

## **Female Employment and Fertility: Further Investigation of an Ambivalent Association**

ZEBA A. SATHAR and SHAHNAZ KAZI\*

This study of the relationship between female employment and fertility is based on a survey of 1000 ever-married women in Karachi. A distinct pattern of differentials in actual performance and in desired fertility is observed across working and non-working women. Working women are not a homogeneous group, and the differences across six broad occupational groups of working women are more marked than those between working and non-working women. Women in higher status occupations marry much later than and have half the completed family size of – those women working in lower status occupations. The fertility of non-working women lies somewhere in between these two groups.

Some reasons for the fertility differentials found are identified in variations in point of entry into the labour force relative to the stage in child-bearing, in expectations from sons in old age support, and in relative facility in seeking means of fertility control. Working women in higher status occupations also have better chances of their children surviving, whereas women in lower status occupations suffer a greater toll of child deaths.

### **INTRODUCTION**

Whereas female employment has always retained importance in the literature on determinants of fertility and fertility change, no consensus has emerged in the theoretical or empirical research on the nature and the existence of the relationship between female employment and fertility. Most studies comprising international comparisons have reached the conclusion that a negative association between women's employment and fertility emerges when societies are fairly developed, and that the association is of little significance for developing societies [UN (1985); Rodriguez and Cleland (1980)].

Country level studies vary in their findings, but by and large it is urban employment, and that too in the modern sector, which seems to bear any association with fertility behaviour [United Nations (1985)]. In the case of Pakistan, previous studies have mostly found that women working in the modern sector have lower fertility but, otherwise, employment status has little or no effect on fertility of women.

\*The authors are Senior Research Demographer and Senior Research Economist, respectively, at the Pakistan Institute of Development Economics, Islamabad.

[Casterline (1984); Syed (1978)]. A summary of the previous findings for Pakistan is presented in Table 1.

Table 1  
*Findings of Previous Studies on Pakistan Regarding  
Female Employment and Fertility*

Study	Data	Study Area	Date	Relationship
Shah (1975)	National Impact Survey	National	1968-69	Negligible*
Syed (1978)	Pakistan Fertility Survey	National	1975	No Statistically Significant Relationship
Ali Khan and Sirageldin (1979)	National Impact Survey	Urban Rural	1968-69 1968-69	No Statistically Significant positive and Significant
Casterline (1984)	Pakistan Fertility Survey	National	1975	No Statistically Significant Relationship
Irfan & Farooq (n.d.)	Population, Labour Force & Migration Survey	National	1979	Negative but not Statisti- cally Significant

\*Relationship between employment and desired family size.

In this paper we hope to penetrate further into the relationship between female employment and fertility; in particular to question whether or not there is variation in fertility behaviour by employment status or by other classifications of work types in the specific context of Pakistan. An attempt will be made to identify the household level mechanisms which induce female employment to bear any impact on fertility.

Nationally representative samples collected thus far, i.e., the National Impact Survey 1968, Pakistan Fertility Survey 1975, the Contraceptive Prevalence Survey 1984, the Population, Labour Force and Migration Survey 1979, and the Annual Labour Force surveys have yielded very low female labour force participation rates, which are even lower in the urban areas. Thus one source of constraint in previous studies utilizing these surveys was the absence of sufficient numbers of women in the sample that represented varied occupations, particularly in the informal sector. Recognized problems of omission of female workers from the officially collected

surveys and censuses in Pakistan have been well documented [Government of Pakistan (1986); Afzal and Nasir (1987)].

The set of severe restrictions against female employment is a factor which cannot be undermined in the Pakistan context. Men are the traditional bread-winners, and even though official statistics underestimate the number of women who work or contribute to family income in some way or another, it is generally still the role for males to provide and for women to be homemakers. Even where women supplement family income, this does not usually reduce their duties in the household.

Given the greater heterogeneity of urban labour markets as compared to rural areas, and also the greater likelihood of sources of paid employment in major urban areas, this study is based on data collected in Karachi in 1987. Here we have deliberately tried to 'oversample' working women in order to get sufficient numbers of women from different economic classes – in different occupations and in the formal and informal sectors – to study differences in their behaviour, as we expect these to be of significance.

