged marriage; the strongest support, however, came from social custom and the family norm. Both legally and conventionally, there was a marked discrimination between

TABLE 17 Proportions of Ever-Married Women by Status of First Marriage, 1974: Republic of Korea

Age	Total	Continuing	Dissolved by		
			Divorce	Widowhood	Separation
15-19	100.0	100.0	0.0	0.0	0.0
20-24	100.0	99.1	0.5	0.2	0.2
25-29	100.0	98.1	0.9	0.5	0.5
30-34	100.0	94.7	3.0	1.7	0.6
35-39	100.0	89.5	4.3	5.5	0.7
40-44	100.0	80.7	5.0	13.5	0.8
45-49	100.0	70.5	4.9	22.2	2.4
15-49	100.0	89.7	3.1	6.4	0.8

Source: 1974 KNFS data tape.

married and single persons: the status of "adult" was often assigned to married persons only, regardless of their age; the style of hair was different according to marital status; in ordinary conversation, "elderly single men" were subject to severe ridicule; single girls beyond marriageable age were frequently treated as "helpless"; and the status of women was only determined by and within marriage (H.-Y. Lee, 1978:758-759). Such constraints, though weakened, still persist. Even today, permanent celibacy is rarely considered acceptable for ordinary people; single persons past marriageable age are derided by family members, friends, and colleagues.

The marital composition derived from a series of censuses reflects the intensity of this pressure to marry. In 1935, the proportion of single women was reported as 0.1 percent at ages 35-39. It has increased only slightly since then, reaching 0.2 percent at ages 45-49 in 1975 (see Table 15). The proportion of single (never married) women is expected to increase somewhat even in late reproductive ages in the years ahead because of a marriage squeeze resulting from the Korean War during 1950-53;⁵ however, the ideas behind the universal marriage system are very unlikely to attenuate. In addition to this social atmosphere, institutional supports for the unmarried are not likely to evolve in the near future, given the apparent direction of the newly emerging social welfare development policy. The government has consistently emphasized the role of family and community in helping the needy, including the

TABLE 18 Mean Age of Women at Dissolution of First Marriage by Reason, 1974: Republic of Korea

Age	Divorced	Widowed
15-19	--	--
20-24	--	--
25-29	25.3*	--
30-34	25.1	27.4*
35-39	26.7	30.2
40-44	25.4	31.1
45-49	26.9	32.7
15-49	26.0	32.5

--: Fewer than 10 cases.

*: Between 10 and 19 cases.

Source: Calculated from the 1974 KNFS data tape.

elderly, and government subsidies are directed mostly to the family rather than to individuals. Thus, marriage still provides lifetime security for Koreans, particularly for women whose opportunity for economic activity is greatly limited by social custom.

Also supporting the universality of marriage is the widespread concept of "adequate timing of marriage" (hon-ki), a social norm applied particularly to girls. Although this concept has changed considerably since the 1920s, it has consistently played an important role in regulating the marriage behavior of Koreans. The range of ideal timing is narrowly defined, and is much narrower for girls than for boys. One begins to feel the pressure for marriage upon reaching this ideal age, although this pressure may have eased slightly during recent years as a result of the continuous postponement of the age at marriage.

TIMING OF MARRIAGE

Even though the traditional universal marriage system persists, the timing of marriage has changed substantially in Korea since the mid-1920s. According to a census estimate, the singulate mean age at first marriage was 21.1 for men and 16.6 for women in 1925, as is seen from Table 19. It rose to 27.4 and 23.7 for men and women respectively in 1975. The postponement of marriage has been an ongoing process during the last half century.

The prevalence of early marriage in traditional Korea is well documented. According to Kyung-kug tae-jun, a fifteenth-century Korean law book, the lower limit of the age at marriage was set at 15 for men and 14 for women; in exceptional cases, marriage could be allowed at age 12. The limit was raised to 20 for men and 16 for women in 1895. Interestingly enough, both laws state explicitly that the prevailing early marriage is a bad custom, and numerous historical documents condemn the early marriage custom as frequently impairing the health of the couple (D.-H. Kim, 1980:446-447; K.-K. Lee, 1977:229-231). In fertility terms, infecundity appears to have been caused often at early ages by early marriage, resulting in turn in a relatively low level of marital fertility in traditional Korea.

The initial rise in age at marriage in the mid-1920s coincided with the growing migration of Koreans to Japan and Manchuria, which was in turn a direct response to the rapidly deteriorating agricultural economy resulting from Japan's colonial policy of exploiting Korean agriculture to the maximum (Kwon, 1977:163-166). Single, male laborers were dominant in migration overseas during the colonial period (1910-45). The contribution of such a

TABLE 19 Singulate Mean Age at First Marriage by Sex, 1925-75: Korea

Sex	1925	1935	1940	1955	1960	1966	1970	1975
Male	21.1	21.4	21.8	24.7	25.4	26.6	27.2	27.4
Female	16.6	17.1	17.8	20.5	21.5	22.9	23.3	23.7

Notes: Calculation based on census data using Hajnal's method. Data for 1925-40 are for all Korea; data for subsequent years are for South Korea only.

Sources: Kwon et al. (1975); Lee and Han (1978).

population movement to marriage postponement for both men and women can easily be postulated.

The most drastic change in the timing of marriage is observed between 1940 and 1955, as is clear from Table 19. This period was marked by a large volume of migration in and out of Korea, and by social disturbance resulting from a series of political upheavals including World War II, the liberation of Korea from Japanese colonialism, the partitioning of Korea into two separate political entities, and the Korean War. These two factors, migration and social unrest, are regarded as largely responsible for the erosion in the custom of early marriage.

During the first decade of the post-liberation era, 1945-55, Korea experienced an unprecedentedly large influx of population into its territory. The number of persons who entered South Korea during 1945-49, consisting mostly of repatriates from overseas and refugees from North Korea, totaled 2.5 million, accounting for 69 percent of the total population growth during the period, or 12 percent of the total population at the 1949 census. During the Korean War years, 1950-53, about 650,000 North Koreans are estimated to have taken refuge in the South (Kwon, 1977). Most of the migrants at that time resettled where they did not have any solid base for living, largely in urban areas. Such circumstances would be incompatible with the practice of early marriage.

Traditional early marriage is only possible when a minimum amount of economic support from the family of orientation is secured. Otherwise, marriage is likely to be postponed until the boy is old enough to participate fully in the labor force. During the late colonial years and the first decade of the post-liberation era, the economy deteriorated severely, and a majority of the population suffered from extreme poverty; in a word, economic conditions did not favor early marriage. Undoubtedly the sudden, unexpected start of the Korean War also caused a significant delay in marriage for persons of marriageable age at that time.

The rise in age at marriage has continued since the war, with the mean age at marriage reaching one of the world's highest levels in the 1970s. However, the pace of increase has slowed recently, and no further substantial postponement in the timing of marriage is expected. The most crucial determinants of change in age at marriage during the post-Korean War period are thought to be, as in the past, increasing economic constraints on

individuals, massive population movements from villages to cities, and the resultant rapid urbanization.

Rapid educational growth and expansion and compulsory military conscription of males for three years are also known to have played an important role in the postponement of marriage. Increased educational opportunities for females (Chang, 1980:88) have had both direct and indirect implications for age at marriage. In Korea, high school education usually ends at age 18 and college education at age 22. Marriage is rarely thought proper for students, even in college. As such, the growing proportion of women in higher education causes some postponement of marriage. Perhaps more important, however, is the indirect impact of education. As the proportion of women in tertiary education increased, marriage at a relatively late age became accepted as proper, and the ideal age at marriage moved up to 22 to 25, not only for college graduates, but for other women as well. High educational attainment is also observed to have motivated women to work for a few years before marriage.

The universal military conscription of men affects the age at marriage for both men and women because of the prevailing idea that the ideal age difference between husband and wife is three to five years. The census shows that the difference between men and women in singulate mean age at first marriage has been around four years since 1925. With the process of urbanization and modernization since the early 1960s, the patterns and conditions of mate selection have also undergone a change. Unlike in the past, a secure job or economic self-reliance has become the necessary condition for a man to get married in urban areas, and this is achieved in most cases some time after discharge from the military service.

Until recently, the movement of young, single individuals was the dominant pattern of rural-to-urban migration in Korea, and migration was heavy during the two decades 1960-80. Since migrants usually have problems adjusting to a new occupation, as well as to the urban environment and life style--though these are not as acute as in other countries (Green, 1977:268-300)--the massive migration since 1960 should have contributed greatly to the rising age at marriage for men and consequently for women.

The impact of age at marriage upon the level of fertility can be examined on two levels: the timing of marriage itself is the primary determinant of an individual's total reproductive period, and the change in age at

marriage may influence the general level of fecundity. In Korea, these two levels appear to have opposite fertility implications. The continuously rising age at marriage has contributed significantly to reducing the general fertility level by shortening the average reproductive span, as mentioned above. On the other hand, many studies have found that marital fertility in crucial reproductive ages increases with a rise in age at marriage. Based on the 1974 KNFS data, Moon (1980) observed that late marriage is associated with earlier births or shorter birth intervals in parities 1 to 3. Donaldson and Nichols's analysis (1978), based on a series of national fertility and family planning surveys of Korea, also shows that the tempo of family building has recently been much faster when the average age at marriage has been higher.

As noted above, historical documents suggest that traditional early marriage, frequently occurring at age 13 to 14, often meant that the bride was too young to be fecund. Therefore, the first child was not born for a few years in many cases. Evidently, the higher marital fertility of women in late marriage is also partly explained by the association between age at marriage and premarital pregnancy rates (S.B. Lee et al., 1978a). Even after allowing for such factors, the relationship between age at marriage and marital fertility is sustained to a significant degree. However, this impact on the level of births is felt far less than is the length of exposure to reproductive behavior (or marriage duration). In short, the postponement of marriage has persistently contributed to a net lowering of the societal fertility level. The 1974 KNFS shows a marked difference in the average number of children ever born between different marriage groups of the same birth cohort through all stages of reproduction. Also, multivariate analyses of fertility in Korea invariably disclose that age at marriage is a strong predictor of fertility (M.-I. Kim et al., 1974a; Shin et al., 1981). The explanatory power is greater at younger ages and largely vanishes in late reproductive ages (Kwon, 1982); this effect can be partly attributed to the faster tempo of family building among the later-married women, as discussed above.

Another important aspect of age at marriage, particularly in relation to fertility behavior, is its socio-economic differentials. Late marriage is closely associated with high education, urban residence,

nonfarm/nonmanual occupations, and a modern value orientation (M.-I. Kim et al., 1974b; Y.-H. Lee, 1977). This pattern is almost identical to that of fertility, suggesting that the former is an important determinant of the latter, particularly in the earlier reproductive span, which is less affected by the deliberate attempt of individuals to control family size (M.-I. Kim, et al., 1974b; Shin et al., 1981).

DIVORCE NORMS AND PRACTICES

Traditional divorce norms manifest a marked distinction between men and women in Korea. Women were not allowed by law and social custom to divorce (or desert) their husbands. However, men could divorce their wives by law if one of the following seven prescribed conditions were met: showing a lack of filial piety to parents-in-law, failing to produce a son, being unfaithful, being jealous, having a bad disease, being talkative, or having a thieving habit. At the same time, Yi dynasty law postulated three exceptional conditions: a woman should not be divorced or deserted if she had completed two years of mourning for the parents-in-law, if she had married in poverty and achieved prosperity, or if she had no place to go.

However, it is generally known that conditions for divorce were associated with much stronger normative social sanctions than the conditions for not being divorced. In practice, women, especially if middle- and lower-class, could be deserted at any time if the husband or his parents felt it necessary. Nevertheless, divorce or desertion was strongly suppressed by familism, kinship, and community organizations. The major mechanisms for this were emphasis on family solidarity, concern with the "face" (or "dignity") of the family, and care for the children's future reputation, particularly in arranging their marriages. Consequently, despite frequent and sometimes very intense conflicts between a wife and her husband or between a wife and her mother-in-law, these were usually taken for granted and treated as within-family affairs, and the dissolution of marriage was therefore generally avoided. The acceptance of concubinage by society is also seen as an important institutional norm preventing marriage dissolution by divorce or desertion. It may be more proper to consider traditional Korean norms on desertion of the wife not as a force facili-

tating marital instability, but as a social mechanism for maintaining family peace. Numerous historical Yi dynasty documents confirm the conjecture that the practice of divorce was very restricted, and that the strong stability of the family was therefore sustained throughout the society (D.-H. Kim, 1980; K.-K. Lee, 1977).

Some conceptual clarification is needed for an analysis of divorce trends. In the Yi dynasty, the legal concept of divorce existed; however, legal divorce was very rare and practiced only in the upper yangban (ruling) class. Among commoners, divorce took the form of desertion, or forced ejection of a wife from the husband's residence. Unlike the vital registration system, censuses and surveys in Korea have collected information on this customary form of divorce. In other words, trends in legal divorce are revealed by vital registration, while those in customary divorce (though also including legal divorce) are revealed by the census and fertility surveys. Data from vital registration show a growing rate of legal divorce since 1960, though still a low level (Korea, NBOS, 1980a); on the other hand, various survey data reveal no increasing trend in customary divorce. This suggests that the custom of deserting a wife and social support for this custom have waned significantly with the process of modernization since 1960.

REMARRIAGE OF DIVORCED AND WIDOWED PERSONS

As is the case for divorce, the traditional norms on remarriage differed for men and women. The law, which incorporated the principles of neo-Confucianism, did not allow a woman to marry more than once in any circumstances, while divorced or widowed men were socially encouraged to remarry.

