TABLE 3.2. WIFE'S EMPLOYMENT PROBABILITY FUNCTIONS: OLS ESTIMATES*

(FYH < FY*: N = 1818)

Dependent Variable: LPW

REGRESSION No.	3.2.1		3.2.2		3.2.3	
CONSTANT	0.0417		0.0273		0.0245	
MIGRR	-0.0415	(1.52)				
MIGRU	-0.0489[c]	(1.87)				
MIGUR	-0.0836[b]	(2.50)				
MIGUU	-0.1165[a]	(2.96)				
NONMIGU	-0.0608[b]	(2.53)				
DM	0.0058[b]	(2.42)	0.0060[b]	(2.50)	0.0060[b]	(2.48)
RUN	0.0806[b]	(1.98)	0.0592	(1.51)	0.0706[c]	(1.68)
FYH	-0.0296[b]	(2.56)	-0.0349[a]	(3.05)	-0.0344[a]	(3.00)
EWN	-0.1023[a]	(4.38)	0.1024[a]	(4.39)	-0.1022[a]	(4.38)
EWX	0.0657[a]	(6.62)	0.0588[a]	(6.07)	0.0607[a]	(6.07)
CW6	0.0486[b]	(1.96)	0.0458[c]	(1.85)	0.0462[c]	(1.86)
CW7	0.0270	(0.93)	0.0234	(0.81)	0.0244	(0.84)
CW8	0.0603[c]	(1.68)	0.0582	(1.62)	0.0586	(1.63)
CW9	0.0384	(0.79)	0.0374	(0.77)	0.0375	(0.77)
LOC					-0.0172	(0.77)
$\bar{R}^2$	0.0444		0.0385		0.0383	
F	7.0231		9.0928		8.2405	

*The numbers in parentheses are the t-ratios of the regression coefficients; superscripts a, b and c denote significance at 1%, 5%, and 10% level, respectively.

TABLE 3.3. WIFE'S EMPLOYMENT PROBABILITY FUNCTIONS: OLS ESTIMATES*

(FYH $\geq$ FY*: N = 495)

Dependent Variable: LPW

REGRESSION No.	3.3.1		3.3.2		3.3.3	
CONSTANT	-0.0478		-0.0744		-0.0746	
MIGRR	-0.0496	(0.85)				
MIGRU	-0.1297[a]	(2.59)				
MIGUR	-0.0506	(0.74)				
MIGUU	-0.1361[b]	(2.27)				
NONMIGU	-0.0870[c]	(1.67)				
DM	-0.0002	(0.06)	0.0004	(0.12)	0.0003	(0.08)
RUN	-0.0457	(0.76)	-0.0998[c]	(1.76)	-0.0939	(1.42)
FYH	0.0017	(0.24)	0.0014	(0.20)	0.0015	(0.20)
EWN	-0.0974[b]	(1.99)	-0.1190[b]	(2.47)	-0.1183[b]	(2.45)
EWX	0.1192[a]	(9.38)	0.1134[a]	(9.04)	0.1138[a]	(8.93)
CW6	0.1329[b]	(2.41)	0.1150[b]	(2.12)	0.1153[b]	(2.12)
CW7	0.1627[a]	(2.79)	0.1496[a]	(2.60)	0.1507[a]	(2.60)
CW8	0.1440[b]	(2.21)	0.1237[c]	(1.92)	0.1254[c]	(1.92)
CW9	0.2481[a]	(2.75)	0.2169[b]	(2.42)	0.2194[b]	(2.41)
LOC					-0.0072	(0.17)
$\bar{R}^2$	0.1837		0.1778		0.1762	
F	8.9398		12.8706		11.5633	

*The numbers in parentheses are the t-ratios of the regression coefficients; superscripts a, b and c denote significance at 1%, 5%, and 10% level, respectively.

RUN for families with FYH < FY*, though still positive, becomes insignificant, while for the higher income group its t-value dramatically rises from -.76 to -1.76. We further note that, although the coefficient of RUN remained insignificant in the aggregate, its sign changed from positive to negative. The results are not conclusive; nonetheless, they strongly suggest that current interpretations of findings reported by studies that do not control for migration and residence may be inaccurate.

Conclusions and Implications

Our logit analysis of the wife's employment status confirms the existence of a threshold education earlier found by Encarnacion. Below the threshold the marginal effect of education is negative; above it, additional years of schooling raises the probability that the wife is employed. In section 2, we argued that, if the subsistence hypothesis is correct, then, we should observe the coefficients of regional unemployment rate and duration of marriage to be positive and the coefficient of urban location, net of the migration status effect, to be negative for households with husband's income less than FY*. Indeed, we find them to be so.