### **Theoretical Framework**

The association between female employment and fertility can be studied from the point of view of Household Economics, whereby wife's wages foregone in the market (usually measured by her level of education) are expected to be negatively correlated with fertility. From the sociologist's perspective, it is the conflict of women's domestic and employment roles which is expected to induce a negative association [Dixon (1976)]. There are many criticisms of using the Household Economics approach to explain household fertility behaviour: one of them is that it does not take into account the restrictions that women face in entering the labour force in many societies. Another criticism is that there need not be a convergence of men's and women's fertility goals, and the household economics model assumes this to be the case [Hayath (1986)].

As for the sociological model, it has been argued that the role conflict between employment and reproduction is not so straightforward, especially in a developing society setting. For one reason, there are likely to be female surrogates to look after young children (including older siblings of younger children). Also, there is a great likelihood of flexibility of working conditions (such as home enterprises), whereby women's work does not conflict with child care. The conclusion of most studies in the past has been that further work needs to be done and more information needs to be collected on conditions of work and household arrangements before reaching any conclusions about the association between female employment and fertility. Many frameworks have been proposed for such a study [Oppong (1982); Anker (1980); Schultz (1982)], and in our data collection we have been

most influenced by the Anker framework.

Essentially, we are asking whether women's employment influences fertility behaviour; and if so, through what types of employment, and under what household conditions is the influence more predominant? How are employed women any different from their non-employed counterparts in terms of the past fertility levels, contraceptive adoption, and fertility desires? Is working outside the home associated with (a) a change in fertility attitudes, (b) a greater capacity to actualize the ideal family size by using contraception, and (c) better survival of children?

### The Survey

A survey of 1000 ever-married women was undertaken in 1987 in Karachi, and it collected combined information on women and their households, while previous surveys either collected the fertility information from women or the labour force or income expenditure details from household heads. In this survey, data were collected through a fairly lengthy and comprehensive questionnaire administered to women directly. The interview schedule comprised questions on the household, division of domestic responsibilities, and organization of the household. At the level of the respondent, data were collected on detailed employment histories, marriage and reproductive histories, contraceptive use, as well as on aspirations and expectations with respect to household decision-making, ideal family size, old age support, etc.

Due to the recognized problem of under-enumeration of female work in Pakistan's official statistics [Government of Pakistan (1986)] we made a special effort to over-sample working women so as to have representation of varied types of employment, particularly those women who are working in the urban informal sector. In addition, our female enumerators were especially trained to explore women working in each household even if they countenanced initial reluctance in obtaining the admission that female household members were doing work for remuneration. The definition of a working woman was "any woman who was either doing work for money or aiding any family member in paid work".

The sample comprised 680 currently working and 320 non-working women, and was dispersed across a heterogeneous group of residential localities. However, efforts were made to allow "comparability" of working and non-working women through ascription to upper and middle income, lower income, and poor households. Though our sample is thus purposively collected and *not* representative of Karachi, when we compared the age-sex distributions from the household information collected for 1000 married women to that of Karachi in the 1981 Census, they were remarkably similar. Thus, though purposively collected, the survey sample is not expected to be vastly dissimilar to a representative sample.

## Employment and Marriage

In a study of marriage patterns in Pakistan, female employment in urban areas was found to be associated positively and statistically significantly with female age at marriage [Sathar and Kiani (1986)]. Also in the 1981 Census, there was a rise in the proportions of single women employed in the urban sector in the ages 15–24 as compared to previous censuses in 1961 and 1972. The rise in female age at marriage is caused by multivarious factors, such as a greater pervasiveness of pre-nuptial employment amongst young women. Also, it may be becoming increasingly acceptable, even desirable, for young women to work before marriage.

