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A Note on the Fertility-Migration Inter-relationship: The Case of Men in Western Area, Sierra Leone

Introduction

SEVERAL studies have attested to the possibility of migrant fertility being influenced by culture of place of origin. Culture appears to be mostly responsible for differentials in the fertility of migrants and non-migrants at destination area (Martine 1973; Adepaju 1978; Lee and Farber 1984; Lee *et al.* 1986). Others claim that where migration takes a rural-urban dimension, an improvement in fecundity level may result in the nullification of any expected migrant/non-migrant fertility differential or a short term higher fertility among migrants (Goldstein 1973). Apart from the fact that these works cover females only, they leave a blank as to the real determinants of migrant and non-migrant fertility from the perspective of source areas.

With respect to females as the target population for investigation, it may seem appropriate to argue in its favour because women, for the most part, carry the physical burden of childbearing. But researchers are becoming increasingly sensitive to the fact that conception does not occur independent of male intervention (Stokes 1980; BPPF1986). Moreover, except where short distances are involved, and with the exception of few countries (e.g., Botswana in Africa), men predominate in internal migration; and men migrate primarily for economic reasons. To a large extent, internal migration of adult females is determined by factors associated with marriage (Elizaga 1966; Zachariah 1966; Campbell 1986; Gwebu 1987). In effect thereof, the impact of men's reasons on women's reasons for migrating are exceedingly strong; and this is bound to have disturbing repercussions on the fertility attitudes and behaviour of female migrants. In other words, when fertility and migration are examined on a uni-dimensional plane, it becomes difficult to appreciate fully the effect of underlying psychological factors on the issue. Female fertility, in response to the implementation of migration decisions, cannot be explained simply by examining cultures because, though not mutually exclusive of each other, culture, economics and psychology may have to be treated separately in order to implement development in societies influenced by modernization processes. Very little is known about the determinants of fertility among migrant women *vis-a-vis* their non-migrant counterparts in the source areas. In view of these

observations, it is deemed necessary to revisit some theories associated with migration and fertility.

Theory

Researchers' perceptions of the interrelationship between internal migration and fertility are reducible to four major theories. It is noteworthy that the theories may seem different from each other because of the relationship between the timing of migration and changes in migrants' fertility attitude and behaviour. Based on the premise that rural fertility exceeds urban fertility, the "generational" theory proposes that fertility goals are formed during childhood, thereby reflecting environmental conditions of the family during childhood (Ribe and Schultz 1980; Easterlin 1983). This model is based on an all-too-general picture of the urban/rural fertility differential. However, several studies have found no evidence of significant rural/urban fertility differentials, especially when the study investigated only married women (Abu-Lughod 1964; Cochrane 1983). According to the "socialization" theory, it appears that migrants are not likely to affect changes in their fertility behaviour relative to their non-migrant counterparts at the source areas; and this is regardless of migrants' duration of residence in destination areas. Fertility reduction is perceived to occur among offsprings of these migrants. The "adaptation" theory considers migrants' adoption of fertility norms in urban areas as a function of changing tastes. In effect, migrants' fertility preferences change over time in reaction to the conflict between monetary and real income within urban economies. After some exposure to different relative wages and prices, migrants' fertility eventually converge to that of urban non-migrants. But this occurs only after controlling for women's age and education as well as family income. By implication, the adaptation theory states that the fertility of long term rural-urban migrants will be lower than that of recent migrants as well as rural non-migrants. Moreover, it appears that rural-rural migrants will have fertility similar to rural non-migrants. But this will occur only under conditions where it is assumed that the birth practices of people in all rural areas are the same. There is evidence of considerable ethnic and regional fertility differences in Sierra Leone and Liberia, among other African countries, due to cultural effect (Devis 1973; Okoye 1980; Srivastava *et al.* 1981). Therefore, unless the reality were that migration patterns are more affected by cultural than physical distance, as well as economic opportunities, the assumption would be rigorous. The "disruption" theory emphasises the tendency of migration to reduce fertility (Hervitz 1985).

