Philippine Population Journal, Volume 4 Numbers 1-4, January-December 1988

MIGRATION AND FERTILITY IN THE PHILIPPINES: HENDERSHOT'S SELECTIVITY MODEL REVISITED

Ro-Ann A. Bacal

ABSTRACT

The traditional selectivity model of migration assumes that this process is not randomly carried out but that migrants are "selected" at place of origin. Migrants are usually described as persons with high aspirations and the potential for upward mobility, who are likely to participate in and to be influenced by urban culture in their desire to "get ahead". Early marriage and the arrival of children are seen as obstacles to upward social mobility thus prompting migrants to postpone marriage and to adopt fertility limiting practices.

This paper analyzes data from the 1983 National Demographic Survey to see if present-day migrants and nonmigrants differ significantly in terms of socio-economic, demographic and fertility-related characteristics. Results of the multiple classification analysis indicate that migration had a negligible contribution in explaining variations in cumulative fertility compared to education, labor force participation, and contraceptive use.

INTRODUCTION

The traditional selectivity model of migration assumes that this process is not randomly carried out but that migrants are "selected" at place of origin. Certain common characteristics, such as age, education, and occupation, have thus been observed among migrants. In addition, Goldstein (1983:4) suggests that the rational behaviour which motivates individuals to move, especially to urban locations, may also lead them to restrict the size of their families.

In like fashion, Macisco et al., (1970) view the selection of migrants as being linked to various socio-economic factors which are thought to affect fertility through the "social mobility" model. Here, migration is perceived to be selective of persons with high aspirations and the potential for upward mobility. Migrants are likely to participate in and to be influenced by urban culture in their desire to "get ahead." Early marriage and the arrival of children are seen as obstacles to upward social mobility, thus prompting migrants to postpone marriage and to adopt contraception and other fertility-limiting practices.

In his 1971 study of fertility differentials among migrants and nonmigrants, Gerry Hendershot found a pattern of lower fertility among rural to urban migrants as compared to the natives of Manila. He interpreted this finding as evidence for the social mobility model. Hendershot concluded that the migration process was highly selective and that the distinct traits and determination to achieve their aspirations found among migrants may be the very factors which influence the lowering of their fertility. He also suggested, however, that the selectivity thesis tends to get weaker over time due to various social and technological trends which make it easier to migrate.

This latter observation raises the possibility that early empirical support for the selectivity model, should now be weaker due to various developmental trends which have occurred since Hendershot's analysis was undertaken. This paper therefore attempts to test this hypothesis using data from the 1983 National Demographic Survey (NDS) conducted by the University of the Philippines Population Institute (UPPI) in cooperation with the Office of Population Studies of the University of San Carlos and the Research Institute for Mindanao Culture, Xavier University.

In the Philippines, the decade of the 1970s saw the implementation of massive infrastructure projects

linking rural towns to urban centers. It was during this period that highways were constructed and became the main arteries of the country's transportation network, providing the critical convergent points of provincial and city roads. The decade was also marked by an upsurge in the urbanization process, as the availability of arable land in the countryside became increasingly constrained. It is against these contrasts that we may test Hendershot's addendum to the traditional selectivity hypothesis.

HYPOTHESES AND DATA

Hendershot suggests that there may be stages of urbanization which differ in the selective tendencies of rural-urban migration. In early urbanization, when poor transportation and communication systems make travelling costly, migration is highly selective, therefore producing migrant fertility below that of urban natives. As transportation and communication networks become more available and affordable, however, migrants tend to be less selective and fertility approximates that of the rural population.

Because of the considerable improvements in land, sea and air travel that had taken place in the Philippines by 1983, this paper, therefore, ventures to validate whether the following hypotheses hold true:

(1) that present-day migrants and nonmigrants have minor differences in their socio-economic and demographic charactresitics; and

(2) that negligible differences in fertility behaviour between these two groups will be expected even when controlling for age, duration of marriage, education, female labour force participation, and contraceptive use status.

The sampling design of the 1983 NDS consists of a stratified two-stage sample wherein the primary sampling units (barangays) were selected with replacement and with probability proportional to the number of households per barangay. A total of 13,000 households were sampled systematically with a random start. Eligible respondents were all ever-married women aged 15-49 years old belonging to the targeted households. To compensate for over - or under-sampling in some barangays, as had been brought about by differing sampling fractions used for the urban and rural strata, this study used the UPPI-specified weights to derive population estimates from the survey.

While the 1983 NDS provides a rich source of information on migration, its major constraint is its sample size. Faced with a lengthy questionnaire and a limited budget, half of the targeted households were not asked about their detailed migration, nuptiality and employment experiences. The unit of analysis of this study is further confined to currently married women (CMW) aged 15-49, thus resulting in an overall sample size of 5,092 respondents.

