

WORKING EXPERIENCE OF MARRIED WOMAN AND FERTILITY IN KOREA*

Kim Doo-Sub

Based on data from the 1974 Korean National Fertility Survey, this study examines the effects of working experience of married woman on fertility in Korea. Using techniques of MCA and ANOVA, fertility differentials with respect to woman's working experience, place of working, occupation, working status, and household structure are investigated. Findings suggest that working experience of woman imposes a negative effect on fertility when current age of wife, age of wife at first marriage and socioeconomic status of the couple are controlled. However, farmers and family workers are found to have higher fertility than those who have never worked. Considering the nature of working, the hypothesis of maternal role incompatibility cannot be applied to them, and working itself does not facilitate the low fertility oriented ideas. It is found that women living with parents or grandparents tend to have high fertility in general. However, contrary to our expectation, household structure does not intervene the negative effect of woman's working experience on fertility. Implications of these findings for policy and future research are discussed.

1. Introduction

Various theories have been advanced in the past regarding the effects of working experience of woman on fertility. Numerous studies have applied the theoretical models to empirical data from various sources. In developed countries, economic activity of married woman tends to have a negative effect on fertility due to higher opportunity cost, maternal role incompatibility, and greater exposure to low fertility oriented modern ideas. But in less developed countries, especially in rural areas, such consistent relationship has not been found. It seems that maternal role incompatibility is not apparent for all the working women in less developed countries. This would be particularly the case if the household includes relatives or other members, available for child care. Thus, working experience of married woman does not necessarily impose a negative effect on fertility in less developed countries.

During the past decade or two, there has been an enormous amount of research on fertility determinants and differentials in Korea. These studies have contributed in great deal to our understanding of the fertility mechanism. However, in Korea, there has been only a few empirical studies on the relationship between working experience of woman and fertility (Lee and Cho, 1976; Koo, 1979; Park, 1985).

The objective of this paper is to examine the relationship between working experience of married woman and fertility in Korea. Analyses of fertility differentials with respect to woman's working experience, place of working, occupation, and working status are provided. Attention is focused on whether the hypothesis of maternal role incompatibility can be applied to the Korean context, and whether, and to what extent, household structure intervenes the relationship between working experience of woman and fertility. The analysis will provide the opportunity to investigate and specify more clearly the fertility mechanism. Insights and knowledge gained from this study can be used as guidelines in formulating policies for female labor force utilization as well as family

* The research on which this paper is based has been supported by the 1985 Hanyang University Research Fund.

planning program.

2. Conceptual Framework and Hypotheses

From the economic perspective, when a woman works she increases household income, and this income effect induces increased fertility. However, at the same time, the opportunity cost of woman also increases. Children make it more difficult for a mother to work, and, hence, foregone potential wage of mother, the so-called opportunity cost of the mother's time, should be considered in explaining fertility. Since the substitution effect (or price effect) is negative, there exists a negative association between the opportunity cost and number of children. Economic activity of married woman raises the opportunity cost of child care, and thus tends to discourage fertility.

It is also argued, from the sociological perspective, that woman's working experience, particularly in the modern economic sector, has a negative effect on fertility due to the role incompatibility as well as due to greater exposure to more modern ideas and information about birth control (Jaffe and Azumi, 1960; Weller, 1968a, 1968b, 1969; Mason and Palan, 1981).

Many empirical studies have found the inverse relationship between working experience of woman and fertility in developed countries (Mincer, 1963; Cain, 1966; Sweet, 1970; Mott, 1972; Cain and Weininger, 1973; Ware, 1976; Jones, 1981). The inverse relationship persists even when other demographic and socioeconomic variables are controlled (Collver and Langlois, 1962). The inverse relationship is usually found to be stronger in urban areas. Perhaps, this may be partly due to the problems of enumerating female workers in rural areas. This may bias the relationship between working experience of woman and fertility in rural areas toward zero. It should also be noted that more modern and industrial occupations are characteristics of urban areas. Women with modern or industrial occupations in urban areas are likely to be more exposed to modern ideas, values, attitudes and information about birth control than women who work in the farm (Chaney, 1977; Kim, 1984). In addition, it is likely that the conflicts associated with maternal role are more apparent in urban areas in terms of the location of working place, i.e., at home vs. outside home (Jaffe and Azumi, 1960; Stycos and Weller, 1967; Miró and Mertens, 1968; Goldstein, 1972; Concepción, 1974).

