

## FEMALE WORKING ROLES AND FERTILITY

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### RESUMEN

*Utilizando datos recopilados en una encuesta en Turquía en 1963, se examinan las relaciones entre el estatus de empleo de la mujer y la fecundidad. Manteniendo constantes la residencia urbano-rural, educación, y exposición a la concepción dentro del matrimonio, no aparecen diferencias en la fecundidad vinculadas al status en la fuerza del trabajo. Aunque hay una tendencia ligeramente mayor, entre las mujeres que trabajan que entre las no empleadas, a mantener actitudes favorables hacia las familias pequeñas y a la limitación en el tamaño de la familia, las diferencias observadas son tan pequeñas que no tienen significación estadística. Se elabora una tipología dentro de la cual se predice la naturaleza y dirección causal de cualquier relación existente entre empleo femenino y fecundidad, sobre la base de la disposición de técnicas de control de la natalidad y la presencia o ausencia de conflictos entre los roles de la mujer como madre y como trabajadora.*

### SUMMARY

*Using survey data gathered in Turkey in 1963, the relationship between female employment status and fertility is examined. Controlling for urban-rural residence, education, and exposure to conception within marriage, no differences in fertility by labor force status appear. Although there is a slightly greater tendency for employed than for non-employed women to hold attitudes more favorable to small families and family size limitation, the observed differences are slight and not significant statistically. A typology is constructed wherein the nature and causal direction of any existing relationship between female employment and fertility are predicted, based on the availability of birth control technology and the presence or absence of conflict between the roles of mother and worker.*

The question of a relationship between female employment and fertility is of considerable importance for both sociologists and economic planners. For the former, restriction of fertility among working women would be consistent with the theory of increasing role incompatibility (worker vs. mother) as the family's productive functions decline and as responsibility for child care becomes heavily focused on the mother. For planners, the possibility that female employment will help in slowing the rate of population growth causes special enthusiasm for accelerating female labor force participation. Thus, in finding a negative relation between a nation's fertility (child-women ratios) and female labor force participation, Collver and Langlois maintain that "if recruitment of women in the labor force will help to induce a decline in fertility by changing the character of family and reproductive behavior, it is worthy of

high priority in development strategy."<sup>1</sup>

Despite the importance of the question and the seeming simplicity of the empirical data required for its answer, opinions vary concerning the *existence* of a relation between employment and fertility, the *direction* of the assumed relation, and the *explanation* of the relationship. The commonly accepted generalization is that there is a strong relation among these variables. Thus, Blake states that "female labor force participation has long been known to bear one of the most impressive relationships to family size of any variable."<sup>2</sup> On the other hand, a United Nations survey of earlier international data and literature concluded that decline in family size could not be linked with

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<sup>1</sup> Andrew Collver and Eleanor Langlois, "The Female Labor Force in Metropolitan Areas: An International Comparison," *Economic Development and Cultural Change*, X, No. 4 (July, 1962), 367-85.

<sup>2</sup> Judith Blake, "Demographic Science and the Redirection of Population Policy," *Journal of Chronic Diseases*, XVIII (1965), 1195.

increased employment of women,<sup>3</sup> and Gendell notes that for developing countries the relation cannot be established.<sup>4</sup> Indeed, it should be instructive to separate the evidence for developed and developing countries, not only with regard to the existence of the relation but with respect to its direction and explanation as well.

#### DEVELOPED COUNTRIES

There is little question about a relationship between fertility and female labor force participation for Western developed countries; its magnitude was "equalled or exceeded in strength only by Catholic-non-Catholic religious affiliation."<sup>5</sup> There is less consensus on the direction of the causation. While Swedish data lead Gendell to conclude that labor force participation is influenced by "family building activities,"<sup>6</sup> a United Nations analysis of Swedish data concludes that "little information is available to indicate the extent to which the differences in the proportion of childless wives is due to tendency for (a) wives who cannot have children to keep on working, or (b) the avoidance of childbearing by wives who prefer to be employed."<sup>7</sup> For the United States, Blake presents data on high school and college students showing that even the desire to work is related to desired family size,<sup>8</sup> while Freedman concludes that, in the United States and Germany,

<sup>3</sup> "[Studies] showing the total proportion of women recorded in censuses as gainfully employed at different periods or those indicating the proportion of married women gainfully employed have not established the fact that increased employment of women is a major factor in the decline of family size" (*The Determinants and Consequences of Population Trends*, United Nations Population Studies, No. 17, 1953, p. 78).