OPERATIONAL DEFINITIONS

Migration Status. The 1983 NDS reckons the migration experiences of the respondents from age 15. All currently married women who said that they had changed their residence since age 15 and stayed in another place for at least three consecutive months for purposes of taking up residence on a more-or-less permanent basis are considered to be migrants.

Migrants in this study have been subclassified into four major stream types: urban-to-urban, urban-to-rural, rural-to-rural, and rural-to-urban. For women who have moved only once in their lifetime, the type of place of origin will simply be the starting point at which movements were included in the survey (in this case, the place of residence at age 15). However, for women with multiple moves, a problem arises as to which place of origin to pinpoint. Goldstein and Goldstein (1983:143) suggest the place of longest previous residence be used as the place of origin. But, with up to 11 migration experiences included in the 1983 NDS, complications arise when a woman has had the same duration for two or more previous residences or when differences in duration were only a few months. In order to make the analysis less complex and to allow for simpler data retrieval, migration streams have been confined to determining the place of residence at age 15 and the place of residence at the time of

survey.

Nonmigrants, on the other hand, include CMW who have never changed residence since age 15 up to the time of the survey. These have been further subdivided into urban and rural nonmigrants.

Dependent Variables. The analysis of differentials in fertility behaviour between migrants and nonmigrants was performed by looking at their cumulative fertility including the respondents' number of live-births up to the time of survey (or "children ever born"). This was derived by subtracting the CMWs' pregnancy losses from their total pregnancies.

Independent Variables. Other than migration status, four other explanatory variables were used in the study, the first of which is age at first marriage. For women married only once, this is her age in completed years when she and her present husband married; for women married more than once, it is her age in completed years when she was first married. As defined by the 1983 NDS, marriage includes both legal and consensual unions. The reference date is therefore when the couple started living together, whether solemnized by a formal rite or not.

Level of education was also included in the model. This is the highest educational attainment of the women. It has been categorized into none, elementary, high school and college. A more detailed breakdown is used when describing the profile of migrants and non-migrants, whereas some categories needed to be combined when analyzing cumulative fertility differentials in order to avoid having too few cases.

For the variable labor force participation, women were classified into those who were currently engaged in any economic activity and those who were not.

Contraceptive knowledge and use was measured as follows. Women were divided into those who had never heard of any family planning (FP) method; women who had heard of at least one FP method but never tried any; women who were currently using any of the FP methods; and women who had tried at least one of the FP methods but were not currently using any. In the analysis of cumulative fertility, these categories were further merged into "never-users" and "ever-users."

MIGRANT SELECTIVITY

In order to determine whether the migration process is indeed selective, comparisons between the characteristics of migrants and nonmigrants of the same origin were carried out. Rural nonmigrants were compared to rural-to-rural and rural-to-urban migrants (to be referred to as rural migrants) and urban nonmigrants were compared with urban-to-urban and urban-to-rural migrants (or together, the urban migrants).

Level of Education. Table 1 shows the cumulative distribution of CMW, by level of education, at the time of survey. The universality of education in the Philippines is very well illustrated here as more than 95 per cent of all CMW have had at least some formal education. However, the figures clearly show that migrants have had more schooling than their nonmigrant counterparts.

For instance, at the time of survey, 17.2 percent of the rural-to-urban migrants and 8.6 percent of rural-to-rural migrants had completed at least some years of college education, as compared to only 8.0 percent of rural nonmigrants. On the other hand, while urban-to-urban migrants achieved higher educational status than urban nonmigrants, the urban-to-rural migrants generally did not perform quite as well as their nonmigrant counterparts. However, both categories of urban migrants did have fewer women with no formal schooling than was the case for urban nonmigrants.

Table 2 presents the changes in educational attainment of migrants through the years. Generally, it shows an improvement from predominantly elementary-level achievers in the 1950s and 1960s with increases in high school and college-level participation by the 1970s. The decrease between the 1950s and 1970s in the percentage of migrants with only elementary education averaged 28 percent while the increase in the percentage of migrants with high school and college education during the same period averaged an impressive 37 and 248 percent, respectively.

Table 1. Level of Education of Currently Married Women at the Time of Survey by Migration Status, Philippines, 1983
(Cumulative Percentages)

Migration Status	College Grad	Some College	HS Grad	Some HS	Elem Grad	Elem	N
Total Sample of CMW	8.1	15.6	27.7	42.2	72.0	97.1	5092
Non-migrants							
Urban	12.0	23.7	39.3	55.0	80.3	98.1	750
Rural	3.5	8.0	17.0	30.4	62.8	95.3	1781
Migrants, by Stream							
Urban-Urban	17.6	29.7	47.3	63.9	86.5	99.3	753
Urban-Rural	9.1	19.0	29.7	46.3	77.6	99.8	637
Rural-Rural	5.0	8.6	18.2	29.4	62.9	96.7	835
Rural-Urban	7.9	17.2	34.6	52.5	82.5	98.8	336

Source: Computed from the 1983 National Demographic Survey datatape (weighted results).