Our sample of ever-married women has a bias towards early marriers as only younger women who are married were included. Though it is theoretically incorrect to infer any association between age-at-marriage and current employment, it is still of interest to see if any features about marriage patterns distinguish women across the seven occupational groupings. The average age at current marriage was much higher for those women employed in high status occupations, whereas for those in low status occupations, the averages may be even slightly lower than for non-working women.<sup>1</sup> This is not surprising since employment before marriage is considered to have a profound impact on subsequent employment patterns [Sathar and Kazi (1988)]. In effect, those women who work before marriage are most likely to continue in employment after marriage also.

Since it was crucial to see whether occupational groupings of women bore any association with age-at-marriage, independent of education and income groupings, Table 2 presents a Multiple Classification Analysis of age-at-current-marriage with controls for educational levels, total household income, age, and occupational groups. Though all variables included in this multivariate analysis are statistically significant, educational level has the strongest positive impact on age-at-marriage, followed next by occupation. Interestingly, after controlling for age, education, and income, non-working women marry at about the average age of factory workers and at average age later only than informal sector workers outside the home.

Currently working women are more likely to have married at later ages and are also more likely to be widowed, divorced, or separated than non-working women. They are also likelier to have married non-relatives, i.e., men who are neither cousins nor members of *biraderi*, reflecting the larger pool of possible spouses available for working women [Table 4.3 in Sathar and Kazi (1988)].

<sup>1</sup>Working women have been classified into six major groups, based on the type of work they were doing. Details of the further breakdown of these women into finer occupational categories is available in Chapter 2 of the main report.

Table 2  
*Multiple Classification Analysis of Age at Current Marriage by Education,  
 Age, Total Household Income, and Occupational Groups*  
 Grand Mean : 19.44

	N	Unadjusted Deviation from Mean	Eta	Adjusted Deviation from Mean	Beta
<b>Total Household Income in Rupees*</b>					
< 1000	161	-1.44		.46	
1000 - < 1500	145	-1.39		.36	
1500 - < 2000	144	-1.20		.36	
2000 - < 3500	197	-1.57		-.74	
3500 - < 7000	189	2.32		.34	
7000 +	163	2.93	.35	-.59	.09
<b>Educational Level**</b>					
0	519	-1.93		-1.41	
1 - 9	146	-1.42		-.68	
10 - 13	132	1.07		.78	
14 +	202	5.30	.52	3.61	.36
<b>Occupational Groups**</b>					
Professional	59	7.60		4.41	
Lower Level Professionals	71	3.55		2.11	
Teachers	80	5.01		1.78	
Factory Workers	148	-1.43		-.79	
Informal Sector Workers	75	-2.33		-1.52	
Home Workers	247	-1.43		-.36	
Non-working	319	-1.13	.51	-.73	.27
<b>Age**</b>					
< 25	69	-2.13		-1.40	
25 - 34	394	.29		-.34	
35 - 39	194	-.02		.15	
40 +	340	.11	.11	.59	.10
$R^2 = .319$					

\*Statistically significant at .05 level.

\*\*Statistically significant at .01 level.

### Employment and Cumulative Fertility

In comparing the cumulative fertility levels of working and non-working women in the Karachi sample, we found lower fertility among working women at all ages; on average, this group had 3.7 children as compared to 4.1 children among non-working women. Thus, contrary to previous findings from nationally representative surveys, working women in Karachi were found to have lower fertility than non-working women at all ages. The major differences in fertility, however, were expected across the six occupational groups. Since considerable variation has been identified across these groups in the reasons as to why women undertook work in the past, the degree of motivation they had towards paid work, etc., it is likely that the association between employment and fertility would vary also [Sathar and Kazi (1988)].