However, the relationship between these two variables varies over time and across space. In less developed countries, no consistent relationship has been found between working experience of woman and fertility. Within urban areas of less developed countries, an inverse correlation is often found. But in rural areas of less developed countries, the evidence is mixed (Blake, 1965; Kasarda, 1971; Hoffman, 1974; Newland, 1977; Westoff and Ryder, 1977). Stycos and Weller (1967) found that female employment in the traditional, informal or agricultural sector has no effect on fertility because of role compatibility of the two statuses. This is particularly true if the place of working is at home (Stokes and Hsieh, 1983). It seems that the hypotheses of wide exposure to low fertility oriented ideas and the maternal role incompatibility can be applied, only when she works in the modern economic sector and the place of working is outside home. In case of unpaid family workers, the income effect and the substitution effect are minimal, and the negative effect of woman's working on fertility is not expected.

Pinelli (1971: 609) argues that the reason for working given by the woman is crucial in relation to fertility. If a woman works because she likes or wants to work, she tends to have fewer children due to stronger role incompatibility. If a woman works because of economic necessity or for a higher standard of living, she is likely to have higher fertility compared to the former due to the positive income effect. However, it may not be the case if additional children interfere with her goal of standard of living. It can also be suspected that if a woman works due to economic necessity, it may be because she already has children and needs to support them.

According to 1984 statistics from the Economic Planning Board, 34.1 percent of married women work in Korea. While professional, administrative, and clerical workers compose only 3.9 percent, majority are farmers and related workers (63.6 percent) and simple laborers. However, female

employment is rising continuously in urban areas, and working outside home is getting more cultural and social supports. Nevertheless, the parental surrogates such as baby-sitters and child care facilities outside household are not widely available in Korea, and this hinders married women from working outside home.

Considering this Korean situation, it can be postulated that the relationship between working experience of woman and fertility is in part dependent on the household structure (Mason and Palan, 1981; Stokes and Hsieh, 1983). Household member other than the couple and their immediate children facilitate mother to work (Tienda and Glass, 1985). In a situation where another household member is available for child care, the opportunity cost of working woman may not be an important factor in explaining fertility. Rather, it is his or her opportunity cost that is relevant. If there are elderly parents or relatives in the household, for example, the price of service (child care) might approach zero. The conflicts between mothering and working also become not apparent for working woman in the extended family. Woman's working in this case, therefore, is not likely to impose a negative effect on fertility (cf. Lehrer and Kawasaki, 1985). This idea resembles the sociological hypotheses of Hill, Stycos and Back (1959) and Weller (1968a, 1968b), which relate family organization and kinship to fertility.

Besides, in general, fertility level tends to be higher in the extended family rather than the nuclear family. It is widely accepted that age at marriage tends to be low in the extended family. In addition, reproductive behavior of the couple is affected by elderly members of the household, and thus the couple in the extended family is likely to have high fertility oriented values, norms, and attitudes.

Based on the theoretical concerns and findings from previous studies, several hypotheses are proposed.

- a. Those women working outside home are likely to have fewer children ever born (CEB) than those who have never worked.
- b. Those women with occupations in the modern economic sector are likely to have fewer CEB than those who have never worked.
- c. Those women working as employees are likely to have fewer CEB than those who have never worked.
- d. Those women in the extended family are not likely to have fewer CEB even though they work.

3. Data and Methodology

The data for the analysis is from the 1974 Korean National Fertility Survey (KNFS), which was conducted as part of the World Fertility Survey. To avoid the effects of exogenous factors on fertility, the sample of this study is confined to the currently married women who were in their first marriage. The KNFS yielded samples of 5,417 women. Among them, 89.6 percent were in their first marriage. Then those cases with missing or inappropriate values for the major variables were excluded from the sample. The sample for this research is composed of 3,839 women aged 16-49.

It should be noted that there are potential biases in this selection. The fertility and working experience of woman in this sample might have been affected by the socioeconomic events that occurred during the childbearing period of this cohort. For example, women aged over 40 experienced the Korean War (1950-1953) and the post-war baby boom during their childbearing period. The exact effects of these events on fertility differentials with respect to the working experience cannot be assessed. In addition, the exclusion of women who are not in their first marriage can be a source of bias. Given the problem of accuracy and reliability of the data used, the exact effect of these sampling biases cannot be ascertained.