By comparing the distribution of migrant cohorts by level of education through the years with those of the nonmigrants at the time of survey, one can conclude, although very roughly, that migration is still selective of the more educated, particularly for those going to an urban destination. But when one averages the percentage distribution of urban migrants (U-U and U-R) and rural migrants (R-R and R-U) and compare them with the nonmigrants' level of education, say in the 1970s, one can see that the differences are not as great.

	Elementary	High School	College
Urban Nonmigrants	45.0	31.3	23.7
Urban Migrants, 1970s	40.2	39.1	20.7
Rural Nonmigrants	69.6	22.4	8.0
Rural Migrants, 1970s	58.8	33.6	7.6

The above-figures indicate that differences in educational achievement between nonmigrants and migrants, in general, may now be minimal. However, it is very apparent that the educational selectivity of migrants to urban places is still undisputed.

The implications of the trend in migrants' level of education over the years are twofold. First, the data appear to show an improvement in the accessibility of the country's educational system so that more are able to take advantage of this social service. Secondly, there is also an indication of the increasing rate of mobility of the more learned, so that certain areas in the country may be considered gainers or losers of brighter citizens as a result of migration.

Economic Activity. Migrants participate more in economic activities than nonmigrants (see Table 3). The highest proportion of non-working women was found among rural nonmigrants who were apparently not taking advantage of employment opportunities in their area as much as their migrant counterparts.

Only 22 percent of rural nonmigrants were reported to be working at the time of survey, as compared to 36 percent of rural to urban migrants and 25 percent of rural to rural migrants. But while more urban to urban migrants (39 percent) were working compared to urban nonmigrants (33 percent), urban to rural migrants (23 percent) participated much less.

In looking at the trend of participation in economic activities of migrants through the years (Table 4), however, one observes an unstable picture. Between the 1950s and 1960s, an increase in the proportion of working women among urban to urban and rural to urban migrants is discerned. Curiously, however, the rates again declined as of the 1970s. On the other hand, urban to rural and rural to rural migrants experienced a decline in proportion of working women between the 1950s and 1960s but their participation increased slightly as of 1983. No explanation can be offered as to the possible cause of this trend.

In comparing the extent of participation in economic activities of the latest wave of migrants with

Table 2. Level of Education of Migrants at the Time of First Move by Year of First Move, Philippines, 1983 (In Percentages)

Migration Status	Elementary	High School	College	N
	1948 - 1959 (1950s)			
Migrants, by Stream				
Urban-Urban	44.7	44.4	10.9	96
Urban-Rural	63.4	33.2	3.4	66
Rural-Rural	88.9	11.1	0.0	111
Rural-Urban	57.1	39.7	3.2	47
	1960 - 1969 (1960s)			
Migrants, by Stream				
Urban-Urban	42.8	44.5	12.7	201
Urban-Rural	66.0	27.6	6.4	183
Rural-Rural	72.5	21.5	6.0	282
Rural-Urban	57.0	35.1	7.9	90
	1970 - 1983 (1970s)			
Migrants, by Stream				
Urban-Urban	33.5	42.0	24.5	455
Urban-Rural	48.1	35.6	16.3	386
Rural-Rural	66.6	28.2	5.2	443
Rural-Urban	41.5	45.7	12.8	199

Notes:

* Elementary - includes women with no formal schooling, women with some elementary education, and graduates from elementary level.

** High School - includes women with some high school education, graduates from high school, and women with some vocational training

*** College - includes women with some college education, women graduated from college, and women with some post-graduate training.

SOURCE: Computed from the 1983 National Demographic Survey datatape (weighted results).

Table 3. Labor Force Participation of CMW at the Time of Survey by Migration Status, Philippines, 1983

Migration Status	Working	Not Working	N
Total Sample of CMW	27.7	72.3	5092
Non-migrants			
Urban	32.6	67.4	750
Rural	22.2	77.8	1779
Migrants, by Stream			
Urban-Urban	38.8	61.2	753
Urban-Rural	23.1	76.9	637
Rural-Rural	25.3	74.7	835
Rural-Urban	35.4	64.6	336

SOURCE: Computed from the 1983 National Demographic Survey datatape (weighted results).

their nonmigrant counterparts, the data show that migration may still be selective of people who are already working.

The figures below show that about 79 percent of migrants from rural areas were economically active at the time of first move, compared to only 22 percent of rural nonmigrants. Also, 65 percent of migrants from urban areas were already working as against only 33 percent of urban nonmigrants.