In Table 3 we look at fertility differentials across the six major occupational groupings of working and non-working women. We find that in the lower occupational status groups, employment does not influence fertility much at all, especially amongst the informal sector and home workers. These women are least likely to experience any conflict between work and reproduction. However, work amongst

Table 3  
*Average Number of Live Births by Broad Age Groups and  
Occupation Categories*

Occupation Category	Current Age					Cases
	<25	25-34	35-39	40+	All	
Professionals	—	.85	(1.71)	2.27	1.57	59
Lower Level Professional	(1.17)	1.46	3.33	2.57	2.15	80
Teachers	(1.0)	1.16	2.41	3.50	1.86	71
Factory Workers	.80	3.22	4.42	4.98	3.97	148
Informal Sector out of Home	(2.0)	4.13	4.57	4.93	4.63	75
Informal Sector in Home	1.05	4.38	5.36	5.38	4.66	247
Non-working	1.65	3.62	5.07	4.84	4.11	320

Figures in brackets are based on less than 100 cases.

the higher status occupational group in the formal sector has a strong reductive impact on fertility and their fertility is lower than that of non-working women.

The cross-occupational differences are likely to be due to the difference in considerations of work, conflict with domestic duties, and patterns of employment. In the higher status occupation groups, lower fertility may represent a trade-off between opportunity costs of women's time and child-rearing, leading to reduced fertility. However, among poorer women in lower status occupations, seeking employment in itself is often precipitated by a large family size. Such women are forced to enter the labour market because of their additional household expenditure due, in most situations, to a large family size. Thus, in the first case, it may be the recognized negative association of employment leading to reduced fertility; and, in the latter case, high fertility inducing employment.

Here, we would like to point out that employment is more likely to have a reductive impact on the fertility behaviour of women who have worked more or less continuously before and after marriage, and *not* on women who started work *after* giving birth to a considerable number of children. Since those women who have worked continuously are concentrated in higher status occupations, it is amongst them that a negative relationship with fertility is most strongly observed.

Most of the reproductive span of women, who start employment with a large family size, is over and it may be just too late for employment to be an influence on traditional behaviour. Table 4 points out the clear differences across occupational groups in the average number of children the women had had before they undertook employment. There is a clear demarcation between the three higher status groups

Table 4

*Mean Number of Children after which Women Started Work,  
by Occupational Groups*

Occupation Category	Mean	Cases
Professionals	.4	59
Lower Level Professionals	.8	71
Teachers	.5	80
Factory Workers	3.2	148
Informal Sector/Outside Home	3.0	75
Informal Sector/Inside Home	2.5	247



and the three lower status groups; whereas the former began employment at a much earlier stage of their reproductive span with less than one child on average, the later group began working much later – after having had an average of more than 2.5 children.

This is fairly unequivocal support for the argument that, in the case of lower status occupation groups, the association between employment and fertility is either non-existent or may be a case of reverse causation, whereby a large family size induces employment. Since the argument is based on the fact that women in lower status occupation are forced into employment due to financial reasons, we ought to introduce household income into the analysis. Consequently, we compare the family size of working women belonging to different levels of household income; household income, in this instance, is computed minus the respondent's own contribution. Table 5 shows that there is an inverse association between the number of children women had before they started work and income, as grouped before the respondent made her contribution. It does seem to support the idea that for poorer income groups, employment is very likely to have been evoked by a substantial family size and is, thus, unlikely to have any bearing on cumulative fertility.

Table 5

*Mean Number of Children after which Women Started Work, by Income Group, Subtracting the Respondent's Own Contribution*

Household's Income in Rupees	Mean	Cases
< 1000	2.9	244
1000 – < 1500	2.2	110
1500 – < 2000	2.1	55
2000 – < 3500	2.0	130
3500 – < 7000	1.2	98
7000 +	.3	42

### **Employment and Ideal Family Size**

In order to assess whether differentials in completed fertility concur with the differences in preferred family size we look at the desired and ideal family size across working and non-working women, controlling for education and income groups. In Table 6 we see that the ideal fertility size varies considerably across the occupation

Table 6

*Multiple Classification Analysis of Ideal Number of Children\*\* and Education, Total Household Income and Occupational Groups and Current Age of Women*