The summation of the underlying thought in each of the four theories leads to the same proposition, that is the eventual reduction of migrant fertility relative to the position in their areas of origin at the attainment of urbanism. Indeed, none is mutually independent of the other. Much as this helps to reduce the cost of testing the hypotheses, the factors involved in each is complicated enough to raise the cost of adequately testing any one of the hypotheses to a point where the marginal utility of the result may tend towards zero as the interrelationship between culture, income, personal aspirations and intergenerational wealth flow gets progressively complex. But perhaps the most serious limitation of these theories is that they assume changes in migrant fertility occur only from female behaviour, practically disregarding the effect of men who predominate immigration. Consequently, researchers

seem to have been misled into emphasising behaviour, giving little attention to the attitudinal aspect of migrant fertility differentials. From a study in Liberia, whose migration and fertility history is similar to Sierra Leone's, the indications are that migration of women has no significant influence on their fertility behaviour (Kollehlon 1986).

Behaviour may be defined as a manifestation of the interaction of social and economic factors with the psychological disposition of a person. The relationship between attitude and behaviour is still fraught with conflict, though the direction of establishment of the fact points more towards the positive than negative side (Westoff *et al.* 1957; Coombs 1979; Schuman and Johnson 1976; Sjoberg 1982; Snyder 1984). The behaviour of a population can best be appreciated where a fairly thorough knowledge of the attitudes of the people concerned has been attained. Unfortunately, whereas studies on family size preferences generally have implications for fertility behaviour, for the most part, previous studies on fertility behaviour tended to emphasise measurement of fertility rates as well as the practice of contraception. Should social scientists dismiss the data from studies about attitudes as unrealistic, hoping that attitude be "removed from the realm of sciences" (Bain 1928: 946), or stay on the fence while questioning the likelihood of stated fertility preferences influencing fertility behaviour (Grebenik 1989)? The answer is No.

An exact one to one consistency between attitude and behaviour is practically impossible. Social scientists must therefore concentrate attention on what the psychological part of the human being can teach about his ultimate behaviour because decisions are made by a person after consideration of all human and environmental factors which constitute the decision making process. Similarly, the interactive forces behind the decision to migrate are extremely complex. Thus fertility behaviour is less likely to be as significant in migration decisions as would be fertility preferences. The reason is simply that, whereas the desired family size changes positions with other alternative preferences on the fertility preference scale, and therefore reflects rationalization effects very well, the birth of a child is an act which may occur by chance. And since accidents are less likely to occur than intended actions, other factors assumed constant, fertility attitudes must be accepted, with all its limitations, as a good indicator of the fertility behaviour of a population.

It is in the light of the foregoing discussion that we now proceed to examine the fertility/migration interrelationship using data on the fertility attitudes of male migrants in the Western Area of Sierra Leone. The operational measure of fertility attitude is the desired family size, which is the number of children men would wish to have if they were to start reproduction all over again.

Study Area

The Western Area is a peninsular in the western part of Sierra Leone. For purposes of civil administration, the region is divided into Greater Freetown (the capital city of the country) and the Western Rural Area. Though the Western Rural Area is not as rural as a traditionally remote village, its population depends mainly on agriculture and fishing for its livelihood. Its population is fairly homogenous in social and economic characteristics; but it is ethnically heterogenous. Greater Freetown is the economic, political and administrative headquarters of Sierra Leone. The characteristics of its population are highly heterogenous,

and the area is the most dense in the country. Its importance dates back to the 16th century when it was discovered, and found to have a deep natural harbour. The settlement of freed slaves, trading relations with Europe and other economic, social and political developments contributed to Greater Freetown's importance as the principal city in the country. The Western Area has experienced considerable migration of people from other regions in the country. This plus fairly high fertility has contributed largely to rapid population growth (over 4.0 per cent annually by 1985) in the region. Migration was dominated mostly by men from the Northern Province, where fertility is high, and the Southern Province, where fertility is relatively low. With a migrant population exceeding 60.0 percent, there are considerable differences in the fertility attitudes and behaviour of the population in the Western Area.