The independent variables of the present study are working experience of woman, place of working, occupation, working status and household structure. For those who have had more than one job, place of working, occupation and working status represent the job women had for the

longest period. The variable of household structure is categorized as follows: nuclear family composed of the couple and their immediate children, extended family with parents or grandparents, and extended family with other relatives or unrelated. The dependent variable of this study is children ever born (CEB) alive to the respondent.

To examine the refined effects of the independent variables on fertility, variables that are not the main concern of the present study but have been found to be important in explaining fertility are controlled in the process of analyses. These variables are current age of wife, age of wife at first marriage, household income, and education of wife and husband.

To test the hypothesized relationships between working experience of woman and fertility, at the first step, mean CEB of various groups classified with respect to the independent variables are compared. Then, multiple classification analysis (MCA) and analysis of variance (ANOVA) are undertaken to elaborate the causal mechanism. The MCA table shows the pattern of changes in the effects of a given variable as we introduce more variables as controls. The ANOVA table provides the statistics necessary for significance testing. In this paper, results of MCA and ANOVA are presented in one table.

4. Findings

Overall, the mean CEB for the KNFS sample of this study, composed of 3,839 women, is 3.5. Fertility differentials with respect to the working experience are provided in Table 1. Children ever born (CEB) is an indicator of cumulative fertility, and is highly dependent upon age of woman. To avoid spurious relationships caused by different age compositions, women are categorized into three age groups in this table. Table 1 indicates that women with working experience have more CEB than those who have never worked. This pattern is consistent regardless of the age group. It is

Table 1. Mean Number of Children Ever Born by Working Experience of Wife and Household Structure, Separately by Age Group

Variables	Age Group			Total
	16-29	30-39	40-49	
All Women	1.65	3.93	5.67	3.51
Never Worked	1.49	3.41	5.16	2.65
Worked	1.86	4.23	5.85	4.05
Place of Working				
Home	1.86	3.74	4.86	3.32
Farm	2.09	4.69	6.56	4.75
Outside Home	1.58	3.76	4.90	3.37
Occupation				
Prof., Manage. & Clerical Worker	1.14*	2.37*	2.29**	1.76
Sales and Service Worker	1.77	3.71	4.80	3.35
Farmer and Related Worker	2.11	4.69	6.47	4.73
Craft., Operative & Laborer	1.63	3.62	4.65	3.09
Working Status				
Family Worker	2.01	4.55	6.35	4.47
Employee	1.54	3.58	4.67	3.06
Own-Account Worker	1.89	3.90	5.39	3.82
Household Structure				
Nuclear (One Couple)	1.69	3.87	5.68	3.57
Couple with Parents or Grandparents	1.85	4.33	5.95	3.83
Couple with Relatives or Unrelated	1.54	3.68	5.24	3.02

Note: * refers to figures based on less than 50 cases.

** refers to figures based on less than 20 cases.

also found that the same pattern persists in both urban and rural areas.

There are several plausible explanations for this somewhat surprising finding. It implies that the causes of role incompatibility stressed in the literature may be inapplicable or relatively unimportant for explaining variations in fertility with respect to the working experience in Korea. Given this, two basic questions can be raised: Are characteristics of woman's working experience in Korea different from those in developed countries and those posited by the role incompatibility hypothesis? Is household structure in Korea more flexible in providing child caring, and thus women are not necessarily forced to make trade-offs between working and mothering? In an effort to find clues to these questions, this study examines fertility differentials with respect to the place of working, occupation, working status, and household structure.

When fertility is decomposed by the place of working, women who have worked on farms show markedly the most CEB in all the age groups. Against our expectation and the hypothesis of role incompatibility, women who have worked outside home tend to have more CEB than those who have never worked. The differences in CEB among women who have worked outside home and at home are minimal. In fact, for the age groups 30-39 and 40-49, women who have worked outside home tend to have slightly more CEB than the home workers.

An interesting pattern appears when fertility differentials with respect to the type of occupation are examined. Although there are only 91 professional, managerial and clerical workers (2.4%) in the sample of this study, they consistently show fewer CEB than any other groups of women including those who have never worked. Craftwomen, operatives and simple laborers are found to have fertility of the medium level. Farmers and related workers show markedly higher fertility than any other occupational categories. Fertility level of sales and service workers is also high, and ranks only behind that of farmers and related workers.