Overall Mean : 4.14

	N	Unadjusted Deviation from Mean	Eta	Adjusted Deviation from Mean	Beta
<b>Education*</b>					
0	457	.51		.38	
1 - 9 Years	139	-.06		-.10	
10 - 13 Years	129	-.63		-.55	
14 +	199	-.71	.35	-.46	.26
<b>Total Household Income (Rupees)</b>					
0 - 999	144	.46		.13	
1000 - 1499	130	.41		.11	
1500 - 2499	132	.10		-.07	
2500 - 3499	181	.14		.05	
3500 - 6999	182	-.38		-.03	
7000 +	155	-.58	.25	-.17	.07
<b>Occupations Groups*</b>					
Professional	57	-.93		-.35	
Lower Level Professional	70	-.69		-.15	
Teachers	80	-.79		-.27	
Factory Workers	137	-.27		-.39	
<b>Informal Sector Workers</b>					
Outside Home	65	.52		.19	
<b>Informal Sector Workers</b>					
Inside Home	221	.42		.11	
Non-working	320	.25	.32	.23	.16
<b>Age</b>					
< 25	64	-.14		-.20	
25 - 34	375	-.05		.03	
35 - 39	185	.09		.06	
40 +	300	.04	.04	.04	.04
$R^2 = .151$					

\*Statistically significant at .01 level.

\*\*Only those women who gave numeric answers to ideal family size included in this MCA table.

groups, and in a similar fashion as fertility differentials between the groups. This finding supports the idea that women of higher status occupations (even including factory workers) do have a lower ideal family size (after controlling for their total household income and educational levels) than non-working women and women in lower status occupations. In fact, total household income and age have no statistical significance in explaining ideal family size of working or non-working women. The educational level of the respondent retains its strong explanatory power even after controlling for income and occupation groupings. Women at each successive educational level, excepting the highest, seem to desire fewer children.

The answers to ideal family size have to be seen in the context of women's orientation towards aspirations for their children and their expectations of old age support. The preference of sons over daughters is a critical factor influencing family size. To explore whether or not working women of different occupations, and those who do not work, differ consistently in wanting more or fewer children, we have to seek answers to some of these questions. Currently working women preferred a smaller number of sons (as they did family size) than non-working women. As seen in Table 7, the average number of additional sons desired by the latter, at each given combination of the number of living sons and daughters, was greater than that for working women. This indication of stronger son preference amongst non-working women is also supported in the finding that a substantially greater proportion of the latter expected provision for their old age to be made by sons as compar-

Table 7

*Mean Number of Additional Boys Desired, by Number of Living Sons and Daughters*

Number of Living Daughters	Number of Living Sons							
	0		1		2		3+	
	W	NW	W	NW	W	NW	W	NW
0	1.94	2.08	.80	1.15	.41	.29	.11	.18
1	1.84	2.00	.45	.88	.38	.44	.06	.12
2	1.33	1.45	.18	.76	.13	.20	.07	.15
3+	.35	.81	.36	.47	.24	.21	.00	.23

W : Currently working women.

NW : Women currently not working.

ed to the working group (Table 8). Women of higher status occupational groups are even less likely to rely on sons than those in lower occupational groups. Also, a smaller proportion of working women do not place any reliance at all on sons for old age as compared to non-working women. This difference in attitude is thought to be based on the fact that non-working women expect to rely more on children, particularly sons, for financial support in old age; whereas working women (or at least a considerably larger proportion of them than their non-working counterparts) expect to rely on pension and savings [Sathar and Kazi (1988), Table 5.7].

In Table 9 we also include the expectations of women regarding daughters, and there are *only very marginal* differences between the attitudes of working and non-working women. Since the pattern of differences across working and non-working women observed in Table 8 is not replicated in Table 9, it verifies that non-working women do feel differently about their levels of dependency on sons (whereas there are no perceptible differences in dependency on daughters) for old age security from working women. This is an important inducement for them to have a greater number of sons, thereby increasing their fertility orientation. Such a mechanism has been described in detail elsewhere as a manifestation of women's low status having an enhancing influence on fertility [Cain (1984)].