Method

The data for this study was obtained during the course of a sample survey on family size preferences among males in the Western Area of Sierra Leone. The enumeration was done in December 1986 to February 1987; and the author was principal investigator. Ever married men aged 20 years and over constituted the target population. Sample selection procedures, in the two areas were different. In Greater Freetown, the 222 enumeration areas (EA) used in the 1985 census of Sierra Leone were divided into 867 sub-EAs. The sub-EAs were delineated within each EA, using prominent landmarks. They were geographically contiguous and continuously numbered (001-867) in a more or less serpentine manner. A sample of 40 sub-EAs were selected, linear systematically, with a random start, without replacement. All households in each sample sub-EA were visited, and eligible households (i.e. where members of the target population resided) were canvassed. In the Western Rural Area transportation problem necessitated a different selection method. A two-stage sample selection was done. The EAs were arranged in descending order of size of households according to the 1985 census, and five sample EAs were randomly selected. In each sample EA, sample houses were selected linear systematically; and all eligible households in each sample house were canvassed.

The total sample size is 3,006 men¹ in the Western Area (2,479 in Greater Freetown and 527 in the Western Rural Area). The analyses are based on cross-tabulations, and the analysis of variance method is used to test for differences among means. Where the sample size was small, the Western Rural Area is not included as a separate unit in the analysis. Migration is measured for place-of-birth question. The author is aware of the limitations of this unit of measurement; but it was expedient due to cost of using the place-of-previous residence approach. However, migration ratios derived from each of the two approaches are usually not significantly different. Analysis of the mean desired family sizes are based on logarithmically transformed data because tests showed that the distribution of the original data was far from normal. The SCSS software package was used for the analysis.

1. 540 wives were also enumerated, but are excluded from this study because of the small sample size.

Findings

Of the total sample males in the Western Area, 1906 (or 63.4 per cent) were migrants. Whereas 2.3 percent of the migrant had stayed in the Western Area for less than one year, 69.7 per cent had been there for 10 or more years. The analyses exclude Sierra Leonean immigrants (i.e., Sierra Leonean citizens born outside the country) because, by place of birth, they are not exposed to migration within Sierra Leone.

TABLE 1: MEAN DESIRED FAMILY SIZE OF MEN BY MIGRANT STATUS, ETHNICITY AND AREA

Ethnic Group	Western Area		Greater Freetown	
	Non-Migrant	Migrant	Non-Migrant	Migrant
Creole	3.72	3.49	3.60	3.47
Mende	3.87	4.35	3.76	4.31
Temne	4.53	4.64	4.20	4.48
Limba	4.31	4.66	4.31	4.68
Lokko	4.70	4.59	4.63	4.52
Foullah	4.03	4.70	3.84	4.66
Koranko/Madingo/Susu	4.28	4.80	3.94	4.64
VaiySherbro/Kissi	3.99	4.25	3.71	4.17
Other Sierra Leonean	5.47	3.77	5.27	3.68
Total	4.17	4.52	3.99	4.44
N	1056	1809	868	1496

Table 1 shows that the desired family size of migrants in the Western Area exceeded that of non-migrants. Though the Western Rural Area is not included in the table because many cells have much less than 20 cases, the F statistic corresponding to the test for equality of means (0.001), with $P = 0.974$, indicates no relationship between the desired family size and migration in that area. However, in the Western Area, the desired family size differed significantly between the categories of migrants and non-migrants ($F=29.212$, with 1 degree of freedom and p value being less than .001). That the desired family sizes of migrant and non-migrants in the Western Area were significantly different owes much to the position in the city ($F = 12.530$ and the P value is less than .001). It is more likely for differences to be manifest in fertility preferences than actual fertility because, *ceteris paribus*, changing role statuses of men and women may depress fertility behaviour shortly, but should not change the preference's positions within the same period. It is evident from the table that the migration component is influential in family size preferences among men in the city. The cultural distance for migrants to the Western Area, which is shorter with respect to the Western Rural Area than the city, is a likely contributor to the similar migration-specific fertility attitude in the Western Rural Area.