Though socially discouraged, remarriage of women was not uncommon in the past. It was often arranged even by the husband's family if a widow was very young and had no children at all. Various surveys around 1960 support this observation: a large majority of respondents (more than 90 percent) approved of the remarriage of women if there were no child, while the opposite was true if there were children (W.K. Koh et al., 1963:149-155; H.-J. Lee, 1959:59). Similar observations could be expected for more recent times. Concerning the prevalence of remarriage and its changing patterns over time, however, information is very limited. The 1974 KNFS, which may provide the

only useful information for the nation as a whole, shows the rate of remarriage for women aged 15-49 among women ever widowed or divorced to be 40 percent. However, as is seen from Table 20, the prevalence of remarriage differs greatly between women widowed and those divorced. The rate for the former is less than 30 percent, while the rate for the latter is nearly 75 percent in the entire reproductive age span. No equivalent national data on remarriage trends over time are available; however, two consecutive surveys in the same middle-sized town disclosed no increase in the rate of remarriage between 1965 and 1974 (H.-J. Lee, 1965; PDSC, 1975). The rate of remarriage for divorced women increases greatly with an increase in age, whereas for widowed women, there is a slightly declining tendency in the rate of remarriage at age 35 and above. This pattern simply reflects traditional remarriage norms. The customary law in traditional Korea prescribes that if a woman leaves the husband's family either for divorce or for remarriage, she has to give up every right in the family, including the claim for children. Accordingly, when a woman divorces or remarries, all ties, formal or informal, between the mother and children in the previous marriage are ordinarily severed. If there is no one in the family of the previous husband to take care of the children,

TABLE 20 Rate of Remarriage (in percent) by Reason, for Women Whose First Marriage was Dissolved, 1974: Republic of Korea

Age	Divorced	Widowed	Separated	Total
15-19	--	--	--	--
20-24	--	--	--	--
25-29	36.4*	--	--	21.7
30-34	68.8	27.8*	--	50.0
35-39	70.5	30.4	--	41.9
40-44	79.1	28.2	--	40.7
45-49	87.9	27.5	18.8*	36.9
15-49	73.5	27.7	16.3	40.5

--: Fewer than 10 cases in the denominator.

*: Between 10 and 19 cases in the denominator.

Source: 1974 KNFS data tape.

they are often adopted by the stepfather if the mother remarries; however, it is considered disgraceful for a child to change the surname due to remarriage of the mother.

Thus, divorce is discouraged when the couple has children, and is frequently related to having no offspring. Also, because divorce for women means a change of residence and the severing of ties with her children, remarriage is the only practical way to obtain social security for most divorced women. In contrast, a widowed woman is supposed to live with the previous husband's family, and if there are children, she is obliged to raise them. This fact partly explains why the rate of remarriage among widowed women drops in the later reproductive ages. In short, the existence of children has been the major consideration in the remarriage of women in Korea.

There is extensive social discrimination against remarried women in the Korean culture. As a result, remarriage generally results in a lowering of social status for women. Second husbands are almost invariably of a much lower social status and usually much older than first husbands. There is also discrimination against offspring from second or third marriages. For men, no change in social status results from remarriage. Even young single women are often willing to marry divorced men. If there are children, particularly sons, from a man's previous marriage, no children or very few are preferred in the second marriage.

It might be expected that these traditional remarriage norms, which still prevail widely, would have a fertility-lowering effect at the societal level. This effect could be assumed furthermore to have increased with the growing availability of fertility regulation since the early 1960s. However, the detailed implications of these norms for fertility are not simple to determine. The following is a list of coarsely postulated relationships between traditional remarriage patterns and fertility:

Norms have discouraged the remarriage of divorcees and widows, and thus contributed to some reduction in the cohort of women exposed to reproduction.

Social discrimination toward remarried women and their children constitutes a force motivating family-size limitation in subsequent marriages.

The strong discouragement of remarriage for women with children curtails reproductive behavior among women with high fertility for some time after the first marriage is dissolved.

THE FAMILY AND FERTILITY

In Korea, human reproduction can only be properly understood in the context of family building. Accordingly, studies of fertility have rarely failed to mention the importance of the family in accounting for the fertility behavior of Koreans. However, little research has been carried out primarily from such a perspective. Although some studies examine the impact upon fertility levels of a few selected family-structure variables, these are so crudely organized, or so fragmentary, that no general conclusions can be drawn. Furthermore, no single ad hoc effort has been made in Korea to identify the linkage between the family and fertility.

Most of these analyses are confined to the relationship between cumulative fertility and the current family composition of individual women, fertility differences according to the order of a husband among his brothers, and the association between the actual family size of the couple's parents and the couple's own family size (e.g., Chung et al., 1972; H.-Y. Lee, 1971; Kwon, 1982). The underlying hypotheses are self-evident: (a) the ideal of a nuclear family promotes low fertility attitudes; (b) because of pressure from relatives to continue the family line, the only son and the first son would tend to have higher fertility; and (c) the fertility behavior of individuals is socialized in the family of orientation. It is immediately apparent that the testing of these hypotheses requires very refined and sophisticated analyses, and that fertility differentials by the couple's family background would have only marginal significance for the overall relationship between fertility and the family. Most studies have revealed little association between the family background of individuals and the level of fertility. This may be interpreted as indicating that the family has little to do with the fertility behavior of Koreans; alternatively, it might be regarded as pointing to the inadequacy of the research methods and assumptions. To understand the relationship between fertility and the family, a holistic approach seems to be essential. The overall family-

building process, rather than cumulative fertility at a certain point in time, must become the focal point of attention. Moreover, instead of treating family-related factors as independent of fertility behavior, the two should be viewed as interconnected.

Bearing this in mind, the discussion below will try to hypothesize how Korean family structure was associated with fertility behavior in the past, and how this association has changed during the demographic transition and modernization. Because of the extreme paucity of empirical studies from such a perspective, this discussion will rely largely on speculation and will therefore often be hypothetical.

THE FAMILY SYSTEM

The family constitutes the most basic structure within Korean society. In traditional settings, the family was one of the major determinants of the social status of individuals, governed human interactions and relationships, provided a rationale for individual behavior, and thus shaped the basic value orientation of Koreans, which is termed "familism."

During the later half of the Yi dynasty, or the eighteenth through nineteenth centuries, the structure and ideals of the Korean family were organized strictly on the basis of male dominance; in short, the traditional Korean family was patriarchal, patrilineal, and patrilocal. This system naturally gave rise to male supremacy, not only in family life, but also in every aspect of social life, as well as to a preference for sons over daughters. Sex discrimination was so strong and pervasive that women were not allowed to mix with men on any occasion, private or public, and a wife was obliged to obey only the husband without any argument. All family property belonged absolutely to men. As noted above, divorce and remarriage norms were completely different for men and women. The family had a hierarchical rather than egalitarian structure: conjugal ties were neglected, and parent-child relationships occupied the pivotal position in the family and kinship network (J.-S. Choi, 1966:364-419); even among sons, there was discrimination according to birth order, as discussed below.

The ideal traditional Korean family was large and multi-generational in composition. However, such an extended family rarely dominated actual family life,

mostly because of poor economic conditions and high mortality (Lee and Kwon, 1968). Moreover, the principles of family building in traditional Korea did not strongly encourage the formation of, and living in, extended families. The extended family in Korea was organized as a "stem family", which was composed of parents and one of the sons' families of procreation, usually the first son's. Other sons were supposed to live with their parents for a couple of years after marriage, and then leave to build a separate household; if a son other than the first married after the death of the parents, particularly the father, he was compelled by custom to start a separate family from the beginning. In other words, the idea of a fraternal joint family was alien to Korean society. As a result, the dominant type of family actually implemented in traditional Korea was the nuclear family (Lee and Kwon, 1968).

One interesting question is whether the large family ideal is an inherent and indispensable component of the Korean family system. It is often argued that son preference, which constitutes the crucial part of the system, is responsible for the traditionally large family ideal, thus suggesting an essential connection between the family system and family-size values. However, various surveys on fertility and family planning in Korea disclose no congruence between shifts in son preference and desired family size. During the last two decades, a continuous rapid decline in desired family size has taken place, while son preference has waned little (Kwon and Lee, 1976; Kwon, 1976). This observation can be partly interpreted as indicating that the large family ideal is not primarily an outcome of the traditional family system; rather, that ideal seems to have been formed as a response to conditions of high mortality at the time, a necessity for the survival of both the family lineage and the society itself. If so, a greatly reduced mortality risk would result in a change in family size values without much normative constraint.

On the other hand, by examining the functions of children in the family, particularly those of sons, it may be seen that a large family is not a necessity, even in the traditional setting. The major obligations of children in the Korean family are the succession of the family name, ancestor worship, support of parents in old age, and the provision of labor. Among these, the first three are regarded as the responsibility of the first son. In short, one son is enough to fulfill most of the

functions of sons, and many are not required. In fact, mainly because of extremely poor economic conditions, many children were often thought to be a source of trouble, not pleasure. Again, compensating for such obligations, the eldest son was endowed with most of the family rights: he became head of the family in the father's absence and inherited the largest share of the family property, including residential quarters. In view of such meanings of children in the family, the traditional Korean family system cannot necessarily be thought to support a large family ideal and thus high fertility.

In traditional Korea, the meaning of the first son was almost absolute, and his status in the family was not comparable with that of any of his brothers and sisters. Accordingly, a preference scale among children can be hypothesized: the first son, other sons, and daughters. Most studies on gender preference and its implications for fertility in Korea have been based on the assumption that son preference would lead to higher fertility than is desired by the average family. However, as mentioned above, since strong son preference has persisted, despite the rapid tempo of fertility decline and the drastic decline in desired family size, this assumption is not supported. Kwon's research (1976) also demonstrates that son preference may not be a barrier to the decline of desired family size and thus to the reduction of actual fertility, and may well be compatible with a low-fertility ideal. Son preference undoubtedly influences the fertility behavior of individuals, but the direction of that influence is not unitary: for women who reach their desired family size without a son, it has a high-fertility implication; those who have enough sons but have not arrived at their desired family size may stop bearing children before reaching that desired number, so that son preference may have a low-fertility implication because of the relative unimportance of daughters. On an aggregate level, the counter forces may partially balance off. Consequently, there may be little impact of son preference on the level of fertility while the TFR is above a level of about three children; however, below this level it is likely that son preference will exert some influence, in part because the proportion of "no-son" outcomes increases as the average number of live births decreases, e.g., among couples with two live births, about one fourth will have two daughters. (For a fuller discussion of gender preference, see Chapter 5.)

Thus, the rapid decline in desired family size in the face of only a slight attenuation of son preference may well be explained by the strong first-son preference mentioned above.⁶ This preference may be interpreted as indicating the limit of the decline in desired family size, that is, "at least one son." Because of the diminished importance of the second or third son, the diffusion of the one-or-two son ideal has encountered little resistance; in turn, given the preference of sons to daughters, there has apparently been a concomitant reduction in the desired number of daughters. Thus the drastic decline in family-size values in Korea during the last two decades (from 5 to 2.5 children on average) may be related, to a considerable extent, to the preference for first sons, as well as son preference in general. If this argument is accepted, it cannot be assumed that the traditional family system in Korea supports high fertility in all circumstances. Rather, that system can be postulated more properly as one factor--perhaps an important one--fostering a low-fertility attitude under conditions of low mortality, and inducing rapid fertility reductions when mortality declines. (These hypotheses about suggested fertility-trend relationships involving the strength and level of son preference deserve more research attention.)

FAMILISM

One of the most distinctive Korean value orientations having profound implications for fertility is so-called "familism," often used in contrast to the "individualism" prevailing in the Western world (H.-Y. Lee, 1978: 778-779).⁷ Familism in traditional Korea defines the meaning of individual behavior primarily within the broad context of the family.⁸ For example, one's success in the world gives one's family and relatives pride and, in a sense, social respect. Accordingly, the entire family not infrequently sacrifices itself to promote the success or education of a son. In return, he incurs substantial obligations not only to his immediate family members but to his relatives, at least emotionally. Therefore, family involvement in important events in the life course such as marriage, childbearing, and family formation becomes inevitable.

During the last few decades, particularly since the early 1960s, profound changes have taken place in every

part of Korean society; these are often characterized as "modernization" or "Westernization." Mounting concern has been expressed over the apparent rise of individualism in connection with Westernization. More recently, an attempt to vitalize some important components of traditional familism was launched with strong support from the government. It is questionable, however, to what extent individualism has penetrated into Korean society. Various social surveys have indicated that familism is still cherished by most Koreans, even in urban areas and regardless of age (Oh and Lee, 1980).

There have been some arguments that individualism, together with conjugal family ideals, is favorable to (very) low fertility in a society (Goode, 1963; Davis, 1957). It has also been observed in Korea that an individualistic value orientation is stronger among those with more modern, or less traditional, attitudes, and that modern ideals are associated with lower fertility (e.g., Chung et al., 1972:141-164). The inference is that individualism should lead to low fertility, even in Korea. The connection between the two is generally explained by the differing values attached to children, and by different value orientations in regard to individual happiness. It is nevertheless doubtful that familism, or collectivism in a sense, always supports high fertility. In fact, in Korea, familism has been found to be the major force in reducing fertility in recent times. The main rationale for fertility control lies not in increasing career or self-realization opportunities for women, but in providing children with better care or education; this strong concern about the future of children is regarded as a characteristic feature of traditional familism in Korea.

Another important aspect of familism as a factor in the societal level of fertility is its strong emphasis upon blood ties among family members. Unlike other societies, such as Japan, with similar family systems, Korea has very little adoption; adoption only takes place, according to traditional norms, when there is no (legitimate⁹) son in the family of the eldest son, which bears all the prescribed responsibilities for the ancestors. In such a case, the eldest boy from one of his brothers' families that has two or more (legitimate) boys is usually chosen. Frequently, the question of adoption is raised after the death of the first son in the main family¹⁰ who has married but produced no son. The necessity of having a legitimate son was a severe

constraint mostly in the upper, or yangban, class (D.-H. Kim, 1980:228-291). For the majority of the population, however, illegitimate sons could inherit the family lineage if there were no legitimate son. As a result, concubinage was widely recognized as a way to secure at least one son in traditional Korea. In the traditional setting, the strong emphasis upon blood tie (or purity of blood) was a major mechanism for ensuring family stability even after the dissolution of marriage due to the death of the husband. Since concubines had, on the average, a smaller number of children than married women, this mechanism is thought to have significantly reduced the overall fertility level.