Working status of woman also makes considerable difference in fertility. Higher fertility is found among unpaid family workers, while employees have lower fertility, and own-account workers, in between. For the age groups 16-29 and 30-39, women who have been working as employees show slightly higher fertility than those without working experience, but slightly lower, for the age group 40-49.

Table 1 also shows the association between household structure and fertility. It is apparent that women living with parents or grandparents in the same household have higher fertility. Interestingly, however, women living with other relatives or unrelated show even fewer CEB than those in the nuclear family.

In sum, Table 1 support *Hypothesis b* that women with occupations in the modern economic sector tend to have lower fertility than those without working experience. But it seems that other hypotheses of this study are to be partially approved or even rejected. However, Table 1 presents only simple mean CEB by the characteristics of working experience and age of wife. It is dangerous to draw a conclusion based on these findings alone. It should be noted that some of the above findings could be misleading with respect to the true relationships among the variables. They could be spurious relationships, and could change when variables are controlled more appropriately. To test the hypothesized relationships further, multiple classification analysis (MCA) and analysis of variance (ANOVA) are undertaken. The control variables are treated as covariates in these analyses. Results of analyses, separately by residence, are presented in Table 2, Table 3 and Table 4.

The first column of Table 2 represents the number of women for each category of the variable. The numbers in the second column are simple means of each category. The next column presents the adjusted mean values for each category, when the effects of other factor and covariates are adjusted for. The *Eta* value indicates the proportion of variation in CEB explained by each factor. It is equivalent to the simple *beta* from the bivariate linear regression of the dependent variable on the factor. The *Beta* is a standardized partial regression coefficient resulting from controlling other factor and covariates. Finally, the overall relationship between CEB and all the independent and control variables (covariates) is indicated by the multiple R^2 . It indicates the proportion of variation in CEB explained by the additive effects of all factors and covariates.

Table 2 reveals that the pattern of fertility differentials changes as the control variables are introduced in the analysis. As postulated by *Hypothesis a*, women who have worked outside home tend to have fewer CEB than those without working experience. Contradictory to the findings of Stokes and Hsieh (1983), women who have worked at home also tend to have fewer CEB than those without working experience. Farm workers still show the markedly highest fertility. Although the fertility level in rural areas is much higher than in urban areas, this pattern of fertility differentials is consistent in urban and rural areas.

In Table 2, the association between household structure and fertility does not change substantially even after controlling the effects of place of working and the covariates. Higher fertility is found among those women living with parents or grandparents, while women living with other relatives or unrelated show lower fertility, and those women in the nuclear family, in between. This pattern holds true regardless of the residence.

Table 2 reveals that *Beta* values for place of working and household structure on fertility are lower than unadjusted *Eta* values. It is also found that values of multiple R^2 are quite high (0.58 and 0.66). These lead us to speculate that the covariates rather than the independent variables have stronger effects on fertility. However, the significance tests of *F* ratios indicate that the effects of place of working and household structure on fertility are statistically significant at the 0.01 level. In this analysis, the interaction effect between place of working and household structure on fertility is found to be statistically insignificant. Finally, it should be noted that the explanatory power of the

Table 2. **Multiple Classification Analysis of Children Ever Born by Place of Working and Household Structure, Separately by Residence**

Grand Mean = 3.51	N	Unadjusted		Adjusted for Independents +Covariates ¹		
		Mean	<i>Eta</i>	Mean	<i>Beta</i>	
		(URBAN)				
Place of Working			0.24		0.08	
Never Worked	1,368	2.57		3.25		
Home	390	3.04		3.23		
Farm	195	4.35		3.57		
Outside Home	527	3.17		3.10		
Household Structure			0.10		0.06	
Nuclear (One Couple)	1,674	3.35		3.22		
Couple with Parents or Grandparents	307	3.69		3.49		
Couple with Relatives or Unrelated	499	3.03		3.09		
Multiple R^2					0.58	
		(RURAL)				
Place of Working			0.15		0.03	
Never Worked	373	2.77		4.49		
Home	114	4.00		4.33		
Farm	734	4.77		4.51		
Outside Home	138	3.96		4.39		
Household Structure			0.14		0.04	
Nuclear (One Couple)	786	4.77		4.50		
Couple with Parents or Grandparents	327	4.57		4.55		
Couple with Relatives or Unrelated	246	3.86		4.24		
Multiple R^2					0.66	

Note: 1. Covariates include current age of wife, age of wife at first marriage, household income, and education of wife and husband.