Table 8

*Proportional Distribution of Women by Expectations of Reliance on Sons for Old Age, by Occupational Status*

Degree of Expectation	Professionals	Lower	Teachers	Informal			Non-working
		Level Professionals		Factory Workers	Sector Workers	Home Workers	
A Lot	11	13	26	26	37	40	45
A Little	25	35	23	24	17	25	21
Not at All	44	31	39	18	20	24	20
Not Stated/ Unknown	19	21	13	32	24	11	13
Number of Cases	59	71	80	148	75	247	320

Table 9  
*Proportional Distribution of Women by Expectations of  
 Reliance on Daughters for Old Age, by Work Status*

Degree of Expectation	Currently Working	Currently Non-working
A Lot	20	21
A Little	17	19
Not at All	42	41
Not Stated/Unknown	21	19
Number of Cases	680	320

#### Employment and Contraceptive Use

The use of modern contraceptives is a good indicator of the extent that women actualize their fertility ideals, and we compared contraceptive use rates across working and non-working women. Our enumerators stated that they encountered the greatest problems in attaining answers from women about contraceptive use. Thus the answers provided may not represent a completely accurate assessment of contraceptive use. Differences in family size norms may be more indicative than those in contraceptive use. In looking at Table 10 we can see that for each successive parity, a lower proportion of working women (in aggregate) want more children than is the case for non-working women. In fact, after having had four children, regardless of their gender, the desire for more children more or less dissipates for working women but continues for non-working women.

Furthermore, working women in Karachi are less likely to experience difficulties in obtaining contraceptives than non-working women: a larger proportion of non-working women (34.5%) as compared to (22.6%) of working women said they could either (a) not talk to their husband, (b) had no knowledge of contraceptive methods, and (c) did not know where to seek such advice, or (d) they faced family objection to the use of contraception to limit family size [Sathar and Kazi (1988), Table 4.26]. Thus the evidence does seem to favour the idea that working women, at least those in higher status occupations, have an edge over non-working women in effectively planning their families. They are necessarily more likely to be able to leave their homes unaccompanied and, subsequently, may have greater 'awareness' of the world outside their own homes. However, women in lower status occupations may not necessarily have such an advantage over non-working women.

Table 10  
*Proportional Distribution of Fecund Women by Current Contraceptive Use Status, by Number of Living Children*

	Number of Living Children													
	0		1		2		3		4		5		6+	
	W	NW	W	NW	W	NW	W	NW	W	NW	W	NW	W	NW
Currently Using Contraception	1.6	0.0	23.1	7.1	39.0	31.8	52.6	40.0	57.4	56.4	47.5	43.5	57.8	47.6
Currently not Using Contraception	76.2	58.3	23.1	28.6	28.0	25.0	30.3	35.6	31.5	23.6	42.6	39.1	37.9	35.5
Wants More Children	22.2	41.7	53.8	64.3	32.9	43.2	17.1	24.4	11.1	20.0	9.8	17.4	4.3	25.3

W : Working women.

NW : Non-working women.

### Employment and Child Survival

Lastly, we pose the question of whether or not working women in Karachi are better able to ensure the survival of their children than non-working women. It can be argued that because of greater mobility outside the home, working women ought to be more likely to take their children to health care facilities and thus ensure their greater survival. To some extent, causality ought not to be inferred as it is not clear whether the child deaths occurred to women before or after they were in employment. Nevertheless, any significant differences in child loss across the two groups are still of relevance and can be interpreted, albeit cautiously. Of course, income and other housing factors are as integral to child survival as mother's greater accessibility of health facilities, and in a bivariate analysis (Table 11) it is interesting to note that the proportion of children dead varies significantly: women, who are professionals and lower level professionals such as clerks and teachers, experience much lower levels of child loss as compared to factory, informal sector, and home workers.