	Working	Not Working
Urban Nonmigrants	32.6	67.4
Urban Migrants, 1970s	65.0	35.0
Rural Nonmigrants	22.2	77.8
Rural Migrants, 1970s	78.5	21.5

This trend is not exactly unexpected considering that migration is most often motivated by job-related opportunities in the place of destination. The socially mobile, higher aspiring migrants, therefore, were more likely to be engaged in an economically gainful activity at the time of their move. (Note, however, that the proportion still employed at the time of the survey is considerably lower, therefore indicating that some of these women subsequently left the labor force.)

Reasons for Moving. Most migrants are rationally motivated, typically by a desire to improve their economic or social status. According to Ravenstein (1885:167-227), migrants move from areas of poverty to areas of opportunity. Even when the migrant is satisfied with his or her present situation, information about greater opportunities elsewhere may persuade a person to move (Lewis, 1982:100). These "push" and "pull" factors have been the focus of attention of studies that have attempted to determine the major reasons for migration.

That migrants have chiefly been drawn to other areas because of economic reasons is manifested in Table 5. The second most common reason for moving is family-related. Here, one may infer the occurrence of chain migration whereby some members of the family may initially have moved to another residence with the other members eventually following.

The predominance of chain migration, especially in a close-knit family system as is the case in the Philippines is one of the contributory factors to the sustained transfers from one area to another. Family-related moves seem to be more prevalent among urban to rural migrants. Those moves that were made because of changes in housing locations, a related reason, came as the third most common reason, particularly among urban to urban movers.

Over the years, the economic, family, and housing-related reasons have remained the predominant motivations for migrants. An interesting observation, which is evident from Table 6, is that there has been a perceptible decrease in economic and educationally motivated transfers between the 1960s and 1970s, even as there was an increase in housing-related moves during this same period. While the former motives represent more "aggressive" aspirations, the latter is relatively "passive" in nature. This would appear to indicate that present-day migrants may be less selective in terms of individ-

Table 4. Labor Force Participation of Migrants at the Time of First Move by Year of First Move, Philippines, 1983.

Migration Status	Working	Not working	N
1948 - 1959 (1950s)			
Migrants, by Stream			
Urban-Urban	68.8	31.2	96
Urban-Rural	66.5	33.5	66
Rural-Rural	81.2	18.8	111
Rural-Urban	74.5	25.5	47
1960 - 1969 (1960s)			
Migrants, by Stream			
Urban-Urban	71.5	28.5	201
Urban-Rural	60.0	40.0	183
Rural-Rural	78.3	21.7	282
Rural-Urban	80.3	19.7	90
1970 - 1983 (1970s)			
Migrants, by Stream			
Urban-Urban	70.2	29.8	455
Urban-Rural	61.3	38.7	637
Rural-Rural	79.2	20.8	443
Rural-Urban	77.0	23.0	199

SOURCE: Computed from the 1983 National Demographic Survey datatape (weighted results).

ual aspirations and goals. However, it might also be the case that housing-related moves may reflect that the movers are already better-off economically than was the case during earlier decades.

In sum, the data on migrant selectivity have generally shown a distinct pattern whereby migrants were "better off" than rural nonmigrants. That is, migrants had higher levels of education and were more likely to be engaged in economic activities than rural nonmigrants. Urban nonmigrants, however, had higher levels on these variables than the migrants.

Interestingly, the study tends to manifest a pattern of selectivity among migrants whose place of destination was urban. For instance, urban to urban and rural to urban migrants displayed the above-mentioned characteristics just as much, if not more than, urban nonmigrants. Urban to rural migrants, although originating from an urban area, however, did not compare well with urban nonmigrants (although they were "better-off" than rural nonmigrants).

Fertility-related Behaviour Among Migrants and Nonmigrants. In addition to being a biological phenomenon, fertility is a sociological and cultural issue (Engracia and Kim, 1979:1). It may be influenced greatly by prevailing customs, values, and social practices in the community. To the extent, therefore, that social, economic and cultural disparities exist, fertility differentials may be observed. Thus, given the obvious difference in lifestyles and standards of living between urban and rural societies, it may be expected that differences in fertility behaviour will exist between these two types of areas.

Empirical studies generally confirm the prevalence of lower fertility in urban as compared to rural areas. The question therefore arises as to whether women migrants eventually adopt the fertility behaviour observed in the destination community.

Results of researches undertaken in this regard have been diverse. For instance, while studies in Bombay (Visaria, 1971), Bangkok (Goldstein, 1973), Korea (Ro, 1976) and Ghana (Ankrah, 1979) indicate lower fertility among female migrants to urban areas, at least as compared to non-migrants in places of origin and destination, studies in four Latin American cities (Myers, 1966 as cited in Ankrah, 1979), in Puerto Rico (Macisco, Bouvier and Weller, 1970) and in the Iranian city of Isfahan (Gulick and Gulick, 1976) found the fertility of migrants to be higher than that of native urbanites.