HUSBAND-WIFE RELATIONS

In the traditional Korean family, the suppression and regulation of sex were regarded as virtuous conduct for women, and frequent union of a couple was often considered obscene. As a regulation mechanism, strict segregation between men and women was imposed. For example, husbands and wives were not to face each other in private or in public, except in bed. Unfaithfulness of a wife to her husband was very severely punished. On the other hand, men's sexual impulses were channeled: their extramarital affairs with "women in the bar" (a kind of prostitute) were often encouraged as being "manly." Segregation between husbands and wives was so extensive that their spheres of interest were completely separate; the external world belonged to the husband and the "kitchen" to the wife, and each was supposed to be disinterested in the other's world. Though it was not expected that such norms would be observed strictly, they must have governed every aspect of Korean social life. If a woman lived in an extended family, her behavior was usually continuously surveyed by other members of the family, particularly the mother-in-law, who sometimes even regulated the couple's frequency of union. According to in-depth interviews on fertility behavior conducted in a middle-sized town,¹¹ many women could not feel love or affection for their husband until their mother-in-law died because of such intensive interference. These traditional marriage and family norms remain largely intact and are still taken for granted by most Korean families.

KINSHIP

In Yi dynasty Korea, kinship was organized by hierarchical principles and had the function of conferring social status on its members (M.-G. Lee, 1973:4-5). Thus, kinship background was sometimes a crucial determinant in the arrangement of marriage. The importance of kinship in traditional Korea can easily be demonstrated by the fact that most farming villages were, and are still, dominated by one or two kin groups bearing the same family name (M.-G. Lee, 1973). Strong emotional solidarity among kin members is noticed increasingly in rural areas (M.-G. Lee, 1973:345-350), reinforced by the extended family ideal discussed above. The major kinship obligations of individual members include observation of worship rituals for common ancestors, economic support to kin families in the case of such important family affairs as weddings and funerals, and aid to kin members in ordinary circumstances, as well as in emergencies. In other words, kinship ideology was the basis for social interaction and the major support for strong "familism" in traditional Korea, although, as noted above, familism is not necessarily related to large family-size desires, and thus probably did not significantly affect fertility levels even in the past.

Kinship ideals have become greatly attenuated in urban areas since the beginning of modernization and urbanization in the early 1960s; thus their influence on behavior generally, and on fertility levels in particular, is probably negligible. Even in rural Korea, kinship has been found to explain few of the community differences in fertility. For instance, two rural villages having similar socioeconomic characteristics except for their kinship systems (differing in the degree of kinship dominance, the closeness of the kinship network, and the degree of kinship involvement in everyday village life) show no meaningful differences in their fertility patterns.¹² The same study reveals larger family-size desires in a fishing village having little kinship solidarity than in the two rural (farming) villages. Hong's analysis based on data from 53 villages yields the same results (S. Hong, 1976).

NOTES

- 1 In this chapter, the term "illegitimacy" is used to refer to births occurring outside marriage in the customary sense. Traditionally, the concept was applied in Korea to denote children born to concubines.
- 2 For a more detailed discussion of the relationship between nuptiality and fertility, see Coale et al. (1979).
- 3 This finding was corroborated in Chapter 2 using a different approach.
- 4 The marital status of ever-married women from the 1974 KNFS closely matches that reported in the 1975 census, indicating the high reliability of the KNFS data.
- 5 According to the prevailing ideal age difference between husband and wife in Korea (3 to 5 years), women in the postwar baby boom generation are matched with men born during the war years. The sex ratio for these groups is less than 80.
- 6 According to J.-S. Choi (1966:642-644), among three societies in Asia, China, Japan, and Korea, which share much of a common cultural heritage, Japan shows the strongest first-son preference and China the least in power relations and property distribution among brothers. However, the first son is most important in Korea in the succession of the family lineage.
- 7 Familism in Korea has features in common with familism in China, as outlined in Levy (1955).
- 8 The concept of family was shared by close relatives in traditional Korea. The Korean term "jib," which stands for family, represents such a concept (J.-S. Choi, 1966:631-638).
- 9 Following the usage in traditional Korea, legitimacy is used here to denote the status obtained through legal marriage. The principle of monogamy was applied to define the legitimate couple.
- 10 The main family, called "bon-ga" in Korean, refers to the family succeeded by the eldest son consecutively.
- 11 The record, unpublished, contains details of in-depth interviews of about 100 selected women, conducted as part of the 1965 Ichon survey on fertility and the family.
- 12 This survey, conducted by Han and others, was discussed in more detail in Chapter 3.

CHAPTER 5

THE DEMAND FOR CHILDREN

The motivation to control fertility in a society depends on both the demand for children and the supply of children. Over the last quarter of a century, Korea has experienced both a rapid decline in fertility and a substantial transformation in the demand for children. This chapter examines in detail the components of the demand for children in Korea and how changes in that demand have influenced the course of Korean fertility. The first section reviews changes in ideal family size over time and differentials in family-size norms among different groups. The second section explores the values and disvalues that parents attach to children and the extent to which these have changed with modernization. The final section focuses on the continuing strength of son preference as an integral part of the Korean culture; the historical background of this preference is outlined, a number of independent measures are used to examine its current levels, and the continuing debate about how it will inhibit further fertility declines is discussed.

FAMILY-SIZE DESIRES

Since the late 1950s, the number of children Korean couples consider ideal has changed considerably. Although there are questions about the quality of the available data and about the meaning of this concept generally, there are strong indications that the ideal family size in Korea has been cut almost in half over a period of slightly more than two decades. The evidence for this rapid decline is shown in Table 21. The pattern indicated is a slight decline in ideal family size prior to 1965, a possible brief plateau in the late 1960s, and

TABLE 21 Average Number of Children Considered Ideal:
Republic of Korea

Year	Ideal Number of Children	Survey	Source
Before 1960	Approx. 5	Several early surveys	Kwon and Lee (1976)
1958	4.4	Urban survey	Chung et al. (1974)
1965	3.9	KAP Survey	Moon et al. (1973)
1966	4.3	Special Demographic Survey	Choe and Park (1969)
1967	3.9	KAP Survey	Moon et al. (1973)
1968	3.9	1968 Fertility Survey	Moon et al. (1973)
1971	3.7	1971 Fertility Survey	Moon et al. (1973)
1971	3.6	KIRBS Survey	Chung et al. (1972)
1973	3.1	1973 Survey	S. Hong (1978)
1974	3.2	Korean National Fertility Survey/ World Fertility Survey	Korea, NBOS and KIFP (1977)
1974	3.0	National Survey of Family Planning Information, Education and Communi- cation	Cheong et al. (1979)
1976	2.8	National Fertility and Family Planning Evaluation Survey	Cheong et al. (1979)
1976	2.7	Survey of Economic Factors in Fertility	N. H. Cho et al. (1977)
1976	2.6	Value of Children Survey	Bulatao et al. (1978)
1978	2.7	Study of Family Planning Information, Education, and Communication	Cheong et al. (1979)

an accelerated decline during the 1970s. Although these temporal changes should be interpreted cautiously because of differences in survey coverage and question wording,¹ the trend is obvious. It is interesting to note that changes in family-size norms roughly parallel declines in actual fertility during this period. It is difficult to disentangle the direction of causality between these two measures; however, declines in ideal and actual fertility seem to have reinforced one another.

The overall averages in the ideal number of children mask some interesting differences in the distributions. Up through 1971, available data show that virtually nobody considered less than two children an ideal family. More recent surveys are consistent with this pattern, although a few percent of respondents in some studies consider one child ideal. The two-child family, which the family planning program would like to establish as the norm, was similarly unpopular through 1971, with only 4 to 6 percent of respondents expressing this as their ideal (Korean Institute for Family Planning, 1973).

However, since that time, the two-child family has rapidly become a more acceptable ideal: in recent surveys, between one third and one half of Koreans say that their ideal number of children is two (Moon et al., 1973; S. Hong, 1978; Bulatao et al., 1978). The three-child family has similarly gained in popularity, with corresponding losses in the acceptability of large families (five or more children).

This development of two to three children as the most desirable family size is confirmed by data on the proportion of women at various parities who do not want any more children (Table 22). With each successive survey, more and more women at each parity say they prefer not to have any more children. Although the proportion of first-parity women who are content to stop bearing children has increased sharply from 7 percent in 1967 to 26 percent in 1979, the vast majority of women would still not be satisfied with one child. However, the trend at the second parity has been more dramatic: in 1967, only 15 percent of women with two children wanted to stop childbearing; just twelve years later, more than three fourths professed to be satisfied with two children. Once the level of three children has been reached, only a small percentage of women (7 percent) say they wish to have one or more additional children.

On the other hand, women will not necessarily be able to attain their ideal family size. A few will be unable to have families as large as they would like, for example because of fecundity impairments. Many more will exceed their ideal family size or have already done so; in fact, in the World Fertility Survey, 34 percent of currently married women already had a larger family than they desired, and 37 percent said they did not want their last live birth.

In addition to the evidence that the ideal number of children is dropping, there are some indications of a corresponding decrease in the ideal spacing of children. The ideal first birth interval dropped by one sixth (from 21.1 months to 17.6 months) between 1976 and 1978. The ideal spacing for subsequent births declined from 3.6 years in 1974 to 3.4 years in 1976, and further to 3.2 years in 1978 (Cheong et al., 1979:82). Moreover, in all three years, ideal birth intervals drop steadily as one moves from rural areas to large cities (Cheong et al., 1979:82; B.T. Park et al., 1979:54; C.H. Choi et al., 1975:24). Thus, it appears that the ideal life cycle for most people in Korea now includes a fairly small number

TABLE 22 Proportion of Women Who Want No More Children: Republic of Korea

Number of Living Children	National Survey on Family Planning 1967	Korean Fertility and Family Planning Survey 1968	National Family Planning and Fertility Survey 1973	Korean National Fertility Survey 1974	National Fertility and Family Planning Evaluation Survey 1976	Korea Contra-ceptive Prevalence Survey 1979
1	7	8	11	13	19	26
2	15	24	46	66	69	78
3	55	54	73	86	88	93
4	74	73	85	92	93	97

Note: The characteristics of women included in the calculation of the above figures may differ from one survey to the next. For example, the Korean National Fertility Survey figures for 1974 are based on currently married fecund women, whereas other surveys may be based on all currently married women. Using a similar definition across all surveys would apparently further heighten the increase over time in the proportion who want no more children.

Sources: B.T. Park et al. (1979:98); Korea, NBOS and KIFP (1977); K.S. Koh et al. (1980b).

of children, born within a relatively short space of time, leaving women with a smaller proportion of their adult lives devoted to childbearing and childrearing. Although the shifts in ideal spacing parallel actual declines in birth intervals at the lower parities, it is once again difficult to tell whether these shifts are leading or following actual changes (Rindfuss et al., 1982).

The ideal age for a woman to complete childbearing remained constant at 31 years over the 1974-78 period (Cheong et al., 1979:82). KNFS data on the proportion of currently married fecund women who want no more children support this observation. At age 25-29, 46 percent of women say they want to have additional children; by age 30-34, this figure is only 16 percent (Korea, NBOS and KIFP, 1977). Even though most women in the younger cohorts want to have more children, their ideal family size is relatively low (about one child lower than for those at the end of their childbearing years). In fact, women age 15-24 have a slightly lower ideal number of children than those in the same age group in Japan (B.T. Park et al., 1979:91). However, there is no way to know whether this ideal number will increase as they pass through their childbearing years.

The Korean National Fertility Survey has also revealed that better education and urban residence (in addition to younger ages) are associated with smaller family-size norms (Korea, NBOS and KIFP, 1977). Family-size norms have consistently been 17-19 percent higher in rural than in urban areas in nearly every survey over the last 15 years. In the most recent nationwide survey (Cheong et al., 1979), ideal family size rose from 2.5 in Seoul, to 2.6 in other cities, to 2.8 in eups (townships), to 3.0 in myuns (rural administrative units). Even within Seoul, there is evidence of different family-size norms in different sections of the city. For example, in a 1971 survey, Chung et al. (1972) found that women in the central or "lighted" areas of Seoul had an ideal family size of 2.88 children, while those in the marginal or "blighted" areas thought 3.33 children ideal.

These differences in family-size norms by urban-rural residence, education, and age are undoubtedly related to the varying roles that children can be expected to play in the lives of people in different circumstances. The next section examines the values that Korean parents attach to children, and how these values change for parents at different stages of the life cycle and in different circumstances.

THE VALUE OF CHILDREN

Attitudes toward the values and disvalues of children appear to be one of the key factors determining family-size attitudes and fertility behavior in Korea. Some values are almost universally attached to children, others are salient to only certain groups, while others have essentially lost their importance or were never very prominent. As noted above, children are seen as performing different roles or functions for different people; moreover, attitudes toward children change throughout the life cycle of individuals and as modernization proceeds. The value of children changes from one parity to the next as parents add to their childbearing experience; it also depends, in large measure, on the sex of the child.²

Although very little was known about the value of children in Korea before the early 1970s, a considerable body of literature addressing this question has recently emerged. In 1957, Leibenstein developed a useful general framework that grouped the benefits of children into three broad categories: (a) their utility as productive agents, helping with the family farm or business, or earning family income; (b) their utility in providing security for parents in old age and in times of emergency; and (c) their psychic or "consumption" utility, i.e., the utility of children as a source of personal pleasure to the parents. The costs of children were divided into direct, out-of-pocket costs of raising children and opportunity costs. This framework is employed below to examine the values and disvalues of children in Korea.