Table 11

#### *Proportions of Children Dead by Occupational Status and Age Groups*

Occupation	All Ages	< 25	25-34	35-39	40+
Professional	0.00	.00 (46)	.00 (18)	.00 ( 6)	.00 (22)
Lower Level Professionals	.02	.00 ( 5)	.00 (33)	.00 (11)	.00 ( 6)
Teachers	.01	.00 ( 1)	.00 (27)	.04 (12)	.01 (26)
Factory Workers	.08	.17 ( 7)	.03 (46)	.05 (30)	.12 (54)
Informal Sector Workers Outside Home	.13	.00 ( 2)	.14 (14)	.12 (14)	.15 (42)
Home Workers	.07	.04 (12)	.05 (89)	.06 (45)	.09 (81)
Non-working	.04	.03 (31)	.04 (124)	.05 (69)	.04 (95)

Number of cases are in brackets.

Table 12

*Multiple Classification Analysis of Proportion of Children Dead by Age,  
Educational Level, Occupation and Total Household Income*

Grand Mean : .054

	N	Unadjusted Deviation	Eta	Adjusted Deviation	Beta
<b>Total Household Income</b>					
Rs < 1000	150	.04		.03	
Rs 1000 – < 1500	140	.00		-.01	
Rs 1500 – < 2000	128	.01		-.00	
Rs 2000 – < 3500	185	.01		.00	
Rs 3500 – < 7000	161	-.03		-.01	
Rs 7000 +	139	-.04	.16	-.01	.08
<b>Educational Level</b>					
0	490	.02		.01	
1 – 9 Years	133	-.01		-.01	
10 – 13 Years	115	-.03		-.01	
14 + Years	165	-.04	.17	-.01	.07
<b>Occupation Groups*</b>					
Professional	46	-.05		-.03	
Lower Level Professional	55	-.04		-.01	
Teachers	66	-.04		-.02	
Factory Workers	136	-.04		.02	
Informal Sector Workers					
Outside the Home	72	.08		.06	
Home Workers	227	.01		.00	
Non-working	301	-.02	.02	-.01	.13
<b>Age</b>					
< 25	50	-.01		-.01	
25 – 34	346	-.02		-.01	
35 – 39	184	.00		.00	
40 +	323	.02	.09	.01	.06

 $R^2 = .054$ 

\*Statistically Significant at .05 level of significance.



The level of child loss amongst non-working women falls somewhere in between. Since the household income and the education of mother have also been identified as important determinants of child survival, a multivariate analysis was also conducted on the proportion of children dead with age, education and occupation group of mother, and total household income as explanatory variables. Interestingly, in such a model (Table 12), only women's occupational grouping retained its statistical significance (at the 5% level of significance) while the other factors remained non-significant. After controlling for income and education, professionals retain their advantage and informal sector workers outside the home their disadvantage in child survival. Home workers, though they belong to poorer households, do not have as distinct a disadvantage in child survival as informal sector workers outside the home. Thus, it seems that the mother's presence inside the home, regardless of whether she works or not, is of some importance.

### CONCLUSIONS

Study of the relationship between female employment and fertility, based on the data from Karachi, reveals a distinct pattern of differentials both in actual performance and in the fertility desired by working and non-working women. However, clearly, working women are by no means a homogeneous group and the differences across the six broad occupational groupings of working women (comprising over 100 different types of occupations) are more marked than those between working and non-working women. Women in higher status occupations have almost half the completed family size of those women working in lower status occupations. In addition to lower fertility, women in higher status occupations were more likely to have married later, to have worked before marriage, and also to have married men outside of the *biraderi* than non-working women.

In further analyzing reasons why employment influenced fertility negatively in the case of women in higher status occupations and positively in the case of lower status occupations, childcare does *not* seem to influence the association. According to our data, the rich employ servants and the poor rely on relations or even older children to look after any children under 5. In the case of poorer women, the lack of a negative association between employment and fertility may be due to the fact that these women already had a large number of children before starting work.

Women in higher status occupations desire a smaller family size, and are much less likely to prefer sons to the extent that non-working women do. As a group, working women expect to rely much less on sons as a source of old age support and are more likely to rely on pensions and savings than non-working women. It appears that the former group of women are more financially independent than non-working women, who rely primarily on husbands and sons for support, and whose larger ideal family size is partially attributable to this tendency.