Furthermore, researches in Thailand (Goldstein and Tirasawat, 1977), and in Bangkok and Bogota (Magnani, 1980) observed lower fertility among younger migrants to urban areas and similar or higher fertility among older migrants as compared to natives of similar ages, indicating a "crossing over" between the ages of 30 and 40. But then again, Hendershot's (1971) study of migration to Manila and Elizaga's (1966) analysis of fertility differences for Santiago, Chile found an exactly

Table 5. Migrants' Main Reason for Moving to First Area of Destination by Migration Status, Philippines, 1983

(In Percentages)

Migration Status	Main Reason for Moving						
	Economic	Education	Family	Marriage	Housing	Other Reasons	N
Migrants, by Stream							
Urban-Urban	24.1	7.3	24.9	8.1	31.2	4.4	753
Urban-Rural	31.9	5.0	30.5	12.8	16.5	3.3	637
Rural-Rural	42.8	3.5	25.0	12.4	12.9	3.4	835
Rural-Urban	33.2	7.5	24.7	13.3	17.4	3.9	336

SOURCE: Computed from the 1983 National Demographic Survey datatape (weighted results).

opposite pattern.

Such contradictions in research findings have been attributed by Zarate and Zarate (1975) to methodological and analytical variations instead of differences in migration and fertility per se. Macisco (1968) observes further that there have been differences in study design, sampling techniques, and operationalization of key concepts of migration and fertility, thus making it difficult to compare studies.

Age at First Marriage. Rural nonmigrants apparently marry the earliest as shown in Table 7, with an average age at first marriage of 19.1 years. Comparative figures for rural to rural and rural to urban migrants are 20.3 years and 21.4 years, respectively.

Differences between urban nonmigrants and urban migrants in the same age group are less noticeable. The average age at marriage for urban nonmigrants is 20.4 years, as compared to 20.6 for urban-to-rural migrants and 21.2 for urban-to-urban migrants.

Since marriage exposes women to conception, the data indicate that childbearing will start somewhat earlier for nonmigrants, especially those residing in rural areas. Data on mean age at first marriage indicate, though, that there is very little variation between the different migrant sub-groups. The average exposure to childbearing among the CMW in the migrant sample, therefore, will be relatively equal.

Contraceptive Knowledge and Use. Nearly every woman in the sample had heard of at least one family planning method (Table 8). However, 59 percent of rural nonmigrants and 45 percent of urban nonmigrants had heard of contraception but had never tried any method. In contrast, only 36 percent of urban to urban migrants had heard but never used contraceptive methods.

About 41 percent of urban-to-urban migrants were currently using contraceptive methods, which is 6 percent more than their urban nonmigrant counterparts. However, there were less urban to rural migrants compared to urban nonmigrants in this category. On the other hand, both rural-to-rural and rural-to-urban migrants included more current users than rural non-migrants.

Ever-users of contraceptive methods were derived by adding the current users and those who have tried but were not currently using. Here, the same

Table 6. Migrants' Main Reason for Moving to First Area of Destination by Year of Move, Philippines, 1983 (In Percentages)

Migration Status	Main Reason for Moving						
	Economic	Education	Family	Marriage	Housing	Other Reasons	N
Migrants, by Stream			1950s				
Urban-Urban	22.2	11.0	31.4	4.5	28.2	2.7	96
Urban-Rural	31.9	6.1	26.8	15.0	10.1	2.9	66
Rural-Rural	40.2	3.8	33.3	6.7	13.9	2.1	111
Rural-Urban	25.0	6.6	41.0	5.7	20.8	0.9	47
Migrants, by Stream			1960s				
Urban-Urban	25.3	9,8	24.0	7.7	29.4	3.8	201
Urban-Rural	35.1	8.9	26.5	7.6	16.5	5.4	183
Rural-Rural	45.6	4.7	23.7	13.4	9.2	3.4	280
Rural-Urban	35.8	9.3	20.8	16.2	15.7	2.2	89
Migrants, by Stream			1970s				
Urban-Urban	24.0	5.4	23.9	9.1	32.7	4.9	455
Urban-Rural	29.1	2.9	33.0	14.9	17.6	2.5	382
Rural-Rural	41.7	2.7	23.7	13.2	14.9	3.8	438
Rural-Urban	34.0	6.9	22.6	13.8	17.4	5.3	198

SOURCE: Computed from the 1983 National Demographic Survey datatape (weighted results).

pattern is observed wherein rural nonmigrants included only 37 percent of ever users compared to rural to rural migrants (46 percent) and rural to urban migrants (57 percent). So also were the urban comparisons relatively unchanged. Again, more urban to urban migrants were ever-users than urban nonmigrants, while fewer urban to rural migrants were ever-users. The results indicate that migration is typically (though not in all cases) associated with contraceptive use and that women who, at one time or another, resided in an urban area are more likely to know about or be using contraceptive methods.

Cumulative Fertility of Migrants and Nonmigrants. In the following analysis migrants were categorized into "migrants to urban areas" and "migrants to rural areas". The intention here was to find out the impact of the place of destination on the fertility behavior of migrants.