The Productive Utility of Children

Although there is a good deal of evidence showing that children provide help in family enterprises, it is not at all clear that this productive utility is a strong motivation for having children. The Survey of Economic Factors in Fertility found that over 60 percent of married women expected help from their children on the family farm and about 20 percent in the family business.³ However, in the same study, this benefit was almost never mentioned as the most important reason for having children. This pattern is even more evident in the case of practical help around the house: the Value of Children (VOC) study found that over 80 percent of parents expected both daughters and sons to help around the

house, yet only a handful of respondents spontaneously mentioned this type of help as an advantage of having children (Bulatao, 1979). Moreover, the productive utility of children normally declines with the relative importance of agriculture and the need for family workers. It may be noted that large-scale migration from rural to urban areas in Korea may be producing a somewhat different pattern: migration to the cities has caused considerable rural labor shortages that may temporarily increase the value of children's work, especially for poorer rural families. However, in the long run, the productive utility of children will inevitably decline.

The Security Utility of Children

Security has been cited as one of the most compelling factors in family-size decisions in countries in which social security programs are nonexistent, do not have widespread coverage, provide inadequate support, or are unreliable. In Korea, where there is no government old age security program, children are still viewed as an important source of old age support and a cushion in times of need. However, the security utility of children is declining substantially as family nucleation proceeds, as parents find they can rely more on their own income or savings, and as children are perceived as less willing to help their parents financially (Lee and Kim, 1979). Although children often figure prominently in plans for old age support, the degree of support may be relatively small. In the VOC study, over 80 percent of wives and husbands said they expected old age support from their sons and about 45 percent from their daughters. However, only about one respondent in five spontaneously mentioned help in old age as an advantage of having children (Bulatao, 1979); about the same proportion cited this as a very important reason for wanting another child (Lee and Kim, 1979). The commonly supplemental nature of children's security contributions is further seen in Table 23, which shows that a substantial proportion of women expect to be basically independent of their children after retirement. This emerging independence is further evident from data on household structure and living arrangements. For example, the Survey of Economic Factors in Fertility found that 48 percent of women in their childbearing years do not expect to live with their children at all, 22 percent expect to live with them for

TABLE 23 Expected Economic Support After
Parents' Retirement: Republic of Korea

	Sons (percent)	Daughters (percent)
Total Support	39.3	1.0
Moderate Support	18.4	2.8
Little Support	25.6	22.5
No Support	16.7	73.7
Total	100.0	100.0

Source: N.H. Cho et al. (1977:76).

as long as possible, while 25 percent expect to live with them only when they are old.

Nevertheless, for substantial segments of Korean society, children are still seen as the primary source of security in old age. This is particularly true for older couples, those who live in rural areas, and individuals with low income and little education. The differentials by type of place of residence are quite striking. In the first phase of the VOC study, only 3 percent of urban, middle-class respondents rated help in old age as a very important reason for wanting another child, compared to 26 percent of urban, lower class respondents, and 43 percent of rural farmers (Lee and Kim, 1979). These differentials suggest that the security utility of children will continue to decline with increasing urbanization and development.

The security utility of children might also decrease if an old age security system were introduced. The Survey of Economic Factors in Fertility found that 68 percent of parents would stop at two children, even if they had no sons, if there were an old age security system in Korea. Although such hypothetical survey questions are always somewhat suspect, it is obvious that a large number of women do make the connection between old age security and family size in their minds.⁴

The Consumption Utility of Children

In addition to the economic factors considered above, parents may derive a wide range of social-psychological benefits from children. Some of those values mentioned prominently in Korea are happiness, love, companionship, the personal development of the parents, and a whole host of childrearing satisfactions (Lee and Kim, 1979). There is also some evidence that this "consumption" utility is greater among young, better-educated women in urban areas (N.H. Cho et al., 1977). As will be seen below, these benefits of children are particularly associated with the first child. This does not mean that rural, less-educated couples and high-parity women do not derive personal pleasure from their children; rather, it indicates that economic factors and other considerations may take precedence for those individuals.

Other Values of Children

The above categorization omits some additional values or considerations which relate more narrowly on the children themselves. Some of these are benefits that accrue to other children in the family rather than directly to the parents: children can provide companionship for each other, and older children can help their younger siblings with school expenses. The Survey of Economic Factors in Fertility reported that when asked about the disadvantages of a small family, 62 percent of women mentioned that the children may feel lonely, and this was by far the most common answer; companionship for children was found to be a particularly important value for couples with two to three children (Bulatao, 1979).

The number of siblings also has implications for the quality of children, their relationship to their parents, and even their personalities. Korean children from large families are seen as having an open and loving manner toward other people, being self-confident, and being popular with other children. Children from small families are thought to have high intellectual ability and a close relationship with their parents; they are also seen as being very happy, but rather spoiled (Lee and Kim, 1979:63). Although children from large and small families may not objectively possess these characteristics, the perception that they do may be a factor in fertility decision making.

Direct Costs of Children

The benefits of having children must be counter-balanced against the costs entailed in rearing them. In Korea, several studies have shown that parents are acutely aware of the high costs of children; the costs of raising children have consistently emerged as the most important perceived disadvantage of having children, of having a large family, and of having another child (Lee and Kim, 1979). Some would argue that survey respondents may simply mention costs as a convenient rationalization of what is in reality a very complex decision--not to have more children. This argument is partially supported by the results of hypothetical questions on what people would do if their income doubled. In one study, only 7 to 14 percent of respondents said they would have more children if their income doubled (Arnold et al., 1975:96). In the Survey of Economic Factors in Fertility, only 0.4 percent said they would use the extra money to have another child, while 43.6 percent would use it for the education of their other children. Thus, the money, if spent on children at all, would be used to increase the quality rather than the quantity of children. Lee and Kim (1979) found that 57 percent of men and women said the number of children they desired would be a heavy economic burden to them. Thus other factors must compel the majority of couples to have more children than they feel they can comfortably afford. Nevertheless, the prominence of cost considerations in every study to date cannot be ignored. Only a minority (about one in five) of Koreans feel that two children would be a heavy economic burden; this figure rises sharply to nearly two thirds for three children, and around 90 percent for four children (Lee and Kim, 1979). Since this is the range within which childbearing decisions will be most crucial over the next decade, perceptions of the costs of children should be carefully considered.

Measuring the actual costs of children, rather than perceptions of them, has proven a difficult task; thus there are virtually no reliable data to cite. A survey conducted late in 1972 (Lee and Kim, 1979:58) reported that urban middle-class couples estimated the average expenditure on their children during the previous 12 months at about \$473 (or 21 percent of their total income). Urban lower-class couples figured they spent only about half that much (\$243), but this level of expenditure ate up 29 percent of their total income.

Couples in the rural, agricultural sample estimated that they spent only 15 percent of their income (\$133) on their children. This economic crunch seems to fall most heavily on lower-class couples in urban areas. This is in fact a common phenomenon resulting from a combination of the high cost of living in urban areas, low incomes, and relatively large numbers of children (Arnold et al., 1975).

A study by the Korean Educational Development Institute conducted somewhat later than the one just mentioned attempted to estimate the cost of rearing a child from birth to age 25 (Kim et al., 1976:65). The authors estimated the cost for a middle-class couple at about 15 million won (about U.S. \$31,000) according to prices at the end of 1975. If these figures are even approximately correct, then costs must be a substantial factor in family-size decisions, at least for middle-class couples.

One of the principal components of the cost of children, and one of major concern, is the cost of education. Although the government covers most of these costs through junior high school, they can still be considerable for parents, who often pay for private schools, books, tuition, school clothes, and special lessons such as those in music or sports. One of the greatest expenses incurred in educating children has been that of private tutors. The government has recently made private tutoring illegal in an attempt to reduce this economic burden. However, while this law will undoubtedly make educational expenses easier to bear, it will by no means make children's education inexpensive. Educational aspirations in general are very high in Korea, and parents are willing to make considerable sacrifices to provide education for their children. Education is now compulsory through the sixth grade, and there are plans to extend compulsory education through junior high school soon; however, most parents want their children (or at least their sons) to finish college, while a large majority would like them to graduate from high school (Moon et al., 1973). The Survey of Economic Factors in Fertility found that education was the single most expensive aspect of raising children, followed by food and clothing. In the same study, three fourths of the parents interviewed said that the cost of educating their children would be a very heavy burden considering their income level and status. A substantial proportion of Korean couples state explicitly that the high cost of

education is a reason for not wanting another child (Lee and Kim, 1979), although the influence of this factor on actual childbearing decisions is still open to question.

The Opportunity Costs of Children

The indirect or opportunity costs of children encompass a variety of restrictions on parents' alternate activities, but among these, perhaps the most important is the restriction on one's job. These costs are thought to affect women more than men since women usually bear the brunt of childrearing responsibilities. However, opportunity costs are often thought to be minimal in less-developed countries (particularly in rural areas), where many jobs for women are compatible with child-rearing (or where job opportunities for women are limited) and where easy alternatives exist for child care through the extended family or friends. In Korea, opportunity costs are not highly salient, but neither are they negligible, and they are gaining in importance. Restrictions on alternative activities are felt most strongly in urban areas, particularly among more educated women (Arnold et al., 1975; Lee and Kim, 1979). Although women do manage to combine working and childbearing successfully, the Survey of Economic Factors in Fertility found that 40 percent of working women felt childrearing interfered greatly with their work, while 30 percent said it interfered somewhat. As educational opportunities for women continue to improve in Korea, opportunity costs will undoubtedly increase as they have in more developed countries.

Other Costs of Children

Other costs of children include both emotional and physical costs and costs to society. Two of the strongest reasons given for not wanting another child are emotional strain and potential problems between husbands and wives (Arnold et al., 1975). Although these emotional costs were not rated as highly as the financial costs, they were still quite important; the physical burden of caring for another child was among the least important reasons, except in rural areas. There was also a very strong concern that having another child would prevent the parents from giving sufficient attention to their other

children. It appears that these nonfinancial costs are not entirely anticipated prior to childbearing: R.-Y. Park (1980) found that the financial burden was of the greatest importance to couples before they had children, but the emotional and physical burdens were given most importance by couples who already had children.

As mentioned earlier, Korea has one of the highest population densities in the world, and Korean couples profess a good deal of concern about overpopulation. For example, in the VOC study, over 70 percent of wives and husbands said they felt that overpopulation was a reason for their having fewer children (Bulatao, 1979). Although these answers must be interpreted cautiously (particularly in light of the fact that answers about overpopulation rarely surface spontaneously), it is interesting to note that the figures for Korea were higher than those for any of the other countries included in the study. Korean couples seem to be acutely aware of crowded conditions and their attendant problems, particularly in the cities.

Parity-Specific Values

The above discussion of values and disvalues generally treats all children as equal. Yet children of different birth orders, different sexes, different ages, and so on, are perceived differently by parents. A recent article by Bulatao (1981) focuses on differences in the value of children in successive childbearing decisions both in Korea and elsewhere. The relevant data for Korea, reproduced in Table 24, show quite pronounced differences by birth order in both the values and disvalues. On the positive side, the first child provides a number of social-psychological benefits, many of which are derived from interaction with the child; it is seen as bringing the spouses closer together, although it can also interfere with the marital relationship by restricting the amount of time that spouses can spend together. The first child is unique in that only one of the five values mentioned (incentive in work) is prominent for any other child. The importance of providing companionship for other siblings emerges for the second and third child and then disappears. Considerations of gender preference come to the fore with the third and fourth child, but do not seem important for subsequent births. Finally, it is not until the fifth child and beyond that economic benefits become a prominent concern.

TABLE 24 Values Attached to the Next Child: Republic of Korea

	Values	Disvalues
1st Child	Love and care for Incentive in work Fun around house Bring spouse closer Pleasure to watch grow	Child's sickness We are too old Hard to discipline Less time with spouse
2nd Child	Companion for siblings Incentive in work	Harder to have job Less free
3rd Child	Wants a girl Companion for siblings Wants a boy Incentive in work	Less time with spouse Overpopulation
4th Child	Wants a girl	Financial burden
5th Child	Help around house Economic help	Financial burden
6th and Subsequent Children	Economic help Help in old age Help around house	Financial burden Child's sickness We are too old

Source: Bulatao (1981:12, 18).

On the cost side, the differences are also striking. Opportunity costs become important in the case of the second child, and then fade. Overpopulation is an important consideration for the third child, as might be expected in light of the family planning slogan "Stop at two without sex distinction." After the third child, financial costs are paramount at every level.⁵ The particular values that are important for each child have important policy implications. For example, if one wanted to encourage couples to stop at two or three children, policies designed to increase sexual equality and decrease gender preference would seem appropriate, although, as the next section will demonstrate, the influence of gender preference on fertility in Korea is not as clearcut as many believe.

SON PREFERENCE

One of the most deeply ingrained values in Korea, both historically and at the present time, is a preference for male over female offspring; in fact, Korea exhibits one of the highest levels of son preference in the world, a topic that has received considerable attention in the literature (see, for example, Chung et al., 1974; Kwon and Lee, 1976; Kong and Cha, 1974). Although there are some signs that son preference is beginning to relinquish its strong hold in Korea, its continuing importance cannot be questioned. Korean society has indeed gone through a drastic transformation; however, satisfactory institutions have not yet emerged to take over the major functions of sons in the traditional Korean family (Kwon and Lee, 1976).