2. *F* ratios for place of working and household structure are found to be statistically significant at the 0.01 level.

WORKING EXPERIENCE OF MARRIED WOMAN AND FERTILITY IN KOREA 25

independent variables is stronger in urban areas than in rural areas (*Beta*: 0.08 > 0.03, 0.06 > 0.04).

Table 3 and Table 4 present the results of MCA and ANOVA when occupation and working status of woman, instead of place of working, are introduced as factors in the analysis. In Table 3, when the effects of household structure and the covariates are adjusted, the occupational differentials in CEB are substantially reduced in both urban and rural areas. The pattern of fertility differentials also changes when the adjustment is made. Fertility of those women who have never worked becomes much higher, and shows the most CEB next to the farmers and related workers. In rural areas, fertility level of craftwomen, operatives and laborers becomes higher than that of sales and service workers. This seems to be partly due to the relatively small number of cases. Professional, managerial and clerical workers, compared to other occupational categories, tend to get married at older age and have higher socioeconomic status (Kim, 1984). Note that when these effects are eliminated, their mean CEB rise drastically to 2.91 and 4.08 in urban and rural areas, respectively. Despite of the small number of cases, however, their fertility level is still the lowest among the occupational categories.

The similar pattern is found in Table 4. Fertility of those women without working experience rises as the effects of household structure and the covariates are controlled. Those women who have

Table 3. Multiple Classification Analysis of Children Ever Born by Occupation and Household Structure, Separately by Residence

Grand Mean = 3.51	N	Unadjusted		Adjusted for Independents + Covariates ¹	
		Mean	<i>Eta</i>	Mean	<i>Beta</i>
(URBAN)					
Occupation			0.33		0.12
Never Worked	1,368	2.57		3.26	
Prof., Manage. & Clerical Worker	76	1.73		2.91	
Sales & Service Worker	480	3.23		3.15	
Farmer & Related Worker	265	4.32		3.63	
Craft., Operat. & Laborer	291	3.00		3.09	
Household Structure			0.10		0.05
Nuclear (One Couple)	1,674	3.35		3.22	
Couple with Parents or Grandparents	307	3.69		3.48	
Couple with Relatives or Unrelated	499	3.03		3.10	
Multiple <i>R</i> ²					0.59
(RURAL)					
Occupation			0.22		0.05
Never Worked	373	2.77		4.49	
Prof., Manage. & Clerical Worker	13	1.92		4.08	
Sales & Service Worker	84	3.87		4.15	
Farmer & Related Worker	831	4.76		4.52	
Craft., Operat. & Laborer	58	3.41		4.35	
Household Structure			0.14		0.04
Nuclear (One Couple)	786	4.77		4.50	
Couple with Parents or Grandparents	327	4.56		4.54	
Couple with Relatives or Unrelated	246	3.86		4.24	
Multiple <i>R</i> ²					0.66

Note: 1. Covariates include current age of wife, age of wife at first marriage, household income, and education of wife and husband.

2. *F* ratios for occupation and household structure are found to be statistically significant at the 0.01 level.

Table 4. Multiple Classification Analysis of Children Ever Born by Working Status and Household Structure, Separately by Residence

Grand Mean = 3.51	N	Unadjusted		Adjusted for Independents + Covariates ¹	
		Mean	<i>Eta</i>	Mean	<i>Beta</i>
	(URBAN)				
Working Status			0.16		0.06
Never Worked	1,368	2.57		3.26	
Family Worker	377	3.69		3.35	
Employee	345	2.90		3.07	
Own-Account Worker	390	3.36		3.25	
Household Structure			0.10		0.06
Nuclear (One Couple)	1,674	3.35		3.22	
Couple with Parents or Grandparents	307	3.69		3.49	
Couple with Relatives or Unrelated	499	3.03		3.09	
Multiple <i>R</i> ²					0.58
	(RURAL)				
Working Status			0.15		0.03
Never Worked	373	2.77		4.49	
Family Worker	752	4.70		4.51	
Employee	100	3.57		4.28	
Own-Account Worker	134	4.60		4.40	
Household Structure			0.14		0.05
Nuclear (One Couple)	786	4.77		4.50	
Couple with Parents or Grandparents	327	4.56		4.55	
Couple with Relatives or Unrelated	246	3.86		4.24	
Multiple <i>R</i> ²					0.66

Note: 1. Covariates include current age of wife, age of wife at first marriage, household income, and education of wife and husband.