Table 9 shows that at the younger ages of 15-24, the fertility of CMW of all migration statuses are practically the same. Between the ages 25 and 49, however, the mean number of children ever born (CEB) among wives in urban areas is clearly lower than their rural counterparts. Furthermore, urban and rural nonmigrants have higher age-standardized mean numbers of CEB compared to urban and rural migrants, although differences across the age groups are small.

Table 7. Age at First Marriage of CMW at the Time of Survey by Migration Status, Philippines, 1983 (In Percentages)

Migration Status	Age at Marriage						
	10-19	20-24	25-29	30-49	Mean	Median	N
Total Sample of CMW	48.9	37.6	10.5	3.0	20.2	20	5092
Non-migrants							
Urban	45.7	40.2	10.1	3.6	20.4	20	750
Rural	59.3	31.1	7.7	1.9	19.1	18	1781
Migrants, by Stream							
Urban-Urban	38.3	42.4	15.2	4.1	21.2	21	753
Urban-Rural	43.9	42.6	10.0	3.5	20.6	20	637
Rural-Rural	48.3	37.8	10.6	3.3	20.3	20	835
Rural-Urban	35.8	45.0	15.6	3.7	21.4	21	336

SOURCE: Computed from the 1983 National Demographic Survey datatape (weighted results).

A multivariate analysis was performed in an attempt to find out whether migration had a significant impact as an explanatory variable for fertility differences among the women covered in the survey. Multiple classification analysis (MCA) using the heirarchical approach was adopted, with the dependent variable being the mean number of CEB and the independent variables being education, labor force participation, contraceptive use status and migration status. Age and duration of marriage were treated as covariates in the analysis. (A two-way ANOVA was performed to test all possible two-way interactions for pairs of the selected independent variables. The results disclosed that whatever interactions existed between the pairs of independent variables can be ignored, which means that the analysis may be pursued further, as based upon an additive model.)

The multiple classification analysis (Table 10) yielded a multiple correlation coefficient squared (R^2) of .58. In other words, the proportion of variance in the fertility of the women in the study explained by the model is about 58 percent. By looking at the low correlation ratios of the independent variables, though, one can surmise that the covariates (age and duration of marriage) made the strongest contribution towards explaining variation in the dependent variable.

When taking into account the unadjusted mean number of children ever born, the respondent's level of education came out as the most important independent variable for explaining variations in the means, followed by migration status. After adjusting for all independent variables (but not the covariates), the woman's level of education continued to exhibit the highest beta coefficients, this time seconded by contraceptive use status. Finally, when means were adjusted for both independent variables and covariates at the same time (i.e. when "holding constant" all predictors in the analysis) the woman's level of education and contraceptive use status came out as more important than either labor force participation or migration status.

While the unadjusted means show significant differences in parity (CEB) by migration status, this observation virtually disappears once education, labor force participation and contraceptive use

Table 8. Contraceptive Knowledge/Use Status of CMW at the Time of Survey by Migration Status, Philippines, 1983
(In Percentages)

Migration Status	Contraceptive Knowledge/Use Status					
	Never Heard	Heard But Never Used	Tried But Not Currently Using	Currently Using	Total	N
Total Sample of CMW	2.1	49.9	17.6	30.3	100.0	5092
Non-Migrants						
Urban	1.0	44.6	19.2	35.2	100.0	750
Rural	4.1	59.0	14.1	22.8	100.0	1781
Migrants, by Stream						
Urban-Urban	0.8	36.0	22.1	41.1	100.0	753
Urban-Rural	0.9	48.3	18.7	32.1	100.0	637
Rural-Rural	1.5	52.9	17.0	28.6	100.0	835
Rural-Urban	1.0	41.6	22.3	35.1	100.0	336

SOURCE: Derived from the 1983 National Demographic Survey datatape (weighted results).

status were taken into consideration. Further minor reductions of the effect of migration results from controlling for age and marriage duration. Earlier, it was pointed out that migration is selective in terms of socio-economic and demographic factors. It now appears that it is really the influence of these variables which were causing the unadjusted figures to give the impression of a significant migration effect on fertility.

SUMMARY AND CONCLUSIONS

The main purpose of this study was to ascertain whether migration continues to be selective in terms of fertility behaviour or not. Magnani (1980:225) aptly put forward two reasons why this issue is important: first, to the extent that migrant women are unable to assimilate into the lifestyles and behavioral patterns prominent in urban centers and continue to exhibit fertility levels character-istic of rural areas, they will contribute heavily to the already rapid rates of growth in Third World Cities; second, the common association of migration with "modern" values and behaviour and as a possible motivation for fertility reduction is an important aspect of the overall development scenario insofar as movement between more and less modern areas may serve as a catalyst for demographic and economic change.