Historical Supports for Son Preference

Son preference has a long history in Korea, but "it was not until after the establishment of the Yi dynasty (near the end of the fourteenth century) when boy preference received institutional support in the form of Confucianism that it took on aspects of a culture" (Chung et al., 1974:77). Under the Confucian system of the traditional patriarchal family, a male child was seen as crucial for carrying on the family name, for the rituals of ancestor worship, and for inheritance purposes. Having as many sons as possible was regarded as one of the five blessings (obok). In the Yi dynasty, the right to preside over the rituals of family ancestor worship (chesa) would pass down to "the eldest son, other sons, sons of concubines of decent origin, and sons of concubines of lowly origin in that order" (Chung et al., 1974:56).

Inheritance laws have often favored sons, particularly the eldest; however, even when the law entitled all children regardless of sex to equal shares in the family property (as was the case during the Yi dynasty), in practice, inheritances almost always excluded women (Chung et al., 1974). Current Korean law states that women in a family may inherit on an equal footing with men (United Nations Fund for Population Activities, n.d.), and a law is being considered that would make this mandatory. However, until 1978, Korean law entitled unmarried daughters to receive only half as much inherited property as sons and married daughters to receive only one fourth as much

(Chung et al., 1974). The Survey of Economic Factors in Fertility found that 76 percent of Koreans expected to bequeath the family farm to their first son, 19 percent would share the land among their sons, and only 3 percent would share the land among both their daughters and their sons. In a rural area of Korea, Yoon (1974) reported that in practice, the first son receives all of the family's land and goods because of poverty and a lack of land to be divided.

The low status of Korean women also contributed to the strong desire for male offspring. During the Yi dynasty, all formal educational institutions were open only to men. Young girls were told that women who know letters are short-lived and short on fortune (Chung et al., 1974:62). Women were also taught the womanly virtue of the three obediences: a woman was expected to obey her father when she was young, her husband after marriage, and her sons (particularly the eldest) after she became widowed.

The traditional importance of sons in Korean society is demonstrated by the lengths to which people have gone in order to have a son. Chung et al. (1974) outline a whole range of common practices such as son praying (including rock worship and wood worship), geomancy (selecting auspicious grave sites), studying the physiognomy of son-bearing women, navel cauterization, and name-giving practices. Although some of these customs are no longer widespread, others are still often practiced. Son preference has also been supported by a whole host of Korean folk sayings, some of which still enjoy considerable currency; the following are examples (Kong and Cha, 1974; Chung et al., 1974; N.H. Cho et al., 1977):

"Children are valuable, but especially sons, regardless of the number."

"A daughter lets you down twice: when she is born and when she gets married."

"If a man should die sonless, no one would ever offer him even a bowl of water."

"If you have to marry someone you dislike, give him many daughters."

"A new-born son should be laid on a bed, clad in fine clothes, and given precious stones to play with, while a girl at birth should be left on the floor with only a diaper on and given only pieces of roof-tile to play with."

"Women not flogged for three days turn into foxes and climb mountains."

Although a number of current laws in Korea discriminate against women, much of the male bias that previously permeated Korean law has been eliminated (B.H. Park, 1973). These legal changes have been accompanied by increasing opportunities for women's economic and social participation and by changes in women's roles (H.-S. Park, 1979). Nevertheless, strong boy preference attitudes persist in Korea, as the next section will show.

Measures of Son Preference

The existence of a strong preference for sons in Korea is one of the best documented facts in Korean population studies; it is supported by every measure of son preference that has been used (including the ideal number of sons and daughters, parity progression ratios, reported sex ratios of children, the Coombs sex preference scale, and the ideal sex of next births). An overriding desire to have at least one son (and often at least two) is nearly universal.

The evidence on changes in the level of son preference over time must be carefully analyzed. Some studies show that there has been little if any change, while others indicate a gradual downward shift. A review of ten surveys between 1958 and 1978 conducted for the present study showed virtually no change over time in the proportions of boys and girls in the ideal family; in fact, the average proportion of sons in the ideal family was precisely the same in the earlier five studies as it was in the five most recent studies. All but one of the studies indicated that the ideal ratio of boys to girls fell within the fairly narrow range of 1.42 to 1.59 despite the fact that the total number of ideal children wanted varied between 2.7 and 4.4. Moreover, there were no large or consistent differences between rural areas, small cities, and large cities. However, this lack of differentials should not be taken as proof that son preference has remained the same over time. Although few of the studies reviewed provide detailed information at the couple level, it may be speculated that the lack of change is due to two opposing forces: a decrease in total ideal family size and an increase in the proportion of couples who want an equal number of sons and daughters.

This statistical quirk occurs because most Korean couples want an equal number of sons and daughters or one more son. Mathematically, the ratio of boys to girls in an ideal family rises from 1.5 for couples who want three boys and two girls to 2.0 for couples who want two boys and one girl. Thus, it may be argued that the natural tendency for this proportion to rise as ideal family size decreases has undoubtedly been offset by a fall in the proportion of couples who want more boys than girls. In the 1976 VOC study, for example, 43 percent of all men and women said the number of boys in their ideal family would exceed the number of girls by one; however, half of all respondents wanted an equal number of boys and girls, and hence did not exhibit any sex preference according to this measure.

Because of the problems inherent in comparing sex preference at different levels of ideal family size, Coombs developed a sex preference measure, based on unfolding theory, that is independent of number preference (Coombs et al., 1975). The Coombs IS-scale ranges from 1, which indicates extreme girl preference, to 7, which indicates extreme boy preference, with the neutral value of 4 indicating the absence of any sex preference. In the VOC study, the mean IS-scale score was 5.31 for married men and 5.30 for married women, almost identical with the average score of 5.37 reported in the KNFS (Kim and Choi, 1981). Over 90 percent of both men and women had scores of 5 or more, indicating the presence of son preference. In contrast, only 2 percent of men and 4 percent of women exhibited any amount of daughter preference (Bulatao et al., 1978).

As in most countries, sex preference is particularly prominent in reference to the first birth. According to the KNFS, 60.3 percent of currently married, fecund, nonpregnant Korean women want a boy for their first child, compared to only 4.1 percent who want a girl. At all parities, 66 percent of women want a boy for their next child, while only 16 percent want a girl (Korea, NBOS and KIFP, 1977:112). Table 25 shows that virtually no one with an equal number of boys and girls (or more girls than boys) expressed a desire to have a daughter for their next child. Families with more sons than daughters show a preference for an additional daughter; however, this preference is only moderate, except for families with two sons and no daughters.

When faced with the dilemma of what they would do if they did not have a son, some couples would go to rather

TABLE 25 Desired Sex of Next Child Among Currently Married, Fecund, Nonpregnant Women Who Want a Future Birth, 1974: Republic of Korea

Number of Living Daughters	Number of Living Sons		
	0	1	2
0	S= 60.3 D= 4.1	S= 25.9 D= 38.6	S= 1.8 D= 91.1
1	S= 93.5 D= 0	S= 80.0 D= 1.0	S= 23.1 D= 30.8
2	S=100.0 D= 0	S=100.0 D= 0	S= 71.4 D= 0

S = percent who want a son.

D = percent who want a daughter.

Source: Korea, NBOS and KIFP (1977:T353-T355).

extreme measures. In the 1971 study by the Korean Institute for Research in the Behavioral Sciences (Chung et al., 1972), 53 percent of respondents said they would just keep on having children no matter how many they had until they got a son (and this figure rose to 73 percent in rural areas). In more recent surveys, this percent has decreased considerably as ideal family size has declined, but a substantial proportion still say they would keep trying for a son. Another alternative would be to adopt a son into the family; this solution was preferred by the majority of household heads interviewed by Yoon (1974) in 1971. A more drastic solution would be for the husband to take a concubine to try to have a son. Concubinage was outlawed under Japanese rule in 1923 and is now rare; nevertheless, in three early studies, a substantial proportion of women (25 to 50 percent) said that if sonless, they would allow their husbands to take a concubine to have a son (Chung et al., 1972; H.-J. Lee, 1959; W.K. Koh et al., 1963). Although it is not likely that many women would actually do this, the large number who said they would underscores the importance of son preference at that time.

The majority of women still maintain that they must have a son (this figure has stayed constant at just over 60 percent for the last 10 years); however, the proportion of women who say they do not care whether they have a son or not increased from 16 percent in 1971 to about 30 percent in 1976 (Moon et al., 1973; B.T. Park et al., 1979). These data indicate that "the traditional preference for sons is still very much alive," although "that the traditional attitude has also undergone some erosion" (Cho et al., 1977:117).

Another indicator of son preference is the reported sex ratio of births and of children. Both the registration system and several surveys and censuses in Korea have found the reported sex ratio to be exceptionally high: the sex ratio of registered births was reported to be in the range of 106 to 116 in the colonial period and 105 to 125 since that time (Kwon, 1977); the censuses of 1955, 1960, and 1970 found the sex ratio of the enumerated population to be 105.5 to 107.2 at ages 0-4 and 107.6 to 109.1 at ages 5-9 (United Nations, ESCAP, 1975:39). However, there is evidence that the true sex ratio at birth does fall within the normal range; thus the above figures suggest an underenumeration of female children relative to male children and provide one more indication of the relative importance of males and females.

Even more revealing than the overall sex ratio of children is the breakdown of sex ratios by parity and birth order. For the KNFS, C.B. Park (1981) reported a sex ratio of 106.5 for all children, but the sex ratio in small families was considerably higher than that in large families. For example, it was reported to be 126 in two-child families and 130 in three-child families, but only 102 in five-child families and 94 in larger families. In addition, the sex ratio of the last child in families of any size (133) was markedly higher than that of previous children (101).

Because of Korea's high degree of son preference, the family planning program has spearheaded a campaign to modify sex preference attitudes by adopting the slogan "Stop at two, without sex distinction." This slogan has met with some resistance, however, as evidenced by the results of the most recent national family planning (IEC) (information, education, and communication) survey (Cheong et al., 1979). While three fourths of the men and women interviewed approved of the slogan "stop at two," only just over half approved of adding "without sex distinction." Moreover, there was about an equal difference in

acceptance of the two slogans in large cities, small cities, and rural areas, indicating that resistance is widespread rather than localized.

Whether son preference has begun to lose its firm hold on Korean society (as suggested by Cha, 1979, and Korea, NBOS and KIPP, 1977) or has waned very little during the last two decades (as suggested by Kwon and Lee, 1976, and Kwon, 1982), there is no doubt that the majority of Koreans maintain their traditional values on this subject. This is true in both urban and rural areas, among both young and old couples, and among both men and women, although several studies have found differentials by type of place of residence, degree of economic development, and age. It is still not clear whether the more modern sex preference attitudes adopted by some Koreans will diffuse rapidly through the population, as have modern family planning attitudes, or whether they will remain stubbornly resistant to change.

The Value of Sons and Daughters

The earlier discussion of the value of children dealt primarily with children in general. However, Korean parents do attach different values to sons and daughters and have different expectations for them. Sons are seen as entailing more benefits and fewer costs. They are essential for carrying on the family name, as well as for providing old age and other support, and ancestor worship (Cheong et al., 1979; Lee and Kim, 1979; Kong and Cha, 1974; Chung et al., 1974; Yoon, 1974; Bulatao, 1979). Although the financial concerns are important, continuing the family name or the family lineage is always the paramount reason given for wanting sons.

Daughters, on the other hand, are valued primarily for companionship and other psychological satisfactions while they remain in the family (Lee and Kim, 1979). Once they get married, they invariably leave their parents' household, and many of these advantages are lost, although they might still provide help in old age or emergencies. Not only are daughters seen as providing fewer benefits to their parents, but they are also seen as being more of a financial burden. Two recent studies have found that about twice as many parents think daughters cost more than sons as vice versa (N.H. Cho et al., 1977; Bulatao et al., 1978). Those who feel that daughters cost more say they need more expensive clothes, while those who

feel that sons cost more mention educational costs most often. Given these perceptions of costs and benefits, it is no wonder that son preference attitudes are slow to change.

The Effect of Son Preference on Fertility and Family Planning

The prevalence of son preference has been said to constitute "a major obstacle to reducing fertility" and "one of the most important obstacles to the current efforts of reducing fertility to near replacement level in Korea" (S. Hong, 1978:85; Kwon and Lee, 1976:2). However, the evidence does not uniformly support this contention, and the general consensus on the impact of son preference on fertility has recently begun to lose ground.

Kong and Cha (1974), in their review of 20 empirical studies conducted before 1975, found several studies showing that the sex composition of children affects the rate of contraceptive practice. More recently, Rindfuss et al. (1982) and Nemeth (1981) have presented some preliminary evidence that Korean women without any sons intentionally curtail breastfeeding to speed up the birth of the next child. Some of the strongest evidence for the influence of son preference on fertility comes from parity progression ratios and other measures based on family composition. This effect often manifests itself most strongly at the second and third parity. Chung et al. (1974) found many more families with three boys and with two boys and one girl than would be expected from probability theory, and many fewer three-child families with more girls than boys. The VOC study reported that there were nearly twice as many two-child couples with two boys as with two girls (Bulatao et al., 1978), indicating that couples whose first two children are girls are at least twice as likely to have more children as those whose first two children are boys. Additional evidence comes from the stated intentions of those with various family compositions. Table 26 shows the percent of women who want no more children, broken down according to their current number of living daughters and sons. The most striking differences appear at the second and third parities, where more than twice as many women with all boys than with all girls want to stop childbearing.

TABLE 26 Percent of Currently Married, Fecund, Nonpregnant Women Who Want No More Children, by Number of Living Daughters and Sons, 1974: Republic of Korea

Number of Living Daughters	Number of Living Sons						All
	0	1	2	3	4	5+	
0	13	16	77	94	(100)	(96)	51
1	12	71	97	99	100	(100)	74
2	36	82	98	99	(100)	*	86
3	47	81	99	100	(100)	*	87
4	(55)	81	99	(100)	*	*	86
5+	*	93	(100)	*	*	*	88
All	23	64	94	98	100	99	74

(): Less than 50 cases.