<sup>4</sup> Murray Gendell, "The Influence of Family Building Activity on Woman's Rate of Economic Activity," 1965 United Nations World Population Conference (mimeographed).

<sup>5</sup> Blake, *op. cit.*, p. 1195.

<sup>6</sup> Gendell, *op. cit.*

<sup>7</sup> *Determinants and Consequences . . .*, p. 89.

<sup>8</sup> Blake, *op. cit.*, p. 1198.

both self-selection of infecund women and conscious fertility controls account for the relation between employment and fertility.<sup>9</sup>

#### DEVELOPING SOCIETIES

While data for developing societies are even spottier than those for other parts of the world, they suggest the hypothesis that a certain level of economic development may be necessary before a relationship between fertility and female employment can emerge. Thus, based on data largely from India, Gendell finds "little or no influence in at least the traditional sector of these societies."<sup>10</sup> But evidence from Latin American countries suggests that a relation does exist. In representative samples of about 2,000 women aged 20-50 in each of the cities of Rio de Janeiro, Panama, and San José, non-working women averaged 3.5, 2.5, and 3.7 live births, respectively, but working women averaged only 3.0, 1.8, and 1.9.<sup>11</sup> A more detailed analysis of 1955 labor force data for Puerto Rico shows that the relation is maintained when age, marital status, education, and residence are held constant.<sup>12</sup> For the rest of Latin American countries, ecological data support the hypothesis. After analyzing census areal data for the provinces of eighteen countries, Heer and Turner conclude that the "single variable showing the highest relation to the child-woman ratio is the proportion of females in the labour force . . . in 14 of 18 nations the multiple re-

<sup>9</sup> Ronald Freedman, P. K. Whelpton, and Arthur A. Campbell, *Family Planning, Sterility, and Population Growth* (New York: McGraw-Hill, 1959), and Ronald Freedman, Gerhard Baumart, and Martin Bolte, "Expected Family Size and Family Values in West Germany," *Population Studies*, XIII (1959/60), 136-50.

<sup>10</sup> Gendell, *op. cit.*

<sup>11</sup> Carmen A. Miró and F. Rath, "Preliminary Findings of Comparative Fertility Surveys in Three Latin American Countries," *Milbank Memorial Fund Quarterly*, XLIII, No. 2, Part 2 (April, 1965). The Panama data refer to currently mated women.

<sup>12</sup> A. J. Jaffe, *People, Jobs, and Economic Development* (Glencoe: Free Press, 1959).

gression coefficient for this variable is also negative."<sup>13</sup>

Finally, assuming a causal relation between the variables, there is controversy over the nature of the intervening variables. Is the link between female employment and fertility mainly due to the utilization of birth control, to variations in marriage rates, or to differences in natural fecundity? With reference to Latin America, Heer maintains that the "chief effect" of increasing labor force participation "is to raise the mean age at marriage and to increase the proportion of females who never marry."<sup>14</sup> In a study on Peru, however, Heer concludes that "female labour force participation reduces fertility by reducing the fertility of married women"<sup>15</sup>—a statement referring to the use of birth control by married women. In contrast, a study by Stycos on the same society concludes that "whatever relation exists between number of children and employment is not due to conscious controls on fertility."<sup>16</sup>

In order to throw further light on some of these complex questions, we will first present data from a national survey in a developing country and then introduce some theoretical considerations.

#### FEMALE EMPLOYMENT AND FERTILITY IN TURKEY

Turkey provides an interesting case for examination of some aspects of the fertility-employment hypothesis, for it falls at one end of a continuum with respect to the employment of women. Despite the

<sup>13</sup> David Heer and Elsa S. Turner, "Areal Differences in Latin American Fertility," *Population Studies*, XVIII, No. 3 (March, 1965), 279-92.

<sup>14</sup> David M. Heer, Discussion of paper by Stycos and Weller at 1965 Eastern Sociological Society Meetings (mimeographed).

<sup>15</sup> David M. Heer, "Fertility Differences between Indian and Spanish-speaking Parts of Andean Countries," *Population Studies*, XVIII, No. 1 (July, 1964), 79.

<sup>16</sup> J. Mayone Stycos, "Female Employment and Fertility in Lima, Peru," *Milbank Memorial Fund Quarterly*, XLIII, No. 1 (January, 1965), 42-54.

advances made by women since the Ataturk regime, Turkey remains a country in which religion and family culture pressure the average woman to devote her energies to the home. Of sixty-nine nations for which information is available, Turkey ranks sixty-third in the portion of labor force represented by women. While the world median is 26 percent, Turkey's is only 12 percent—less than half that of Peru, Venezuela, Thailand, Ceylon, or Malaya.<sup>17</sup> Moreover, in a nation where male authoritarianism is still predominant, most males do not want their wives to work. In the survey to be reported, only 22 percent of the rural and 27 percent of the urban males approved of married women working outside the home.