In contrast, when husband's income is beyond the threshold, the effects of these variables are insignificant, except, perhaps, for urban location (NONMIGU) which appears to be significantly negative, though barely so

at 10% level. Presumably then, the constraint of keeping income from falling below subsistence is not operative among households in this situation. In this case, the household production model predicts that conflicting effects would be associated with changes in any of these variables. Hence, it is not surprising to find their coefficients to be insignificant.

Our findings regarding the effect of regional unemployment rate is quite interesting since most studies conclude that the "discouraged worker" effect is dominant, apparently, even in LDCs. Our analysis underscores the need to examine the effect of unemployment rate separately for families with incomes above and below subsistence. Furthermore, it suggests that studies that do not control for the effects of urbanization and migration and interpret the negative coefficient of unemployment rate to mean that the "discouraged worker" effect is dominant are likely to be inaccurate. The reason is that the unemployment rate appears to be picking up the negative effects of urban location and migration when these variables are omitted from the regression equation. Specifically, we find that the positive coefficient of regional unemployment rate becomes insignificant for households with FYH < FY*, while for the higher income group it becomes negative and significant.

On the whole, our findings suggest that, unlike in the United States and other developed countries, economic growth and development is likely to be accompanied by a declining labor force participation rate of married

women in the Philippines, at least in its early stages. An examination of historical data reveals that the labor force participation rate of women from 1956 to 1972 appears to have fallen indeed (see Table 4) and that the changes over this period of the various factors associated with it conform very well with our expectations. During this period GNP has been growing at an annual rate of growth of about 6%; open unemployment rate has fallen from 10% to 5.4%; average educational attainment has increased to elementary grade; the mean age at marriage has been rising from 22.1 in 1948, 22.3 in 1960 and 23.4 in 1973; the Philippines has become more urbanized; and finally, the proportion of migrant households is likely to have also increased.[20/]

Our analysis further suggests that the decline in wives' labor participation would eventually taper off and might even rise again as relatively more families move beyond critical levels of income and education. The reason for this is that, while the effects of unemployment, income, and age at marriage are likely to become small and insignificant, the impact of rising education and higher female earning potential is predicted to become significantly positive. Whether ultimately this positive effect would result in rising female labor force participation would depend on a number of factors. Inter alia, it would depend on the effect of

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20/ For an analysis of trends in nuptiality, see Smith (1975). The rate of population growth of the 70 largest urban areas was 4-5% during the 1960's, with Manila and suburbs growing at 4.7%, compared with a national population growth rate of 3% (ILO 1974).

TABLE 4. FEMALE LABOR FORCE PARTICIPATION RATE BY AGE COHORT: 1956 - 1975, MAY ROUNDS

YEAR	TOTAL	10-24 Years	25-44 Years	45-64 Years	65 Years & Over
1956	50.3	47.0	50.3	55.0	2.4
1957	37.4	36.2	39.8	41.8	16.8
1958	42.9	40.4	46.8	48.4	19.2
1959	39.9	36.8	43.2	47.9	19.1
1961	40.3	38.7	43.0	45.3	20.0
1962 (April)	42.5	39.5	46.8	48.3	18.7
1963	43.6	40.8	48.2	48.6	17.4
1964	42.0	37.2	48.0	47.3	24.3
1965	38.7	35.0	45.3	41.7	17.3
1966	37.7	33.7	43.8	43.0	15.4
1967	43.5	40.3	47.8	49.2	21.2
1968	44.8	39.5	52.2	51.3	16.7
1969	33.8	28.8	40.5	39.4	14.9
1970	30.6	25.7	37.1	35.1	17.7
1971	33.5	29.1	39.5	39.1	15.7
1972	34.2	29.3	41.7	39.0	15.2
1973	31.2	24.5	40.2	37.4	18.7
1974	34.2	28.8	42.1	40.1	17.2
1975 (Aug.)	34.3	26.5	44.5	42.1	19.5

Sources: 1. National Sample Survey of Households (NSSH), previously called the Bureau of Census and Statistics Survey of Households (BCSSH) and earlier, the Philippine Statistical Survey of Households (PSSH).

2. Census (1970).

urbanization especially on the evolution of the structure of labor demand and the pace of internal migration. If the structure of labor demand, which has been identified by King (1978) as a major cause of female labor participation in the United States, becomes more flexible in terms of working hours as the economy is transformed further in its advanced stages of development, economic growth is more likely to be accompanied by increasing female participation, especialy when the pace of internal migration then would either slow down or stabilize. Otherwise, the resurgence of wives' participation might not materialize.

The question at this point is whether or not the results of this study are unique to the Philippines. This issue requires comparative research of several countries which is currently on-going and of which this study is a part.