*: Less than 20 cases.

Source: Korea, NBOS and KIPP (1977:112).

While these differences are indeed dramatic, the overall effect of gender preference is attenuated by the fact that by biological necessity, fewer women fall in the extremes of having all boys or all girls than fall in the middle where the differences are considerably smaller. There are also large numbers of women at parities 0, 1, and 4 or higher, where sex preference is less important.

To calculate the overall effect of gender preference, a new measure can be used which attempts to estimate fertility attitudes in the absence of any gender preference. This measure assumes that without any sex preference, all women at any given parity will be as satisfied with their family size as are those of the same parity who currently have the most favored combination of sons and daughters. In other words, it may be hypothesized that 16 percent of all women with one child will want no more children, 77 percent at parity two, 97 percent at parity three, and so on (see Table 26). This measure also allows for the presence of daughter preference or a preference for balance. Using this method and the KNFS data in Table 26, it may be estimated that 80.4 percent of Korean women would want no more children in the absence of any gender preference, compared to 74.3 percent who actually said they wanted no more children. The same method leads to a somewhat larger differential in the case of contraceptive use: 54.6 percent of women would use contraception in

the absence of any gender preference, compared to 45.7 percent who said they were actually using contraception at the time of the survey. These rough measures indicate that gender preference may play a considerable role in explaining fertility behavior in Korea. However, it is equally obvious that strong sex preference attitudes have not kept large numbers of women with an "undesirable" balance of daughters and sons from using family planning to curtail further childbearing.

Multiple regression analyses of the influence of sex preference on fertility and family planning yield mixed results. The Survey of Economic Factors in Fertility found that son preference exerted a strong influence on the number of children desired, but no significant influence on contraceptive use. Koo (1979) found that son preference was statistically significant in explaining fertility for older urban respondents only. Chung et al. (1974) concluded that boy preference was an important factor in family planning practice up to parity four (particularly at the intermediate parities, thereby paralleling the results based on family composition); however, the authors did not find any net effect of boy preference on the desire for more children among low-parity women. Overall, the multivariate analyses indicate that although son preference has an impact on fertility for women in some groups, its effect is decidedly less consequential than the purely descriptive data on son preference might lead one to believe.

Kwon (1982) attributes the relatively weak effect of son preference to countervailing forces. He speculates that son preference will cause some couples to have more children than they would otherwise desire, but others to have fewer children because girls are not considered an absolute necessity for Korean families; therefore, the net effect of son preference on the aggregate level is negligible.⁶ Kwon et al. (1975) have also put forth the intriguing thesis that historically, son preference may have lowered the rate of population growth in Korea by generating relatively high mortality for adult women and female children through inadequate care and diet. The argument that gender preference does not necessarily retard fertility decline has also been developed in two recent studies outside of Korea. In a small empirical study in the United States, Widmer et al. (1981) showed that sex preference can lead to lower fertility for some couples and that the overall effect of sex preference is not necessarily an increase in fertility. Bulatao and

Fawcett (1981) suggest that fertility may be reduced by the existence of gender preference because of the risk that the next child may be of the "wrong" sex. In Korea, this possibility cannot be discounted.

An alternative hypothesis would suggest that son preference may become a more important element in the future course of Korean fertility. According to this argument, son preference has a negligible effect on fertility when the TFR is at a level of five or six children, but will gain in importance as the TFR approaches a level of two or three children. In this case, further substantial reductions in fertility would be unlikely without major changes in the social and cultural values that support son preference attitudes.

There are thus a number of opposing arguments and very little empirical research on the present and future effects of son preference on fertility. This topic must therefore remain a matter for speculation.

NOTES

- 1 In some surveys, respondents were asked the ideal number of children for women in Korea; in others, they were asked for their personal ideal or desires; and in others, the precise nature of the question was not clear.
- 2 A detailed discussion of gender preference for children is presented in the next section.
- 3 The results of the Survey of Economic Factors in Fertility cited here and in the remainder of this chapter are found in N.H. Cho et al. (1977).
- 4 It should be noted that women are particularly concerned with the issue of old age security (Lee and Kim, 1979) since they are generally younger than their husbands, and their life expectancy is considerably higher; therefore, they can expect to live for many years after their spouse's death.
- 5 Costs may be felt more acutely at higher parities because personal tax exemptions are limited to the first two children; however, this factor would only be important for couples who pay an income tax.
- 6 See Chapter 4 for a more detailed explanation of this thesis.

CHAPTER 6

FAMILY PLANNING AND ABORTION

DEVELOPMENT OF THE NATIONAL FAMILY PLANNING PROGRAM

The major social changes in Korea that have been linked to the modernization process and industrialization brought about a transformation in the value of children. Individual couples began to appreciate the benefits of having small families and the government began to realize the need for a reduction in the rate of population growth. These perceptions prompted the development of a major national family planning program and led to its early success. This chapter begins with a review of the historical development of the national family planning program and past and present trends in contraceptive use. The chapter concludes with a discussion of the use of induced abortion and its impact on fertility rates.

As discussed in Chapter 1, the late 1950s were years of very high fertility. This period was preceded by a series of important political events: in April 1960, there were massive student protests that eventually led to the overthrow of the Rhee government and the establishment of an interim government. A new government, formed a few months later, undertook a major national development program. The so-called National Reconstruction Movement peaked in 1962-63, when over half of the roads to rural villages were improved and clubs were organized for women aged 19-45 in each of the 45,000 villages in the country. The new government also began to evince an interest in family planning. This interest was strengthened in early

This chapter is based on a number of reports describing the family planning program in Korea, especially the history by Kim et al. (1972).

1961 when it was announced that the gross national product had increased by only 2.6 percent the previous year, while the population growth rate (based on 1960 census results) was a whopping 2.9 percent, more than enough to cancel the small economic gain. Private-sector family planning efforts also helped stimulate the interest of both the government and civic leaders.

The Planned Parenthood Federation of Korea (PPFK) was founded in the spring of 1961 following contacts with the International Planned Parenthood Federation (IPPF) at international meetings, through IPPF's publications, and through visits of IPPF personnel. The head of the National Reconstruction Movement became president of PPFK. Since its formation, PPFK has worked closely with and has been subsidized by the Korean government, coping with politically sensitive family planning issues and occasionally shielding the government from criticism. It has also played an important international role in population and family planning.

PPFK was also instrumental in the establishment of Korea's national family planning program in 1962. When this program began, the local health infrastructure was quite weak, and there was no established health network below the gun (county) level. The government did not complete its goal of establishing one health center in every shi (city) and gun until 1963. When myun (township) family planning workers were finally hired in 1964, they were put under the myun chief in the regular government office rather than under the health administration. This system had the unexpected advantage of making the myun chief responsible for the success of the family planning program, but it had the disadvantage that the family planning worker's role was usually diluted with other work in the myun office. Nevertheless, efforts were made to minimize the size of the central organization, and most of the money for the program was distributed at the local level.

When the family planning program was first established, it offered only traditional contraceptive methods and vasectomy. A major expansion was facilitated by the inclusion of family planning expenditures in the investment section of the national budget in 1963. At the end of the same year, the program was extended to provide a family planning worker for each of the country's 1,473 myun, and a mass IUD program was announced. On this basis, the government set a target of reducing the population growth rate from 2.8 to 2.0 percent annually

by 1970. In a single year, the number of family planning field workers increased from 366 to 2,970, and the annual number of loop insertions increased from 2,000 to 107,000; by 1967 the program had inserted its millionth loop (Cho and Perry, 1979:103). The number of physicians who completed the basic training course in family planning each year rose from 45 in 1962 to 1,154 in 1964, then gradually tapered off (Korean Institute for Family Planning, 1978:367).

By 1964, 18 percent of the government's total health budget was allocated for family planning. This rose to 30 percent in 1966 before it began to decline, reaching a level of only 13 percent by 1970. In the first six years of the program, foreign assistance accounted for 18 percent of total family planning expenditures by the government and by PPFK. Most of the local funds were spent for organizational activities and contraceptive supplies; most of the foreign funds were spent on demonstration projects, equipment, research, evaluation, training, and information and education.

The largest foreign donors during the 1960s were IPPF and the Population Council. After 1967, the United States Agency for International Development (USAID) began to provide large-scale support to Korea's family-planning programs. In addition, the Swedish International Development Agency (SIDA) contributed substantial funds to build the Korean Institute for Family Planning's modern training and research facilities. As a consequence, mainly of USAID and SIDA funding, the foreign share of total family planning rose to about 40 percent around 1970.

The Ministry of Health and Social Affairs (MOHSA), which administers the family planning program, gave PPFK responsibility for the national information and education campaign during the 1960s; it gave KIFP the task of training family planning personnel, and conducting research and experiments. In 1963, 125,000 posters and 2.3 million calendars were distributed in rural areas. The following year, posters and calendars were supplemented by about 1.5 million leaflets on contraceptive methods and 400,000 counter cards for restaurants. Flip charts and pelvic models were also distributed for use as educational aids. In 1965, even more innovative items such as fans for family planning acceptors and mirrors with loop messages for beauty shops were introduced. The thrust of the program began to change in 1966 with the introduction of mobile teams consisting of a health educator and a family planning worker. These teams

conducted group meetings and showed informational films in villages, in addition to providing clinical services. Both group meetings and media messages have been invaluable for spreading family planning information and motivating acceptors. In 1968, the monthly magazine Happy Home was started for the members of 17,000 Mothers Clubs that were set up that year (see the next section for a fuller discussion of these clubs). Since the beginning of the family planning program, both government and private radio stations have carried a substantial amount of family planning material. Discussion sessions have been broadcast, and the availability of contraceptive methods has been publicized through spot announcements. At the present time, there continue to be spot announcements every other day, plus special programs from time to time.

Although PPFK and MOHSA have been most active in the family planning program over the years, other agencies have also played important roles. The Ministry of Home Affairs, through the local government organizations and later the New Village Movement (Saemaul Undong), mobilized support for family planning; the Ministry of Culture and Public Information contributed to the success of media campaigns; and the Ministry of Education was instrumental in the introduction and expansion of population education activities. Finally, the army has provided family planning education to large numbers of military personnel.

MOTHERS CLUBS

In 1968, the Planned Parenthood Federation decided to establish "Mothers Clubs" in rural areas, basically to overcome traditional resistance to both smaller-size families and modern contraceptive practice. From the beginning, these clubs were planned only for rural areas, principally because of (1) the socially cohesive informal networks that have traditionally bound families and individuals in the villages; and (2) social institutions, based on traditional values, that have resisted radical social change in these areas. The idea was to promote family planning in the conservative rural sector by making use of the existing informal networks of married women. Urban areas generally had much greater access to contraceptives through both commercial channels and city health centers; moreover, urban women, having lower fertility levels and better education, were already more

highly motivated to accept family planning. Furthermore, the informal networks existing in the villages did not exist in urban areas.

The stated objectives of the Mothers Clubs were to motivate village women to accept and practice family planning, to facilitate family planning communication, and to mobilize support for the government's population policy. For tactical reasons, they also engaged in such related activities as health education for better sanitation, small-scale banking functions, and neighborhood assistance projects.

At the time the clubs were formed, there were roughly 16,800 legal villages in Korea, with one legal village usually consisting of several natural villages. In 1973, there were some 22,500 clubs; during the peak of Mothers Clubs activity, they were operated by about half of the natural villages. The clubs ranged in size from 12 to over 40 members; as they became more active, they gradually grew larger, with the average club size increasing from 23 in 1968 to 31 in 1972. The clubs met about once a month, and according to a 1974 survey, had an overall attendance of about 76 percent (H.J. Park et al., 1974:177-182). The survey also showed that 10 percent of the clubs were very active, 38 percent active, 37 percent were moderately active, and 15 percent inactive; in other words, about one half were functioning productively.

It is extremely difficult to evaluate quantitatively the contribution of these clubs to the success of the family planning program and to actual fertility reduction in Korea, although such attempts have been made. For example, Park and Chung estimated that roughly 33 percent of couples practicing family planning in 1974 did so on the advice of the Mothers Clubs (H.J. Park et al. 1974:191). Where they were actively functioning, the clubs effectively recruited new acceptors, provided valuable assistance in introducing and winning acceptance of new contraceptive methods, and contributed to continued use by serving frequently as convenient, additional distributors of such contraceptives as pills and condoms. They also provided important channels for information and education about family planning. At the community level, club leaders encouraged village leaders to participate in family planning activities.

In the initial stages of the family planning program, field workers in the rural communities played a fairly effective role; in subsequent years, however, they tended

to be younger and unmarried and to show high turnover. The Mothers Clubs, composed of older, married women, provided social and psychological support to these workers and to family planning acceptors. The clubs also helped eliminate taboos against discussing sex and family planning, and contributed indirectly to improving women's status giving them more active community roles and leadership.

The Mothers Clubs existed and operated for 10 years beginning in 1968, after which they were integrated into the nationwide "Saemaul," or New Village Movement. This movement, still actively operating, is a comprehensive effort toward developing and modernizing the rural sector of the country (for further discussion, see M.-G. Lee, 1980). By 1978, a major decline in fertility had been achieved, as discussed in Chapter 2. Whether or not the Korean family planning program would have achieved the high level of contraceptive practice without the Mothers Clubs is a moot question. Certainly, the clubs were an important factor in the success of the Korean family planning program, and consequently in the reduction of marital fertility.