The general pattern that emerged from the tables points to very little variation in fertility in younger ages and some distinct differences in older ages. This implies that while the tempo of fertility is relatively similar among the CMW in the earlier years of their reproductive span, completed family size, as manifested in the fertility performance of older women, eventually discloses whatever disparities in fertility may exist between migrants and non-migrants. In this regard, since the older migrant women will tend to have lived longer in their place of destination than will be the case for the younger migrant women, the assimilation process may have been more successful in these cases.

Table 9. Mean Number of Children Ever Born for Currently Married Women by Age Group and Migration Status, Philippines, 1983

Migration Status	Age Groups (Years)					Total Unstandardized	Standardized for Age
	15-24	25-29	30-34	35-39	40-49		
Non-Migrants							
Urban	1.5	2.6	3.6	5.1	5.6	3.6 (750)	3.8
Rural	1.5	3.0	4.4	5.5	6.8	4.3 (1781)	4.4
Migrants, by Stream							
To Urban Areas	1.4	2.4	3.4	4.4	5.4	3.6 (1089)	3.5
To Rural Areas	1.6	3.0	4.1	5.3	6.5	4.3 (1472)	4.2
Total Sample of CMW	1.5 (975)	2.8 (1048)	3.9 (952)	4.2 (813)	6.2 (1305)	4.0 (5092)	4.0

NOTE: Figures in parentheses refer to number of currently married women.

SOURCE: Computed from the 1983 National Demographic Survey datatape (weighted results).

It may also be that the migration process has become less constraining in recent years. Progress in transportation and communication facilities in the Philippines may have lessened the pressures and difficulties associated with migration so that movements may now have little impact on fertility.

The results of the multiple classification analysis, in fact, point out that migration (as opposed to education, labor force participation, and contraceptive use status) had a negligible contribution to the multiple correlation coefficient (R^2). This challenges the results of earlier studies which had suggested that migration had a significant impact upon the fertility of women in the developing world. In fact, the results show that it was the demographic variables of age and duration of marriage which made the major contribution to the R^2 coefficient.

Among the socio-economic variables in the model, the women's level of education and contraceptive use status produced higher eta and beta coefficients, particularly when compared with the adjusted means (that is, when "holding constant" all other predictors in the analysis). This appears to demonstrate the ability of these factors to explain fertility differentials. It also indicates that education may well serve as a potential entry point whereby planners and policy makers can attempt to bring down the presently high levels of fertility found throughout the country.

Contraceptive use also appears to be an important factor to consider. A closer look at the data in Table 10, however, indicates that in this case it is the ever users who actually exhibit higher fertility levels. This has no doubt occurred because excessive childbearing tends to bring about contraceptive adoption rather than vice versa. Clearly, though, more can still be done towards transforming family planning use into a stronger predictor of small family size. Earlier adoption of contraception, as coupled with the use of more effective methods, appears called for.

Table 10. Unadjusted and Adjusted Mean Number of Children Ever Born for Currently Married Women by Selected Socio-economic and Demographic Variables, Philippines, 1983

Characteristics of Currently Married Women	N	Unadjusted Mean No. of CEB	Mean No. of CEB Adjusted for: Previous Variables	All Variables	
Grand Mean 3.96					
Level of Education					
Elementary	2698	4.73	4.79	4.18	
High School	1383	3.33	3.31	3.76	
College	968	2.73	2.56	3.63	
Correlation Ratio		0.30	0.33		0.09
Labour Force Participation					
Working	1440	3.98	4.23	3.84	
Not Working	3609	3.95	3.85	4.01	
Correlation Ratio		0.01	0.06		0.03
Contraceptive Use Status					
Never User	2611	3.76	3.59	3.72	
Ever User	2438	4.18	4.36	4.21	
Correlation Ratio		0.08	0.14		0.09
Migration Status					
Non-Migrant in Urban Area	1098	3.70	3.86	3.88	
Non-Migrant in Rural Area	1395	4.21	4.02	4.00	
Migrant to Urban Areas	1474	3.67	3.84	3.87	
Migrant to Rural Areas	1082	4.30	4.14	4.11	
Correlation Ratio		0.10	0.04		0.03
Multiple R Squared					0.58

NOTE: Covariates used: age and duration of marriage.

SOURCE: Results of Multiple Classification Analysis (MCA) computations from the 1983 National Demographic Survey datatape.

Like migration, women's labor force participation turns out to be a relatively inconsequential independent variable. This finding is perhaps not too surprising, considering that most Philippine studies conducted previously on this topic have been unable to show that working wives have significantly lower fertility than those not participating in the labor force (e.g., Costello and Palabrica-Costello, 1986).

One is tempted to conclude that migration does not in itself raise fertility rates by bringing high fertility women into urban areas. However, because migration is age selective and contributes to inflating the age groups in the peak reproductive years, it has the potential to raise the number of births in cities, thereby contributing to the natural increase in urban growth.