Working women are less likely than non-working women to desire additional children at each successive parity. But even though working women desire fewer children, their levels of contraceptive use (excluding women who desire more children) are about the same as those prevailing amongst non-working women. The former are, however, less likely to face obstacles in seeking permission of husband and finding an outlet for seeking the means of fertility control than non-working women.

Working women in higher status occupations also have better chances of their children surviving, whereas women in lower status occupations suffer a much greater proportion of child deaths. The implications for children of women working in informal sector jobs outside the home are in fact quite grave – the mother's presence in the home, even if she is engaged in some economic activity, offsets this higher risk to a large extent in the case of home-workers.

#### REFERENCES

- Afzal, Mohammad, and M. Nasir (1987) Is Female Labour Force Participation Really Low and Declining in Pakistan? A look at Alternative Data Sources. *The Pakistan Development Review* 26 : 4.
- Anker, R. (1980) *Research on Women's Roles and Demographic Change: Survey Questionnaires for Households, Women, Men and Communities with Background Explanations*. Geneva: International Labour Organization.
- Cain, M. (1984) *Women's Status and Fertility in Developing Countries: Son Preference and Economic Security*. New York: Center for Policy Studies. Population Council. (Working Paper No. 110)
- Casterline, J. (1984) Fertility Differentials in Pakistan. In I. Alam and B. Dineson (eds) *Fertility in Pakistan: A Review of Findings from the Pakistan Fertility Survey*. Voorburg, Netherlands: International Statistical Institute.
- Dixon, R. (1976) The Role of Rural Women: Female Economic Production and Reproductive Choice. In R. Ridker (ed) *Population and Development: The Search for Selective Interventions*. Baltimore: Johns Hopkins University Press.
- Hayath, N. (1986) Status of Women and Fertility. *Report on the Rockefeller Foundation Workshop*. July 8-11. Mount Kisco, New York.
- Irfan, M., and G. Farooq (n.d.) In Investigation of Household Reproductive Behaviour in Pakistan. Islamabad: Pakistan Institute of Development Economics. (Studies in Population Labour Force and Migration, Report No. 4)
- Kazi, S., and Z. Sathar (1988) Women, Work and Reproduction in Karachi Households. Paper presented at IUSSP Conference on Women's Position during the Course of Development. Asker, Norway.
- Khan, M. A., and I. Sirageldin (1979) Education, Income and Fertility in Pakistan. *Economic Development and Cultural Change* 27 : 3.

- Oppong, C. (1982) Family Structure and Women's Reproductive and Productive Roles: Some Conceptual and Methodological Issues. In Anker, Buvinic and Youssef (eds) *Women's Roles and Population Trends in the Third World*. London: Croom Helm.
- Pakistan, Government of (1986) *Report of the Workshop on Statistics and Indicators on Women and Development*. Organized by Women's Division, Federal Bureau of Statistics and INSTRAW, Islamabad.
- Rodriguez, G., and J. Cleland (1980) Socio Economic Determinants of Marital Fertility in Twenty Countries. *World Fertility Survey Conference 1980*. Voorburg, Netherlands.
- Sathar, Z., and S. Kazi (1988) *Productive and Reproductive Choices of Metropolitan Women: Report of Survey in Karachi*. Islamabad: Pakistan Institute of Development Economics.
- Sathar, Z., and F. Kiani (1986) Delayed Marriages in Pakistan. *The Pakistan Development Review* 25 : 4.
- Schultz, P. (1982) Women's Work and their Status: Rural Indian Evidence of Labour Market and Environment Effects on Sex Differences in Childhood Mortality. In Anker *et al.* (eds) *Women's Roles and Population Trends in the Third World*. London: Croom Helm.
- Shah, N. (1975) Female Labour Force Participation and Fertility Desire in Pakistan. *The Pakistan Development Review* 14 : 2.
- Syed, S. (1978) Female Status and Fertility in Pakistan. *The Pakistan Development Review* 17 : 4.
- United Nations (1985) *Women's Employment and Fertility*. New York: United Nations. (Population Studies No. 96)