TRENDS IN CONTRACEPTIVE PRACTICE

The expansion of the government's family planning program was followed by a major increase in contraceptive practice. Table 27 shows contraceptive practice rates by women's age and residence for 1966, 1971, 1976, and 1979. The last column of the table indicates that the practice rate increased 2.7 times in 13 years, from 20 to 54 percent of currently married women age 15-44. The urban practice rate was four to eight percentage points higher than the rural practice rate between 1966 and 1976, but only one percentage point higher in 1979, indicating a rapid urban-rural convergence between 1976 and 1979. Table 27 and Figure 8 also show that practice rates increased substantially at all ages, but especially at ages 30 and above. For the country as a whole in 1979, the practice rate ranged from 18 percent at ages 20-24 to 72 percent at ages 35-39. The practice rate at ages 40-44 was lower than that at ages 35-39, perhaps partly because some women feel they are not able to have more children at this age and hence do not use contraception.

TABLE 27 Contraceptive Practice Rates by Woman's Age and Residence, 1966-79 (percent of currently married women): Republic of Korea

Residence and Date	Age					Total
	20-24	25-29	30-34	35-39	40-44	
<u>Whole Country</u>						
1966	3	13	29	32	14	20
1971	7	15	28	38	27	25
1976	15	32	56	62	45	44
1979	18	41	68	72	53	54
<u>Urban</u>						
1966	5	19	36	33	13	26
1971	7	17	32	45	29	27
1976	18	37	60	66	48	48
1979	19	43	69	72	55	55
<u>Rural</u>						
1966	3	10	25	30	15	18
1971	5	14	24	34	25	23
1976	12	25	50	57	44	40
1979	16	36	67	72	51	54

Note: The last column refers to currently married women aged 15-44. For 1971, 1976, and 1979, the 20-24 age group includes currently married women aged 15-19.

Sources: Korean Institute for Family Planning (1978:313); K.S. Koh et al. (1980b:106).

Table 28 presents contraceptive practice rates by women's education and residence. It is noteworthy that by 1966, college-educated women were already modern in their contraceptive behavior. Indeed, their practice rate of 46 percent in 1976 was slightly lower than it was in 1966. This decline occurred because of the increase in the proportion of college-educated women who lived in rural areas and had lower practice rates than their urban counterparts; practice rates for urban college-educated women increased slightly over the decade. In 1966, practice rates increased steeply and monotonically with education, but from 1971, a contraction of educational differentials began to take place. In 1976, practice rates were very similar from one educational group to the next, although those with a high school or college education still tended to have higher rates than those

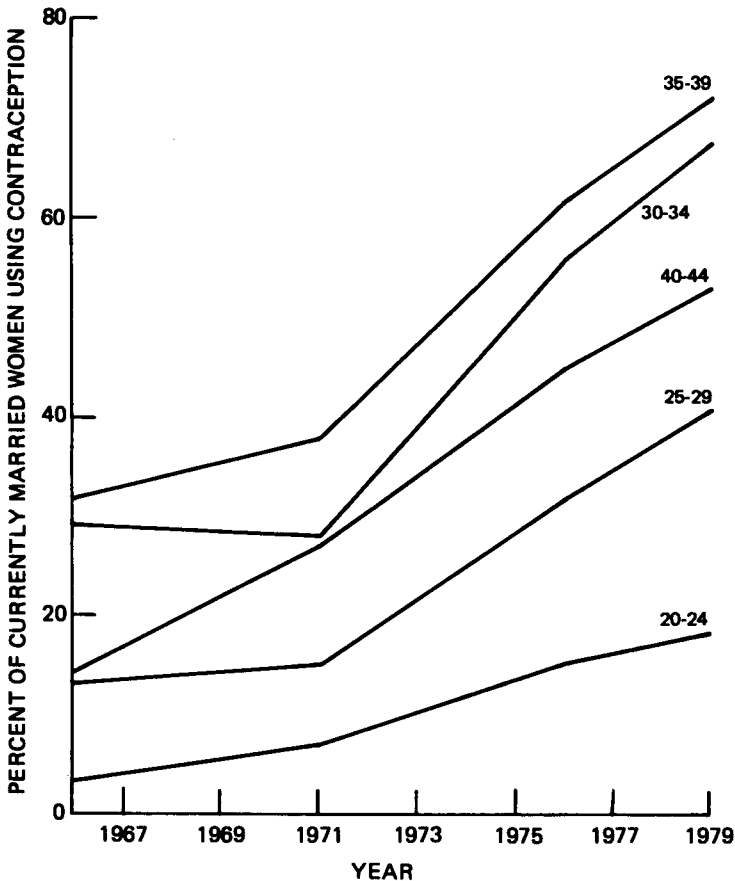


FIGURE 8 Contraceptive Practice Rates by Woman's Age: Republic of Korea

with less education. The patterns of urban-rural differences in practice rates within educational categories did not change much over the 13-year period; the gradual disappearance over time of educational differentials was taking place both in urban and rural areas.

The almost complete disappearance of rural-urban differentials in contraceptive practice by 1980 can be credited to the wisdom of the early program leaders and administrators in focusing their efforts on the traditionally high-fertility rural areas. Program

TABLE 28 Contraceptive Practice Rates by Women's Education and Residence (percent of currently married women aged 15-44) 1966-79: Republic of Korea

Residence and Date	Education				
	None	Primary	Junior High	High School	College
<u>Whole Country</u>					
1966	16	20	32	40	49
1971	21	25	25	32	38
1976	38	41	41	46	46
1979	51	54	53	58	61
<u>Urban</u>					
1966	14	23	36	40	51
1971	19	27	24	35	36
1976	41	46	47	54	53
1979	52	54	53	59	61
<u>Rural</u>					
1966	16	18	26	43	--
1971	21	23	25	21	44
1976	39	41	38	40	44
1979	51	55	53	52	62

Sources: Korean Institute for Family Planning (1978:315). The values of 16, 14, and 16 for 1966 in the first column are approximate values obtained by averaging practice rates for "illiterate" and "read Korean" in Korea, Ministry of Health and Social Affairs (1966:163) (the figures in the KIFP source are erroneous).

administrators argued that contraceptive needs in urban areas would be met by the private sector. Changing patterns in contraceptive sources in rural and urban areas support this argument. The proportion of users obtaining contraception from the government program has gradually declined: in 1966, 80 percent of current users obtained contraceptives from the government program, while in 1976, this figure was only 50 percent (Korean Institute for Family Planning, 1978:313). The expansion of nongovernment services has occurred principally in urban areas, largely because drug store contraceptive purchases involve no filling out of forms or lengthy waits and usually no prescription; rising incomes, making contraceptive costs less burdensome, together with the rather small price differences between government and nongovernment contraceptives, have also contributed to

the increased use of the latter. Since 1976, the proportion obtaining contraceptives from the government may have risen somewhat because of the increased subsidy of sterilization, which will be discussed later.

USE OF DIFFERENT CONTRACEPTIVE METHODS

Table 29 shows contraceptive practice rates by method. In 1966, the most popular method was the IUD, followed by the condom; however, virtually all of the increases in practice between 1966 and 1976 are accounted for by other methods--the pill, sterilization, and "other" (e.g., diaphragm, spermicides, douche, rhythm, withdrawal). The

TABLE 29 Contraceptive Practice Rates by Method of Contraception and Residence (percent of currently married women aged 15-44), 1966-79: Republic of Korea

Residence and Date	Method				
	IUD	Pill	Condom	Steril- ization	Other
<u>Whole Country</u>					
1966	9	1	6	2	2
1971	7	7	3	4	4
1976	11	8	6	8	11
1979	10	7	5	20	12
<u>Urban</u>					
1966	9	1	9	3	4
1971	5	7	4	4	7
1976	8	8	8	11	13
1979	6	6	6	24	13
<u>Rural</u>					
1966	9	0	5	2	1
1971	8	7	2	3	3
1976	13	8	4	6	9
1979	15	8	4	16	11

Note: Sterilization figures include male as well as female sterilizations. Method-specific rates in this table add, to within small rounding errors, to overall practice rates in the last column of Table 6.1.

Source: Korean Institute for Family Planning (1978:316).

IUD practice rate actually declined in urban areas, although it increased in rural areas and remained approximately constant in the country as a whole.

As noted above, the IUD was greatly emphasized from the beginning of the national family planning program; it was the only effective method known to the program administrators and leaders. The major push for IUD acceptance was in rural areas, as is reflected in Table 29. The argument behind this emphasis on IUD acceptance was that the level of education among eligible women in rural areas was low, and the method was rather simple to administer: it did not require the services of medical doctors, and individual acceptance and practice were easily achieved without much educational effort.

In the early stages of the family planning program in 1963-64, IUDs were introduced on a large scale and were rather favorably accepted. Nevertheless, there was some cultural resistance. In his study of fertility in a rural community in 1964, Cho (1966) found that not all the villages in the area accepted IUDs. Villages with effective leaders who were younger and had a modern outlook were more accepting, but villages under conservative leadership resisted. Eventually, of course, all rural areas came to adopt IUDs as a principal contraceptive method. Acceptance of the IUD also meant a serious decision by the individual to control births. The IUD drop-out rate was very high during the 1970s, reaching 51 percent by the end of the first year (Moon and Han, 1973). However, IUDs played the important role of initiating contraceptive behavior in addition to preventing births; IUD drop-out was usually followed by either abortion or adoption of other contraceptive methods.

The government program did not introduce birth control pills on a large scale until 1968; by then, IUD drop-outs were increasing, and couples were searching for an alternative method other than abortion. As shown in Table 29, use of the pill increased at approximately the same rate in both rural and urban areas. Another noticeable change in the trend of contraceptive practice since 1976 is the rapid increase in the use of other methods, such as withdrawal and rhythm, in both rural and urban areas.

It is not apparent in the table, but the upsurge in sterilization, which was particularly marked in urban areas, occurred only after 1972. Before that date, sterilizations were limited mainly to vasectomies, and the number of female sterilizations was negligible. A dramatic surge in the latter occurred in the two-year

period 1975-77, with the rate rising from 11 to 53 tubal ligations per 1,000 ever-married women age 20-39. This increase has been attributed to the introduction of laparoscopy (a simplified outpatient procedure) into the government program in 1976 and the tripling of government payments in 1977 from 5,000 to 15,000 won (U.S. \$10 to U.S. \$30) to physicians performing the procedure. Prior to 1977, the government subsidy covered only one third of the fee, leaving the patient to pay the other two thirds. In 1976, the proportion of couples sterilized in the private sector exceeded the proportion sterilized in the government sector; by 1978, this differential had been reversed (Westoff et al., 1980:130-137).

The female sterilization rate increased substantially in both rural and urban areas at every age and marital duration and at every parity and educational level. Perhaps because of the increases in the government subsidy, however, the greatest surge in female sterilization occurred at lower educational (and, presumably, income) levels; the sterilization rate did not increase much for college-educated women (Westoff et al., 1980:137). The surge was also notable among those who had never previously used contraception: in 1977, female sterilization accounted for 22 percent of all new acceptors in the government program (Korean Institute for Family Planning, 1978:291). Since 1977, two-child families with a wife under 40 who has undergone contraceptive sterilization are given preference for new government housing (Nortman and Hofstatter, 1980:23), although the import of this policy has yet to be evaluated.

Among currently married fecund women who want no more births (the group that is most likely to elect sterilization), 26 percent were sterilized as of 1978. Another 29 percent were using other efficient methods (pill, IUD, condom, diaphragm, spermicides). The remaining 45 percent were either using inefficient methods (rhythm, withdrawal, douche, and folk methods) or were not using contraception at all (Westoff et al., 1980:137). Many of these women used abortion, which will be discussed later in this chapter. Because of the widespread use of abortion, the substantial increase in sterilization after 1976 averted only a moderate number of births. In 1977-78, sterilization averted 0.84 pregnancies per woman, of which 0.30 would have resulted in births and 0.54 in induced abortions. The sterilization program has thus had a major impact in reducing the number of abortions (Westoff et al., 1980).

Direct computation of births averted indicates that the national family planning program accounted for about 37 percent of the decline in the birth rate for women aged 15-44 between 1963 and 1973. The effect of the program was largest (in the neighborhood of 54 to 60 percent) at ages 25-44; at ages below 25, rising age at marriage accounted for most of the fertility change (Khoo and Park, 1978:70). This estimate of impact is approximate, since it depends somewhat on educated guesses about potential fertility and substitution rates. Regarding the latter, it was assumed that 20 percent of acceptors in the government program would have obtained contraception in the private sector had the government program not been available.

Multivariate areal analyses also indicate that the national family planning program contributed to fertility decline. Standardized regression coefficients indicate that both the program and socioeconomic changes have contributed; however, results from such studies depend a great deal on which variables are included in the analysis. Cho and Perry (1979:110) found that the availability of pharmacies strongly influenced total marital fertility in 1970, more so than did the IUD acceptance rate. K.S. Koh et al. (1980a:21) found that availability of doctors and family planning workers (variables not included in Cho and Perry's analysis) substantially influenced the TFR in 1975.

In spite of Korea's lowered fertility rates, the absolute number of births could increase as women born during the "baby boom" of the late 1950s enter the high-fertility age group. To forestall this, the government established a Population Policy Deliberation Committee in 1976, chaired by the Deputy Premier and Economic Planning Minister. Beginning in 1977, a revision of the income tax law limited tax exemptions to two rather than three children per family. Operationally, the family planning program has increased field workers' salaries, and plans are underway to increase services to special groups such as industrial workers and the very poor (Nortman and Hofstatter, 1980:23).

The new government under President Chun decided to continue to push the family planning program, and recently legislated an incentive scheme to discourage large families. According to this new scheme, to be implemented from 1982, families with three or more children will have to pay a higher residence tax and higher fees for medical insurance. Other benefits for

small families include priority in public housing, maternal leave for public-sector employees, and maternal medical service benefits. Also, as noted above, to counter the persistent preference for sons, new legislation has been proposed to attempt to correct those aspects of the inheritance system that are unfavorable to women.