Given the ethnographic pattern of migrations to the Western Area, and evidences of ethnic fertility differentials in Sierra Leone (Devis 1973; Okoye 1970), the following analysis is done in order to examine fertility preferences of migrants and non-migrants among ethnic groups in the Western Area. From the data in Table 1, the F statistic corresponding to the test for equality of means (12.530), with p value being above .001, indicates that the desired family size varies significantly between the levels of ethnicity. Among migrants the Creoles had the lowest desired family size. The Vai, Sherbro and Kissi group of men and the Mendes ranked second and third, respectively; and this may be explained by the effect of education, among other factors. The distribution of fertility preferences among the ethnic groups is consistent with findings among women that fertility is higher among those in the Northern Province of Sierra Leone (where the Temne, Limba, Foutah, Koranko and Madingo are concentrated) than in the Southern and Eastern Provinces where the Mende, Sherbro and Vai predominate (Dow 1969; Devis 1973; Okoye 1980). Though these studies were carried out to investigate fertility behaviour of women, attitudes project probable reactions from both sexes better. Since the desired family size of migrants should portray actual fertility behaviour, differences between the means in Table 1 are consistent with Devis' findings about ethnic fertility differences among women in Sierra Leone (see Table 2). Reasons for these differences include the economic and social values

TABLE 2: ESTIMATED GROSS REPRODUCTION RATES FOR SELECTED ETHNIC GROUPS
IN SIERRA LEONE

<i>Ethnic Group</i>	$e_0^0 = 35$ Years and Same Proportion Under	
	<i>Age 10</i>	<i>Age 35</i>
Creole*	2.27	1.96
Mende	2.38	2.50
Sherbro	2.59	2.81
Kono	2.89	2.91
Lokko	3.07	3.17
Temne	3.32	3.39
Limba	3.45	3.51
Kissi	3.61	3.38
Susu	3.88	3.73
Koranko	4.21	3.64
Foullah	4.35	5.16
Madingo	4.35	5.37

* Based on $e_0^0 = 45$ Years

SOURCE: Devis, T. (1973, Tables 3 and 5)

placed on children by Temnes and Limbas who maintain traditional cultures (Dorjahn 1958; Finnegan, 1965). The mande-speaking groups were traditionally guided by strict rules about sexual abuse (Little, 1951). Moreover, the Vai and Sherbro are strongly influenced by the culture of the Mende as well as having had long exposures to education. The Foullah, Madingo and Susu belong to very high fertility groups with origins in the Republic of Guinea. With respect to our observations about the relatively lower mean desired family size of the migrant Lokko, the occurrence is not strange. Though the Lokko is of northern Sierra Leone origin, Devis' (1973) observation about the fertility behaviour was similar (see Table 2). The observation has been attributed to the "relatively low fertility of the Lokko ... to its former relationship with the Mende, from which it was isolated by the Temne advance" (Campbell 1979: 12).

The impact of urbanism most probably explains much of the changes in the differential desired family sizes of non-migrants in the Western Area. Since the effect of duration of residence has not been accounted for in the analysis, the probable impact of urbanism on the desired family size is apparent among migrants in the city. The lower desired family size of Creole migrants over non-migrants in the Western Area is consistent with the position in the city. The settlement areas of Creoles are in the city or very close to it, distance-wise; and apart from religious differences, the general attitudes of the Creole are similar, regardless of whether their ancestors were "settlers" or "liberated Africans" (Fyfe 1987; Wyse 1989). The classical theory which states that migrant fertility is lower than that of non-migrants i.e., the disruption effect, is apparent in the desired family sizes of the Creole, Mende and Lokko. But the overall mean desired family size indicated that this theory does not apply to the Western Area. Moreover, considering the observations about traditional values in Sierra Leone, the difference in migrant and non-migrant desired family size in the Western Area is plausible. Because of uncertainty about living conditions at the destination, the migrant's desired family size may be destabilized over a short period, thereby causing it to fall temporarily below that of the non-migrant. Though this statement seems to contradict an earlier one, this is the reality because conditions are seldom normal where a dynamic population is concerned. Indeed, the ideal family size (which is "constantly normative") is not expected to change positions with other alternatives on the preference scale within a short time. But the desired family size is "currently normative", and therefore subject to the economic and social disposition of a person. Consequently, under conditions of abrupt economic and social changes, the desired family size will change positions accordingly with other alternatives along the preference scale. With increased duration of residence, however, the migrant's desired family size should revert to a position more or less closer to the ideal, other factors held constant. Consequently, though people in the Western Area have experienced changes in taste due to rapid economic decline as well as social changes, changes in the migrant's desired family size lag behind that of the non-migrant.