The survey in question was conducted in Turkey in 1963, and the questionnaire was constructed primarily by the senior author.<sup>18</sup> Stratified by type of community, the sample involved interviews with about 2,700 married couples in 240 villages (less than 2,000 inhabitants), 46 towns (2,000-15,000), 21 cities of at least 15,000 population, and the metropolitan cities of Ankara, Istanbul, and Ismir. Each married woman aged 15-45 was asked whether she had worked for pay or goods in the past year, and, if she had worked, whether she had done so primarily inside or outside the home. (No other questions on employment were asked.) As expected, only a small proportion of married women—8 percent—work outside the home.<sup>19</sup> The proportion is the same in rural and urban areas. This might suggest that

<sup>17</sup> Bruce M. Russett *et al.*, *World Handbook of Political and Social Indicators* (New Haven: Yale University Press, 1954), pp. 32-33, Table 4.

<sup>18</sup> For further information on this study see J. Mayone Stycos, "The Potential Role of Village Opinion Leaders in a Program of Family Planning," *Public Opinion Quarterly*, XXIX (Spring, 1965), 120-30.

<sup>19</sup> Thirteen percent of all women have worked. Of these, just over one-third in rural and in urban areas worked inside the home. Because of the small number of these cases, they have been grouped with the non-working women, from whom they are indistinguishable in fertility rates.

working women are a much more select group on certain characteristics than would be the case in societies where female employment is more common; but this is not borne out on the few measurable characteristics available. With respect to age, husband's education, and occupation, there is no significant difference between working and non-working women in either rural or urban areas. In the rural area, however, almost twice as high a proportion of working as non-working women have attended school (see Table 1).

Turning now to fertility, we find large differences by residence but very small differences by employment status. While rural women have had about one-third more births than urban women, the non-employed show only about 15 percent more births than the employed, holding age constant by direct standardization (see Table 2). Further, while urban women married a year and a half to two years later than rural women, employment status shows no relation to age at marriage in rural areas, and only a slight relation in the urban region (Table 2). Finally, when duration of marriage is controlled, the differences in fertility by

employment shrink to statistical non-significance (*Z* tests fail to show significant differences at the .05 level). On the other hand, rural fertility is still one-third higher than urban among the non-employed and one-quarter higher among the others. In short, differential fertility does exist in Turkey but does not appear related to employment of the female.

In Table 3 a third independent variable, education, is added. It will be recalled that working women in the rural area were considerably better educated than non-working women. Controlling for education, the absence of relation between employment status and age at marriage and marital fertility persists. In the rural area, neither schooling nor employment appears related to fertility, while in the urban area fertility is discriminated quite sharply according to schooling<sup>20</sup> (Table 3).

Thus, unlike the rural area, differential fertility does exist in the urban setting, but it is not a cause or consequence of employment even among women who

<sup>20</sup> However, those with schooling in the urban areas have achieved a higher average level than the rural schooled. Only those with no schooling are entirely comparable.

Table 1.—SOCIAL AND DEMOGRAPHIC CHARACTERISTICS, BY RESIDENCE<sup>a</sup> AND LABOR FORCE STATUS

Labor force status	Median age		Percent of husbands in white collar occupations		Percent attended school		Percent of husbands who attended school		Number of cases	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Employed.....	31.2	31.8	5	39	31	56	50	68	115	99
Non-employed.....	30.7	31.4	8	43	17	55	45	78	1291	1118

<sup>a</sup> Because of the small number of women employed, residence has been dichotomized, with village cases designated as "rural" and all others as "urban."

Table 2.—FERTILITY-RELATED MEASURES BY RESIDENCE AND LABOR FORCE STATUS

Labor force status	Age standardized cumulative live births (means)		Median age at marriage		Mean years married		Mean live births per 100 years of marriage	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Employed.....	3.8	2.8	16.8	18.6	12.4	11.5	31	25
Non-employed.....	4.4	3.2	16.7	18.1	12.0	12.0	36	27

have been to school. Is it possible that this is due to the unavailability or inefficiency of birth control technology?