The target in the Fourth Five-Year Plan was to reach an annual growth rate of 1.6 percent by the end of 1981. However, results from the 1980 census show that the average annual growth rate between 1975 and 1980 was 1.5 percent (see Table 1), and the target was thus already achieved by 1980. So far, moreover, the resurgence of births has failed to materialize.

The Fifth Five-Year Plan calls for continued family planning efforts and further reduction in the population growth rate. Because the proportion of women of child-bearing age will substantially increase in the years to come, the Plan sets a fairly realistic target of a 1.5 percent growth rate for 1986. If this is to be achieved, the family planning practice rate must increase to 56 percent by 1982 and 67 percent by 1986.

INDUCED ABORTION

In recent years, populations with a so-called Chinese cultural background have been successful in reducing their fertility levels, usually at a more rapid rate than European populations. These frequently cited "family planning success stories" occurred first in Japan and then in other East Asian nations, and in the Chinese populations of Singapore and Malaysia. All these populations have historically been under the influence of the Chinese culture, for which induced abortion and infanticide were traditional practices. In the absence of modern contraceptives, it is considered quite natural for a woman to resort to abortion to terminate an unwanted pregnancy. This happened on a massive scale in Japan after World War II. As modern contraceptive methods are introduced, the use of abortion as a method of birth control becomes less prevalent, but it never completely disappears. Abortion in these populations still serves as the ultimate means of birth control when other, more convenient methods fail, and this is particularly true in Korea. Asian cultures which sanction induced abortion or infanticide will probably complete the fertility transition more quickly than those which do not; consequently,

among the former, abortion tends to play a major role in the initial stage of the fertility transition (Cho, 1977).

THE PREVALENCE OF INDUCED ABORTION

Although detailed statistical information on abortion is scarce and tends to be incomplete, it can be said that induced abortion has been an important means of family-size control and thus a major intermediate determinant of Korean fertility levels, at least since 1960. Before the initiation of the national family planning program in 1962, it was the only effective method of fertility control. However, induced abortion is known to have been very rare during the period of Japanese colonialism. A small black market in abortions arose immediately following the liberation of Korea in 1945, and an increasing number of "backyard" abortions were performed during and after the Korean War (1950-53). Abortions occurred mainly in the cities, especially the large ones, on a very limited but growing scale (Caldwell, 1969). The major motivation for abortion at that time was to terminate illegitimate pregnancies resulting from forced or unavoidable situations during the period of war and extreme social unrest; because of such incidents, abortion became socially acceptable, though it remained illegal.

Various studies clearly indicate that induced abortion for family limitation started in the late 1950s and was rapidly diffused to a significant proportion of the urban population beginning around 1960. An early abortion survey in Seoul discloses that one abortion took place for every two births in 1963, and that more than 90 percent of abortions in the early 1960s were induced for the purpose of family limitation (S.B. Hong, 1971:20 and 47). According to an estimate by Han (1973:71-78), based on the 1971 National Fertility-Abortion Survey, the ratio of the total abortion rate to the TFR (approximately equivalent to the ratio of the total number of abortions to the total number of births) was 22 percent in Seoul, 18 percent in other urban areas, and 3 percent in rural areas.

Although self-reported data on abortions are known to be unreliable, there is considerable evidence that induced abortion has become more prevalent since 1960, except in the years around 1970. The proportion of ever-married women who had experienced an abortion was

TABLE 30 Percent of Ever-Married Women Who Have Experienced an Induced Abortion: Republic of Korea

Region	1966	1971	1976
Whole Country	13	26	39
Seoul	25	40	50
Other Urban	23	34	41
Rural	10	19	29

Sources: Han (1973:73); B.T. Park et al. (1979:147).

reported to be 13 percent for the whole country in 1966 and 39 percent in 1976, while the total abortion rate has been estimated at 550 per 1,000 ever-married women for 1960, 1,347 for 1966, and 2,310 for 1976 (see Tables 30 and 31). Such a drastic change in the prevalence of abortion has been accompanied by a concomitant change in attitudes: according to a survey in a middle-sized town, the proportion of women who disapproved of abortion was 54 percent in 1965 (Lee, 1965:20); national surveys of fertility and family planning show the rate of disapproval to be 45 percent for 1971 and only 8.5 percent for 1976 (B.T. Park et al., 1979:254).

Although abortion was illegal in Korea except for medical or maternal health reasons until 1973, legal action against abortion has rarely been taken, and a majority of the population has treated abortion, along with contraception, as a proper means of family limitation. One important factor contributing to this situation and thus to the high prevalence of abortion is a lack of opposition to illegal abortion among medical personnel and lawyers (Ham and Jon, 1965). More than 90 percent of abortions were reported to have been performed in authorized medical clinics even before legalization in 1973, at a cost so small that it did not constitute an economic strain even for the poor (Hong and Watson, 1976:95-96). In fact, the average cost for an abortion in 1971 was reported as U.S. \$7.50, which was equivalent to three days' wages for unskilled laborers; the 1968 abortion survey in Seoul reported similar costs (S.-B. Hong, 1971:45-46).

TABLE 31 Total Induced Abortion Rates (per 1,000) by Type of Area, 1960-76: Republic of Korea

Year	Whole Country	Seoul	Other Urban	Rural
1960	550	1,184	1,001	249
1961	610	1,658	848	264
1962	748	1,562	906	468
1963	935	2,146	1,223	522
1964	992	1,878	1,342	632
1965	1,326	2,964	1,623	753
1966	1,347	2,764	1,653	830
1967	1,413	2,452	2,086	855
1968	1,430	2,430	2,087	899
1969	1,755	2,424	2,794	1,142
1970	1,652	2,004	2,446	1,200
1971	1,590	2,114	2,100	1,170
1976	2,310	2,720	2,430	1,890

Sources: Han (1973:73); B.T. Park et al. (1979:147).

In addition to a growing desire for family limitation and a low level of economic and social constraints, the rapid dissemination of abortion in the 1960s seems to have been partly due to the frequent failure of contraceptive methods and a widely prevailing distrust of both contraceptives and sterilization. Many studies on abortion reveal a close association between family planning practices and abortion (Hong and Watson, 1976:120-23; S.-U. Kim, 1980). For example, the proportion of contraceptive users among women with abortion experience was 76 percent in 1971, while that among women with no abortion experience was 33 percent. In a pregnancy-interval analysis based on the 1974 KNFS data, Choe (1980) demonstrates that women with abortion experience were generally "bad" contraceptive users as compared to women who relied on contraceptives only. It was found from various in-depth interviews (in the 1965 and 1974 Ichon surveys and in an anthropological survey of population processes in Korea by S.B. Han and others) that a considerable number of women preferred induced abortion to contraceptives or sterilization for family planning and had had multiple abortions, even though 95 percent of women still consider abortion to be hazardous to one's health (B.T. Park, et al., 1979:161). The proportion of ever-married women who had experienced

abortion more than once is reported to have been 7 percent for the entire nation in 1966, 13 percent in 1971, and 22 percent in 1976 (B.T. Park et al., 1979:147; Korean Institute for Family Planning, 1978:330). According to the 1976 National Fertility and Family Planning Evaluation Survey, the majority of women would abort a birth if it resulted from the failure of contraceptives or if it were unwanted (B.T. Park et al., 1979:159-60).

Table 31 shows that the abortion rate reached a plateau around 1970 and resurged in the mid-1970s. The plateau may be explained by the increasing availability of effective family planning methods after 1965, while the resurgence may be explained by the legalization of abortion for family limitation in May 1973, since which time the government has vigorously promoted abortion as an important component of the national family planning program.

PATTERNS AND DIFFERENTIALS OF ABORTION

As stated above, abortion became popular first in big cities, then in small cities, and finally in rural areas. The rate of abortion peaked in 1965-66 in Seoul and in 1969-70 in other cities, thereafter fluctuating with a tendency to decline, in the early 1970s (see Table 31). The rate for urban areas, including Seoul, rose again in the mid-1970s, although it had not quite reached its former peak levels by 1976.

A nearly incessant increase in the rate of abortion has been observed in rural areas since the early 1960s. As a result, the urban-rural gap in the prevalence of abortion was reduced gradually during the first half of the 1960s and rapidly after 1965. The rate of abortion in rural areas was estimated at about 20 percent of the urban rate in 1960 and 70 percent in 1976. The marked regional gap in the early years is largely accounted for by a scarcity of doctors and a relatively small abortion market; moreover, although various surveys found rural women more favorable to abortion than urban residents, the former apparently felt more anti-abortion pressure within the more intimate rural community. With the growing abortion market and increasing population pressure, rural women became increasingly exposed to abortion. The legalization of abortion in 1973 was particularly important in expanding rural abortion practices since the national family planning program was concentrated in these areas.

With the growing prevalence of abortion and the rapid decline of fertility, the first incidence of abortion for an individual woman started to take place at an increasingly early age and parity. For instance, the proportion of pregnancies that terminated in induced abortion in the third parity was 1 percent in 1960, 9 percent in 1965, and 11 percent in 1970 (Han, 1973:8). Overall, abortion is concentrated among women aged 30-39, with the degree of prevalence dropping toward both ends of the reproductive span, according to either the age-specific abortion rate or the ratio of abortions to live births (Korean Institute for Family Planning, 1978:334; Park, Choi & Kwon, 1979:152). The rising incidence of abortion in the early reproductive ages is usually interpreted as indicating the recent increased use of abortion for spacing between children.

According to a series of abortion surveys in Seoul, the relationship of an individual's socioeconomic background to abortion use changed significantly during the 1960s. In 1964, abortion was much more commonly practiced among women of higher socioeconomic status; there was a strong positive association between abortion and women's educational, occupational, and economic status. This pattern shifted partially in 1970: abortion became most extensive among middle-status women and decreased slightly in the upper-status group (S.-B. Hong, 1971:26-42); similar observations can be made based on national abortion data from a variety of sources compared in sequence (see Han, 1973:13-26; S.-U. Kim, 1980; B.T. Park et al., 1979:145-50).

Religious background has little association with abortion use; even Catholics have about the same level of use as women in other religious groups or those with no religion. Based on the 1974 KNFS data, S.-U. Kim observed that an extended family composition tends to be associated with somewhat less frequent abortion use, indicating the parental anti-abortion pressure due mainly to a difference between parents and children in desired family size. Lack of privacy may also act to discourage abortion.

From various surveys, very consistent differentials in attitudes toward abortion are observed by women's age, current residence, and other major socioeconomic background characteristics. However, these patterns are generally opposite to those observed for actual abortion behavior, and there is no significant statistical relationship evident between abortion behavior and attitudes (S.-U. Kim, 1980; Han, 1973:58). This

suggests that actual use largely depends on the couple's motivation to control family size and satisfaction with available family planning methods, rather than on their attitudes.

ABORTION AND THE PRACTICE OF FAMILY PLANNING

As mentioned above, abortion has been considered an important means of fertility control in Korean society since the late 1950s; it is also clear from the above discussion that abortion trends have been very positively correlated with family planning practices, indicating that abortion is not simply an alternative to contraceptives. Hong and Watson (1976:120-139) observed the following relationships between abortion and contraceptive use based on the 1971 National Fertility-Abortion Survey:

The proportion of contraceptive users is much greater among women with abortion experience than among those without.

Contraceptive use after abortion is more frequent than that prior to abortion, and abortion is more common among previous contraceptive users than among non-users. In general, the use of contraception and abortion stimulate each other.

Sterilization and abortion are largely mutually exclusive. The proportion of women sterilized after abortion is very minor (12%), compared to the women who previously adopted contraceptives (27%).

A considerable portion (42%) of women remain unprotected from another pregnancy after abortion.

Using the same data, S.-H. Han made the following additional observations (1973:31-47):

The distribution of women with abortion experience is much wider compared to contraceptive users. In other words, the proportion of abortion users is relatively high both in young and late reproductive ages.

Contraception is usually started after the second birth, but induced abortion frequently occurs at the first or second parity of pregnancy.

Selectivity in abortion utilization in terms of the socioeconomic background, particularly the level of educational attainment of women, occupation of the husband, and number of modern objects owned, is far greater than that in contraceptive use.

Although there has been no systematic effort to examine the relationship between abortion and contraceptive use based on more recent data, it is apparent from various survey reports that the above observations are largely applicable to later years.

EFFECTS OF ABORTION ON FERTILITY

Since the 1960s, postponement of marriage, induced abortion, and family planning have been the major components of fertility change in Korea. Several attempts at decomposing the fertility decline by these three components have shown that they are more or less equally important in explaining the fertility change during the 1960s (Kwon, 1980; Repetto et al., 1981: Chapter 2; Koh and Smith, 1970:37, 56-57). It has also been observed that, in the early 1960s, the decline of fertility due to abortion was much more salient than that due to adoption of family planning methods, though this pattern was reversed in the 1970s. According to an estimate by Han (1973:69-71), the proportion of fertility curbed by induced abortion was equivalent to 3 percent of actual total fertility in 1960, 14 percent in 1965, and 18 percent in 1970; the most pronounced effect of abortion according to Han's estimates was almost 50 percent of actual total fertility in Seoul in 1965.

Estimation of the effect of abortion depends primarily on the method used to calculate the number of births averted per induced abortion. The above estimation, using the renewal process model of Keyfitz (1971), discloses that one induced abortion has the effect of averting 0.52 births. However, other studies show a considerably smaller effect: based on the same 1971 survey data, Hong and Watson (1972) roughly estimated that one abortion is equivalent to averting approximately

0.35 births, while Choe (1980) calculated the corresponding figure at 0.40 using 1974 KHS data on pregnancy intervals and a life table method. It is also highly probable that the impact of abortion on the fertility levels (as measured by the number of births averted per induced abortion) has changed significantly during the last two decades with profound changes in reproductive behavior, lactation practices, and fecundity levels; however, there is apparently no information available that would permit an assessment of such changes.

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