The challenge now is to design a strategy for lowering fertility that would specifically address the migrant women. As it is, the family planning program of the

Philippines, and most countries for that matter, does not have any special fertility-limiting strategies that would cater to the needs of particular groups of women like the professionals and career-oriented, the ordinary housewives, or (in this case) migrants. It is about time to reflect on the fertility behaviour and needs of these groups so as to respond effectively with relevant programs.

REFERENCES

Ankrah, K.T. 1979 *Assimilation or Selectivity: A Test of Competing Theses on the Relationship Between Rural-Urban Migration and Fertility in Ghana.* Unpublished Ph.D. dissertation, University of Cincinnati.

Costello, M.C. and M. Palabrica-Costello 1986 "Female Employment, Occupational Setting and Fertility in a Philippine City." in John Stoeckel and Anrudh K. Jain (eds.), *Fertility in Asia: Assessing the Impact of Development Projects.* London: Frances Pinter.

Del Fierro, A.C. Jr. 1974 *Rural-Urban Migration and Differential Fertility in the Philippines.* Unpublished Ph.D. dissertation. University of Kentucky.

Elizaga, J.C. 1966. "A Study of Migration to Greater Santiago." *Demography* 3(2): 352-377.

Engracia, L. and Y. Kim 1979. "Fertility Differentials Among Filipino Women." *UNFPA-NCSO Population Research Project, Monograph No. 15.* Manila: NCSO.

Goldstein, S. 1973. "Interrelations Between Migration and Fertility in Thailand." *Demography* 10(2) : 225-241.

_____ 1983. "Urbanization, Migration and Development." In C. Goldscheider (ed.), *Urban Migrants in Developing Nations: Patterns and Problems of Adjustment.* Boulder: Westview Press.

_____, and A. Goldstein 1983 *Migration and Fertility in Peninsular Malaysia: An Analysis Using Life History Data.* Santa Monica, California: Rand.

_____, and P. Tirasawat 1977 *The Fertility of Migrants to Urban Places in Thailand.* Papers of the East-West Population Institute, No. 43. Honolulu: East-West Center.

Gulick, M. and J. Gulick 1976. "Migrant and Native Married Women in the Iranian City of Isfahan." *Anthropological Quarterly* 49(1): 53-61.

Hendershot, G.E. 1971 "Cityward Migration and Urban Fertility in the Philippines." *Philippine Sociological Review* 19(3-4): 183-191.

Hiday, V. 1978. "Migration, Urbanization, and Fertility in the Philippines." *International Migration Review* 12(3): 370-385.

Lee, E.S. 1966. "A Theory of Migration." *Demography* 3: 47-57.

Lewis, G.J. 1982 *Human Migration: A Geographical Perspective.* London and Canberra: Croom Helm.

Macisco, J.J., Jr. 1968. "Fertility of White Migrant Women, U.S. 1960: A Stream Analysis." *Rural Sociology* 33:474-479.

Macisco, J.J., Jr., L.F. Bouvier, and R.H. Weller 1970. "The Effect of Labor Force Participation on the Relation Between Migration Status and Fertility in San Juan, Puerto Rico." *Milbank Memorial Fund Quarterly* 48:51-70.

Magnani, R.J. 1980. *Migrant-Nonmigrant Fertility Differentials in Urban Areas: Results for Bangkok and Bogota.* Unpublished Ph.D. dissertation, Brown University.

Myers, G.C. 1966. "Fertility and Mobility in Cross-Cultural Perspective." Paper presented at the 1966 Annual Meeting of the American Sociological Association.

National Census and Statistics Office 1983. *1980 Census of Population and Housing, Philippines. Vol.2: National Summary.* Manila: NCSO.

National Economic and Development Authority 1987. *Philippine Statistical Yearbook.* Manila: NEDA/ NCSO.

Pascual, E.M. 1966.*Population Redistribution in the Philippines.* Manila: UPPI.

Pernia, E.M. 1983. "On the Relationship Between Migration and Fertility" *In The Spatial and Urban Dimensions of Development in the Philippines.* Manila: PIDS.

Ravenstein E.G. 1885. "The Laws of Migration." *Journal of the Royal Statistical Society* 48(2): 167-227.

Ro, K. 1976 ."Migration and Fertility in Korea." In *The Dynamics of Migration: Internal Migration and Fertility.* Occasional Monograph Series No. 5, Vol.1. Washington, D.C.: The Smithsonian Institute, Interdisciplinary Communications Program.

Visaria, P.M. 1971. "Urbanization, Migration and Fertility in India." In *The Family in Transition.* Washington: National Institute of Health.

Zarate, A. and A.U. Zarate.1975."On the Reconciliation of Research Findings of Migrant-Nonmigrant Fertility Differentials in Urban Areas." *International Migration Review* 9(2): 115-156.