2. *F* ratios for working status and household structure are found to be statistically significant at the 0.01 level.

never worked show, after the adjustment, higher fertility than own-account workers as well as employees. But their fertility level is still lower than that of family workers. This pattern persists regardless of the residence.

Table 3 and Table 4 suggest that household structure is not strongly related with occupation or working status of woman. Note that the mean CEB by household structure remains almost the same as in Table 2, in both urban and rural areas, after the adjustment for other independent variable and covariates. The significance tests of *F* ratios reveal that the effects of occupation, working status and household structure on fertility are statistically significant at the 0.01 level. The interaction effects between the independent variables are found to be minimal and statistically insignificant.

To conclude, results of MCA and ANOVA can be summarized as follows. First, *Hypothesis a* stating that women who have worked outside home tend to have fewer CEB than those without working experience is accepted. Low fertility of women without working experience in Table 1 is distorted by the effects of socioeconomic status. Evidence indicates that women who have never worked have higher education and family income than those who have worked. Duration of woman's working is negatively associated with education and family income of the couple. Most women work out of poverty or economic necessity to support their children rather than for their job satisfaction or self-realization (Kim, 1984). High fertility of the women with working experience, therefore, is due to their relatively low socioeconomic status. It is indicated that working experience

of married woman outside home impose a negative effect on fertility when the effects of socioeconomic status are eliminated. If the place of working is at home, the negative effect is reduced. But home workers still show slightly lower fertility, after the adjustment for the covariates, than those without working experience.

Secondly, analyses of differential fertility with respect to occupation and working status also reveal that those women who have worked have fewer CEB than those who have never worked, with exceptions of farmers and unpaid family workers. This supports *Hypothesis b* and *Hypothesis c* that working experience in the modern economic sector and working experience as an employee tend to lower the fertility level. Farmers and family workers show higher fertility than those who have never worked, even after the adjustment for current age of wife, age of wife at first marriage and socioeconomic status of the couple. It is reported that they are the highest fertility oriented not only in CEB but in contraception and Coombs preference scales for number and sex of children (Kim, 1984). Considering the mode of agricultural production in Korea, wife and children are main sources of labor supply. Thus the utility of children is likely to be the highest for farmers. According to the current operational definition of economic activity, most women in farm households are counted as family workers. For them, working is not extremely conflict with child care, and the hypothesis of maternal role incompatibility cannot be applied. The substitution effect due to the increase of opportunity cost of woman also seems to be minimal in this case.

Finally, women living with parents or grandparents show high level of fertility regardless of the working experience. In contrast, women living with other relatives or unrelated are found to have lower fertility than women in the nuclear family. This finding not only runs counter to our expectation but seems also to resist interpretation in terms of plausible alternative theoretical arguments. It should be noted that the interaction effects between working experience and household structure on fertility are minimal and statistically insignificant. This implies to reject *Hypothesis d* stating that women in the extended family do not tend to have fewer CEB even though they work.

5. Conclusion and Summary

It has been argued that working experience of married woman impose a negative effect on fertility. The underlying assumptions are that economic activity of married woman raises the opportunity cost of child care; that working women have less time to spend in household activities including child bearing and rearing, and thus lead to maternal role incompatibility; and that working experience may provide women a larger variety of roles and serve as a liberator from family constraints, which facilitate low fertility oriented values, norms and attitudes. Evidence shows, however, that these assumptions are not fully appropriate to the Korean situation. In fact, it is found that the simple associations between working experience and fertility are in the opposite direction.

Preliminary analyses indicate that majority of women who have worked are family workers or own-account workers in the traditional, informal and agricultural sectors, and that their place of working is at home or farm. Evidence indicates that women with working experience have lower level of education and family income than those without working experience. Substantial differences are also noticed in current age of wife and age of wife at first marriage with respect to occupational categories (KIM, 1984). It is speculated that these would be a source of distortion which leads to the negative associations between working experience of married woman and fertility.

Based on the findings from preliminary analyses, this study examines fertility differentials with respect to working experience, place of working, occupation, working status, and household structure. To avoid the spurious relationship current age of wife, age of wife at first marriage, household income, and education of wife and husband are included as control variables in the course of analysis.