* As would have been observed, the desired and ideal family sizes are discussed here as separate variables. Unlike other studies, we used a new approach to distinguish the ideal from the desired family size (see Campbell 1989 for a description of the method).

From the mean desired family sizes in Table 3 it is revealed that fertility attitudes of migrant men in the city (i.e., Greater Freetown) were related with duration of residence. Indeed,

TABLE 3: MEAN DESIRED FAMILY SIZE OF MIGRANTS, BY DURATION OF RESIDENCE AND AREA

<i>Duration of Residence</i>	<i>Western Area</i>	<i>Greater Freetown</i>	<i>Western Rural Area</i>	<i>N</i>
<1Year	4.25	4.02	4.98	42
1-9 Years	4.24	4.08	4.78	498
10+ Years	4.66	4.59	5.14	1269

the mean desired family size increased with increased duration of stay. In the Western Rural Area however, there was a deviation from the pattern in the city; and this is manifested in the pattern in the Western Area. It must be recalled that Table 1 indicated the existence of a significant difference between migrant and non-migrant desired family sizes in the city. It would seem therefore that since migrants are usually young, any occurrence of high family size preferences at short duration of stay in the destination area is reflective of their parity before moving from place of last residence. In Greater Freetown, this was apparent among the Limba, Foutah, Koranko and Vai/Sherbro/Kissi (see Table 4). (The grouping was

TABLE 4: MEAN DESIRED FAMILY SIZE OF MIGRANTS, BY ETHNICITY AND DURATION OF RESIDENCE IN GREATER FREETOWN

<i>Ethnic Group</i>	<i>Duration of Residence (in Years)</i>		
	<i>0-4</i>	<i>5-9</i>	<i>10+</i>
Creole	2.35	3.26	3.71
Mende	3.96	4.15	4.41
Temne	3.83	4.24	4.65
Urnba	4.68	4.22	4.86
Lokko	3.92	4.39	4.57
FouUah	4.45	3.95	4.84
Koranko/Madingo/Susu	5.51	4.36	4.73
Vai/Sheibro/Kissi	4.96	3.75	4.16
Total	3.97	4.20	4.60
<i>N</i>	129	291	1020

changed because of small sample size at duration of less than one year of residence. But this does not affect the ideal under discussion.) In general, the destabilization effect of new settlement tends to have inhibiting influences on the desired family size. With increased duration of stay, this inhibition is gradually eroded.

We now proceed to examine the mean desired family size of migrants by region (rural, urban, etc.) of last residence. Though the analysis so far excluded immigrant Sierra Leoneans, they are included here on the assumption that residency in a country outside that of nationality exposes people to modernizing influences similar to that in highly urbanized cities within their places of residence. Table 5 shows that the mean desired family sizes for migrant from rural areas exceeded those of migrants from urban areas. This is consistent with expectations as rural and urban differences in family size preferences and fertility behaviour have been observed in Sierra Leone (Dow 1971; Okoye 1980). Contrary to our expectations, the fertility preferences of men who were born outside Sierra Leone were higher than those who originated from urban areas in the country. This may be explained by the fact that the majority of them were Fulanis whose origins were probably rural. In view of this observation, the "generational" hypothesis seems applicable to the Western Area.

TABLES: MEAN DESIRED FAMILY SIZE OF MIGRANTS, BY REGION OF LAST RESIDENCE - WESTERN AREA

<i>Region of Last Residence</i>	<i>Western Area</i>		<i>Gr. Freetown</i>		<i>Western Rural Area</i>	
	<i>DPS</i>	<i>N</i>	<i>DPS</i>	<i>N</i>	<i>DPS</i>	<i>N</i>
Rural	4.90	1165	4.47	891	5.07	210
Urban	4.54	659	4.44	516	4.90	79
Other Country	4.67	62	4.45	46	5.35	16
Total	4.54	1886	4.45	1453	4.96	305

NOTE : DPS = desired family size; Gr. = Greater.