This might be the case in the rural area where 40 percent of the women failed to recognize any of a list of eleven methods of birth control, an additional 22 percent recognized only one method, and only one-fifth have ever used a method. But in the urban area the average woman admitted knowledge of five methods, and over half have used a method. Nevertheless, neither here nor in the rural area is there any significant variation in birth control practice by employment status (Table 4).

The final test would seem to be in terms of attitudes. Whether or not the technology is available, one might expect working women to be more sympathetic to family planning and to desire fewer children than non-working women. This would suggest a "precontrol" period, in which behavior and technology have not yet caught up with attitudes and desires. To test this hypothesis, we examined 17 items reflecting attitudes toward family size and birth control. In the 34 comparisons of employed and non-employed women within rural and urban areas, there was a difference significant at the 5 percent level in only one item.

While it is true that in the rural area, 15 of the 17 comparisons are in the expected direction (as opposed to only 8

in the urban area), it should be recalled that the rural employed are considerably better educated than the non-employed.

## DISCUSSION

Although we found differential fertility in Turkey, it is associated with residence and education rather than with employment status of the female. More precisely, only the urban areas show differential fertility, and this is by education rather than by labor force status. Moreover, the intervening variables of age at marriage and birth control were also associated with residence and education and not with employment status. Finally, knowledge of birth control and attitudes toward family size and birth control show no significant variation by employment status when residence is controlled. In short, neither fertility nor the behavioral or attitudinal variables associated with it are related to the employment status of the female in Turkey. The only possible exception to this generalization pertains to the attitudes of rural employed women, who consistently appear slightly more favorable to a restricted family size than do the rural non-employed. Possibly Turkey is at one end of a continuum, and the United States, where the attitudes toward employment are related to attitudes toward fertility even among the unmarried, is at another. Let us

Table 3.—AGE AT MARRIAGE AND MARITAL FERTILITY RATES,  
BY RESIDENCE, EMPLOYMENT STATUS, AND EDUCATION

Employment status	Median age at marriage			
	Rural		Urban	
	With schooling	Without schooling	With schooling	Without schooling
Employed.....	17.7	16.4	20.5	17.0
Non-employed.....	17.7	16.6	18.7	17.4
	Mean live births per 100 years of marriage			
Employed.....	32	31	20	31
Non-employed.....	34	36	23	31
	Number of cases			
Employed.....	35	79	54	43
Non-employed.....	221	1047	597	487

speculate further about what might lie between and why.

ROLE COMPATIBILITY

Where the roles of mother and worker are entirely *compatible*, we should expect little relation between labor force status and fertility. The less the cost in transferring childbearing tasks to others or in incorporating them with the job, the greater the compatibility. Compatibility can stem from the nature of the task or from the social organization of child care. Thus, it is relatively easy to combine maternal and occupational chores on a family farm or in a cottage industry.<sup>21</sup> It is also easy to work outside the home if parental surrogates are cheaply available

in the form of relatives, friends, or state agencies.

The urban proletariat in developing societies may be in a transitional situation. Thus domestic service—a major employment channel for urban females in underdeveloped areas—mixes elements of family or traditional employment with more modern employment. Even though the woman may live away from “home,” she is often permitted to have her own

<sup>21</sup> Jaffe and Azumi found that in both Puerto Rico and Japan the fertility of women engaged in home industries was found to be approximately equal to that of women not in the labor force (A. J. Jaffe and K. Azumi, “The Birth Rate and Cottage Industries in Underdeveloped Countries,” *Economic Development and Cultural Change*, IX, No. 1 (October, 1960), 52–63.

Table 4.—VARIOUS CHARACTERISTICS BY RESIDENCE AND LABOR FORCE STATUS<sup>a</sup>

Characteristics in percent	Rural		Urban	
	Employed	Non-employed	Employed	Non-employed
Ever thought about desired number of children..	47	43	62	60
Would like to have more children.....	30	32	31	25
Think more than three children is ideal.....	50	55	20	22
Have talked with spouse about desired number of children.....	65	50 <sup>b</sup>	64	67
Agreeing it is unnecessary to have as many children as possible.....	71	69	89	83
Approves of family limitation.....	72	67	82	82
Thinks government should sponsor a family planning program.....	93	86	97	94
Interested in learning about birth control....	75	73	86	86
Thinks spouse would approve of birth control..	62	52	73	77
Ever spoken to spouse about practicing birth control.....	37	28	48	57
Ever spoken to anyone other than spouse about birth control.....	12	11	29	28
Would take an oral contraceptive.....	63	57	74	73
Would want husband to take an oral contraceptive.....	54	50	71	63
Knowing duration of fertile period.....	6	7	8	9
Knowing timing of fertile period.....	9	13	20	16
Who have ever used a birth control method.....	26	19	49	55
Mean number of birth control methods known....	2.59	1.73	4.18	4.97

<sup>a</sup>“No answer” cases have been excluded from the bases in calculating the percentages. While these infrequently constitute more than 8 percent of the urban categories, several of the questions concerning attitudes toward birth control produced between 10 and 15 percent “no answer” in rural areas. However, statistically significant differences in “no answers” within the rural area were found only on items 5, 6, 8, and 12.