From what we know at present, our findings and interpretations of the labor force participation behavior of married women in the Philippines apparently conform quite well with the experience of a cross-section of countries in various stages of development. It would appear from Table 5, for example, that the relationship between labor force participation rate and level of development may be represented by a U-shaped curve.[21/] Intercensal change data (see Table 6) further reveal that

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21/ Sinha (1965), who observed this pattern on an earlier set of international data, reported a similar relationship among Indian states. His hypothesis is that, as pressure on the wife to work in order to

TABLE 5. LEVELS OF FEMALE AGE-SPECIFIC ACTIVITY RATES IN COUNTRIES AT DIFFERENT LEVELS OF DEVELOPMENT*, CROSS-SECTIONAL CENSUSES

	TOTAL	Level I	Level II	Level III	Level IV	Level V
No. of Countries	84	13	19	17	18	17
Mean Levels of Rates:						
15 - 19 years	36.4	50.6	28.1	22.1	34.0	51.5
20 - 29 years[a]	37.6	52.6	28.2	22.2	42.8	46.4
30 - 44 years[a]	34.0	54.1	28.2	19.6	38.3	34.8
45 - 64 years[a]	29.3	45.3	26.9	16.7	31.0	30.4
65 years & over[a]	11.8	19.5	15.8	7.7	10.3	7.0

*These levels were based on the index of relative development (RDL) of each country measured by two economic indicators: energy consumption per head and percent share of the non-agricultural sector in total employment.

[a]Unweighted average rate for 5-year age groups.

Source: Durand (1975), p. 133.

TABLE 6. INTERCENSAL CHANGES IN STANDARDIZED FEMALE LABOR FORCE PARTICIPATION RATE BY LEVEL OF DEVELOPMENT: CIRCA 1946 - 1966*

Development Level	I & II	III - IV	V
Total number of countries	9	23	14
Countries with			
Negative Change	6	12	5
No Change	0	1	1
Positive Change	3	10	8

*The numbers of countries here are not the same as in Table 4 because many do not have intercensal change data.

Source: Durand (1975).

countries in the initial stages of development generally experienced declining female labor force participation rates. On the other hand, among advanced countries, rising trends appear more prevalent. As might be expected also, among countries between these two stages of development, the number of economies with falling vis-a-vis rising female participation is more balanced.

Consider now some policy implications of the analysis. It is usually assumed that since the Philippines like other Asian LDCs is a labor surplus economy, the solution to the problem of female participation in the labor force lies in the expansion of employment opportunities. It would appear, however, from our discussion that such a solution might be insufficient for low income families. It appears that wives might prefer to do more nonmarket activities when wage rates, especially of males, are higher and other members of the family are gainfully employed and are able to do more market work. The reason for this, our analysis suggests, is that there is less pressure on the wife to work and supple-

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maintain the household's subsistence standard of living eases as a result of economic growth and as female employment opportunities contract in spite of expanding aggregate demand because of the shift from agricultural to nonagricultural production, female economic activity rate tends to fall in the early stages of development. In subsequent stages, however, development is likely to be accompanied by rising female participation as the expansion of labor demand overbalances the contraction in job opportunities and as the substitution effect of wage increases becomes predominant. Durand (1975) rejects the U-curve hypothesis as a generalization on the ground that "a mixture of rising trends in some countries and falling trends in others appears both in long-run series and in the recent intercensal change data for countries at all development levels" (p.150). In particular, noting that those countries with rising participation rates belong

ment her husband's income to maintain the household's subsistence standard of living. The interesting question which requires empirical research, is, what exactly does the wife do with her extra nonmarket time? Our conjecture is that, partly at least, couples with subsistence incomes would tend to use their "extra" resources to produce additional children. This hypothesis is consistent with the fact that, as reported by Encarnacion (1975), additional years of schooling and family income below critical levels have positive effects on fertility.

Another problem that might be associated with expanding aggregate labor demand is its geographical structure. The expansion of labor demand might be so unbalanced geographically that households must migrate (e.g., from rural to urban areas) to be able to take advantage of available opportunities. If households migrate to raise their standard of living, women's labor force participation and earnings are likely to be reduced as indicated by our finding that migration and urban location generally have significant negative effects on the wives' employment probability. To what extent the reduction is temporary or permanent is a research problem being currently examined by one of the authors as part of her dissertation. Anyway, the point that we wish to make is that, while

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to the European cultural family, he strongly doubts whether economic change alone could induce increasing female participation as countries progress from medium to high development levels.

labor mobility is a condition for an efficient allocation of resources, the need for households to migrate might be unnecessarily increased due to certain economic and social policies that unduly favor one geographical area over another (e.g., Metro Manila versus the rural areas)[22/]. In this regard, a substantial number of households in the less favored areas might be paying, as a result, an unduly high price for improving their standard of living. And part of it is the reduction in the employment and earnings of women. How unduly high the price is would be an interesting topic for future research.

22/ For a discussion of some economic and social policies that favor the urban vis-a-vis the rural sector, see Edwards (1974).

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