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Reflection

From the evidence of significant differences in the desired family sizes of migrant and non-migrants in the Western Area, it may be inferred that a relationship does exist between fertility attitude and internal migration. Whether or not this can be extended to cover fertility behaviour is uncertain. If the ideal family size was used as the unit of attitude measurement, the inference could have been drawn for fertility behaviour also. But Sierra Leoneans are currently experiencing a state of shock over a precipitous fall in real income due to an economy which has been declining rapidly since 1981. The effect is stronger among men than women because men bear most of the economic costs of family welfare. Since the desired family size reacts swiftly to changing economic and social dispositions of people, it is practically impossible to state with certainty the future direction of fertility behaviour, especially as reproductive capacity of men may be presumed unlimited.

There is considerable evidence from the survey to surmise that if the current economic situation persists, actual family sizes will eventually fall (Campbell 1989). With over 60.0 per cent of the sample population being migrants, this is likely to affect the migrants as much as it will the non-migrant population. But there is no information on how the implied fall in reproductive behaviour will differ (if at all) between migrants and non-migrants. If the economic situation persists, ideal family size is likely to shift positions on the preference scale so that fertility attitudes tend towards expected position under conditions where societies are close to attaining (or have attained) modernity. Modernity is used here in the sense that populations are rapidly becoming modern; and modernity can be measured from individuals' perceptions of development, and not simply by the number of modern facilities available (which may or may not have significant effect on the population's transition from traditionalism through modernism.) If persistence of poor economies lead eventually to permanent change in ideal family sizes, it may be manifested in migrants differently from non-migrants. But this is speculative because among migrants, the duration of stay is an important determinant of changes in fertility preferences and behaviour. And since the total effect is dependent on the average of the aggregated attitudes, this total effect will be determined by the distribution of the migrant population in terms of volume and differential attitudes of migrants in each duration of residence category. Stated otherwise, if the overall sum of fertility attitudes is not weighted to account for the real effect of the population in each category of duration of residence, the contribution of findings about differences between migrant and non-migrant fertility may be insignificant.

That fertility of migrants change with increasing duration of residence in the Western Area is indicative of a reorganization of preferences along the fertility preference scale as the migrant experiences some form of adjustment to (and stabilization in) the way of life in the destination area, especially if it is an urban centre. The time required for full adjustment of the preferences to be manifested in fertility behaviour will depend on several factors, such as job availability, income satisfaction, housing and marriage. Migrants move to large urban and mining centres primarily to find work. The psychological effect of the realities of unemployment (i.e., economic dependence, embarrassment and frustration) in many African cities is manifested in respondents expressing epiphenomenal reasons for migrating (Campbell 1980). Where a migrant volunteers a reason for moving which is concomitant to the truth, it is evident that preferences on the psychological scale must be highly disorganized and far from stability. The relationship between duration of unemployment and preference stabilization for the migrant may be assumed to be linear and positive. Unemployment is naturally associated with income dissatisfaction and inadequate housing opportunity. This could sum up to the migrant being incapable of deciding to marry or, if married, to have his wife and children join him. Where such a migrant is with his wife, the direction of fertility implementation is unpredictable. The decision against reproduction may be assumed. But there is the possibility of reckless abandon toward rationalization. If a child is produced under such conditions, it cannot be associated with migration because unemployment in the city is not limited to migrants alone. Indeed, there is evidence that migrants may benefit from voluntary associations which seek to assist them in the process of stabilization in urban centres (Little 1965).

Conclusion

The study in the Western Area tends to support the "generational", "socialization" and "disruption" theories, but not the "adaptation" theory. The most plausible is the "disruption" theory. An immediate fall in fertility preferences is a normal condition which may be traced to the migrant's psychological disposition at the time a decision was made to migrate from the source area. Thus, empirical studies in this area are expedient in order to throw more light on the "socialization" and "generational" theories. However, fertility reduction will depend on the economic conditions prevailing in destination areas as well as people's perceptions of the value of children. In the Western Area, the indications are that the disvalues of children to fathers are increasing (Campbell 1989). In effect therefore, fathers may decide to maintain their fertility behaviour, irrespective of migrant status. But with the relatively stronger indication that fertility will eventually fall, the position on the inter-relationship between fertility and migration remains a matter of debate, especially where women are concerned because their reasons for migrating are not independent of men's own.

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