<sup>b</sup> Difference significant at the 5 percent level (two-tailed Z test). For a description of the methods used in testing the difference between these statistics, of John E. Freund, *Modern Elementary Statistics*, second edition; Englewood Cliffs: Prentice-Hall, Inc., 1960), pp.257-60, 266-69.

children with her, creating less incompatibility of roles than would be the case in other types of employment. Using vital registration data for Lima, Stycos found that the mean parity of women employed in services was virtually identical with those not in the labor force, for those giving birth in recent years.<sup>22</sup> However, as employment shifts to less compatible positions, and as the system of child care via the extended family becomes attenuated in the urban setting, we can anticipate a closer relation between fertility and employment.

Where the roles are relatively *incompatible*, there should be a relation between fertility and employment, but its degree and nature would be to a large extent fashioned by the degree to which efficient contraceptive technology is available. Where it is not available, we would expect the relation to be explained primarily by the operation of biological factors (less fecund women being able to work) and by delayed marriage of those who wish to work. Where contraceptive technology is available, these factors would also be operative but perhaps subordinate to the influence of family planning.

To summarize then, where the roles of mother and employed woman are compatible, we should not anticipate a relation between fertility and employment; where they are incompatible, the relation

<sup>22</sup> The parity of professional and office workers was much lower. Since the data are based only on mothers who gave birth in the years studied, they are only suggestive. See J. Mayone Stycos, "Female Employment and Fertility. . . ."

will depend on the availability of birth control technology. To the degree that it is unavailable, the relation will depend on self-selection by fecundity and marriage and will probably not be a strong one. Where birth control is readily accessible, working women presumably would regulate fertility to lessen the strain of incompatible roles.

In the case of Turkey, we suspect that the roles may be more compatible at this time than one would initially guess. The very small proportion of women who work combined with the fact that this minority is indistinguishable from other women in age, social class, and (in the urban area) education might suggest that random factors rather than the expectation or desire for a working career bring the average woman into the labor force, perhaps only temporarily. At the same time, the low proportion of working women suggests that even in urban areas there should be no scarcity of relatives or cheap help available for child care. As assistance in child care becomes more difficult and as employment becomes more of a career orientation than a temporary economic expediency, it should begin to conflict with the mother role.

It is difficult to know whether to take seriously the small but consistent attitude difference disclosed among rural women. Although we have chosen not to regard them as significant, the high proportion that has discussed desired family size is particularly noteworthy and could suggest that there is more role conflict for working mothers in rural than in urban

HYPOTHETICAL RELATION OF FERTILITY TO FEMALE EMPLOYMENT  
UNDER VARYING SOCIETAL CONDITIONS

BIRTH CONTROL	MOTHER-WORKER ROLES	
	Compatible	Incompatible
Available.....	Cell 2: No relation	Cell 4: Employment influences fertility
Not available.....	Cell 1: No relation	Cell 3: Fertility influences employment

areas, a question of broad significance for research on the family.

These speculations highlight the need for collecting data on job histories, employment expectation, the child care ambience, and attitudes toward employment in the course of fertility surveys—information which was not collected in the present survey. For the present, as a tentative and interpretive summary of our findings, we can present the combinations of our two crucial variables—motherhood and employment compatibility and birth control—as if they represented a continuum, in the accompanying tabulation. The condition in rural Turkey might approximate Cell 1, urban Turkey, Cell 2; Lima, Peru, Cell 3; and a European or American city, Cell 4.

In short, only as the female working role approaches incompatibility with the wife and mother role does the relation between fertility and employment emerge. In this case, however, whether fertility is primarily a cause or effect of employment may depend eventually on the availability of birth control technology. The evidence from urban Turkey would suggest that, in some nations, the technology may appear prior to the emergence of a well-defined role for working women. At the same time the (admittedly weak) evidence from rural Turkey might suggest that attitudes favorable toward reduced fertility may precede birth control technology under specified conditions of female employment.