Findings of analyses support *Hypotheses a, b* and *c* of this study. Working experience of married

woman itself is found to have a negative effect on fertility. However, farmers and unpaid family workers reveal higher fertility than those who have never worked. Considering the nature of working, conflicts between mothering and working is not apparent to them, and working itself does not facilitate the low fertility oriented ideas.

Attention was given to the intervening role of household structure between working experience of married woman and fertility. It is indicated that women living with parents or grandparents have high fertility in general. However, in this study, the negative effect of woman's working experience on fertility is not found to be intervened by household structure. Therefore, *Hypothesis d* stating that those women in the extended family, living with parents or relatives available for child care, do not tend to have lower fertility despite of their working is rejected. This study applies the same analytical scheme separately to urban and rural residents to investigate and specify more clearly the causal relationships. The pattern of all the above relationships is consistent regardless of the residence, and strengthens the arguments of this study.

Although the Korean government's efforts to curb rapid population growth have been successful, more efforts should be made for a further reduction of the population growth rate. The population policy of Korea has been centered around the control of population mainly by providing methods of contraception. To lower fertility more effectively, an effective linkage between population policies and various development plans should be provided, and population policies should go beyond family planning programs.

Working in the modern economic sector has been regarded as experience providing women with additional roles and interests which compete with maternal roles and family interests. However, findings suggest that, in Korea, most of the job opportunities for women are limited to the traditional, informal and agricultural sectors, and that women with higher education are less likely to work after marriage. Therefore, policies designed to increase job opportunities for highly educated women in the modern sector should be emphasized and encouraged. Also, information, education and communication activities of the family planning program should be designed to provide low fertility oriented ideas and contraceptive knowledge more effectively to working women in the traditional, informal and agricultural sectors.

It is our contention that the disparate findings, among developed and less developed countries, on the causal relationship between working experience of woman and fertility result mainly from different socioeconomic structure of societies. Fertility behavior in less developed countries should be understood within the context of a society's socioeconomic structure. One direction of future research would be to apply the conceptual framework set out here to other countries at different stages of development. This expansion may provide further insights to the nature of the relationship.

Another promising direction of future research is to focus in greater depth on the household setting of fertility behavior. Models should be developed to interpret the influence of household structure, and its interaction with working experience of woman in determining fertility behavior. More successful achievement of fertility reduction in Korea in the course of socioeconomic development may partly be dependent on such understanding of the causal mechanism.

References

Blake, Judith

1965 "Demographic Science and the Redirection of Population Policy," in M. C. Sheps and J. C. Ridley (eds.), *Public Health and Population Change*, University of Pittsburg Press.

Cain, Glen G.

1966 *Married Women in the Labor Force: An Economic Analysis*, University of Chicago Press.

Cain, Glen G. and Adriana Weininger

1973 "Economic Determinants of Fertility: Reslts from Cross-Sectional Aggregate Data," *Demography*, 10.2 (May), 205-223.

- Chaney, Elsa M.
1977 *Agripina: Domestic Service and Its Implications for Development*, Agency for International Development, Washington, D.C.
- Collver, Andrew and Eleanor Langlois
1962 "The Female Labor Force in Metropolitan Areas: An International Comparison," *Economic Development and Cultural Change*, 10.4 (July), 367-385.
- Concepción, M. B.
1974 "Female Labour Force Participation and Fertility," *International Labour Review*, 109, 503-517.
- Davis, Kingsley
1957 "Institutional Patterns Favoring High Fertility in Underdeveloped Areas," in *Underdeveloped Areas: A Book of Reading and Research*, Harper and Brothers
- Davis, Kingsley and Judith Blake
1956 "Social Structure and Fertility: An Analytical Framework," *Economic Development and Cultural Change*, 4.3 (April), 211-235.
- Goldstein, Sidney
1972 "The Influence of Labor Force Participation and Education on Fertility in Thailand," *Population Studies*, 26.3 (Nov.), 419-436.
- Goode, W. J.
1964 *The Family*, Prentice-Hall.
- Hill, R., J. Stykos and K. Back
1959 *The Family and Population Control: A Puerto Rican Experiment in Social Change*, University of North Carolina Press.
- Hoffman, Lois W.
1974 "The Employment of Women, Education, and Fertility," *Merrill-Palmer Quarterly of Behavior and Development*, 20.1 (Jan.), 99-119.
- Jaffe, A. J. and K. Azumi
1960 "The Birth Rate and Cottage Industries in Underdeveloped Countries," *Economic Development and Cultural Change*, 9.1 (Oct.), 52-63.
- Jones, Elise F.
1981 "The Impact of Women's Employment on Marital Fertility in the U.S., 1970-75," *Population studies*, 35.2 (July), 161-173.
- Kasarda, J. D.
1971 "Economic Structure and Fertility: A Comparative Analysis," *Demography*, 8.3 (Aug.), 307-317.
- Kim, Doo-Sub
1984 *Socioeconomic Inequality and Fertility: The Cases of Korea and the United States*, Ph.D. dissertation, Brown University, University Microfilms International.
- Koo, Sung-Yeal
1979 "A Study of Fertility and Labor Force Participation of Married Women in Korea," Unpublished Ph.D. dissertation, University of Hawaii.
- Lee, Hyo-Chai and Cho Hyong
1976 "Fertility and Women's Labor Force Participation in Korea," in Smithsonian Institution (ed.), *Recent Empirical Findings in Fertility: Korea, Nigeria, Tunisia, Venezuela, Philippines*, Washington, D.C., 1-26.
- Lehrer, Evelyn L. and Seiichi Kawasaki
1985 "Child Care Arrangements and Fertility: An Analysis of Two-Earner Households," *Demography*, 22.4 (Nov.), 499-513.
- Mason, Karen Oppenheim and V. T. Palan
1981 "Female Employment and Fertility in Peninsula Malaysia: The Maternal Role Incompatibility Hypothesis Reconsidered," *Demography*, 18.4 (Nov.), 549-575.
- Mincer, Jacob
1963 "Market Prices, Opportunity Costs and Income Effects," in C. Christ (ed.), *Measurement in Economics: Studies in Mathematical Economics and Econometrics in Memory of Yehuda Grunfeld*, Stanford University Press.
- Miró, Carmen A. and Walter Mertens
1968 "Influences Affecting Fertility in Urban and Rural Latin America," *Milbank Memorial Fund Quarterly*, 46.3, part 2 (July), 89-120.

Mott, Frank L.

- 1972 "Fertility, Life Cycle Stage and Family Labor Force Participation in Rhode Island: A Retrospective Overview," *Demography*, 9.1. (Feb.), 173-185.

Newland, Kathleen

- 1977 *Women and Population Growth: Choice beyond Childbearing*, Worldwatch Institute, Washington, D.C.

Park, Insook Han

- 1985 "Women's Work and Fertility in Korea: Explaining the Commonly Reported Lack of Negative Relationship," Unpublished Ph.D. dissertation, University of Hawaii.

Pinnelli, Antonella

- 1971 "Female Labour and Fertility in Relationship to Contrasting Social and Economic Conditions," *Human Relations*, 24.6 (Dec.), 603-610.

Stokes, C. Shannon and Yeu-Sheng Hsieh

- 1983 "Female Employment and Reproductive Behavior in Taiwan, 1980," *Demography*, 20.3 (Aug.), 313-331.

Stycos, J. M. and Robert H. Weller

- 1967 "Female Working Roles and Fertility," *Demography*, 4.1, 210-217.

Sweet, J. A.

- 1970 "Family Composition and the Labor Force Activity of American wives," *Demography*, 7.2 (May), 195-209.

Tienda, Marta and Jennifer Glass

- 1985 "Household Structure and Labor Force Participation of Black, Hispanic, and White Mothers," *Demography*, 22.3 (Aug.), 381-395.

Ware, H.

- 1976 "Fertility and Labor Force Participation: The Experience of Melbourne Wives," *Population Studies*, 30.3(Nov.), 413-427.

Weller, Robert H.

- 1968a "The Employment of Wives, Dominance, and Fertility," *Journal of Marriage and the Family*, 30.3 (Aug.), 437-442.

- 1968b "The Employment of Wives, Role Incompatibility and Fertility," *Milbank Memorial Fund Quarterly*, 46.4 (Oct.), 507-526.

- 1969 "Role Conflict and Fertility," *Social and Economic Studies*, 18.3 (Sept.), 263-272.

Westoff, Charles F. and N. B. Ryder

- 1977 *The Contraceptive Revolution*, Princeton University Press.