Migration and Fertility Relationship: A Case Study of Kenya

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Abstract

Migration patterns in Kenya in general differentially affect fertility levels, patterns and behaviour. For economically dynamic areas, out-migration and the associated spousal separation and differential sex ratios seem to be associated with falling fertility, though migration is not the only or even the principal factor involved. In lagging and/or peripheral areas, by contrast, the demographic effect of migration seems to promote high fertility by undermining some critical factors of fertility determinants and behaviour. Examples from Africa in general and Kenya in particular are invoked to examine and explain this important association between migration and fertility. Furthermore, the paper incorporates the geography of economic and social development to help understand the relationship between migration and fertility.

Résumé

Au Kenya, les formes de migration affectent généralement les comportements, types et niveaux de fécondité de manière différente. Dans les régions dynamiques économiquement, l'émigration ainsi que la séparation d'avec les épouses et les taux de différentiels de sexe qui l'accompagnent semblent être associés à la baisse de la fécondité, bien que la migration ne soit pas l'unique voire le principal facteur. Par contre, dans les régions attardées ou périphériques, l'impact démographique de la migration semble être la promotion du taux élevé de fécondité au détriment de quelques facteurs importants du comportement et des déterminants de la fécondité. Des exemples tirés de l'Afrique en général et du Kenya en particulier sont utilisés pour étudier et expliquer cette association importante entre la migration et la fécondité. En outre, cet article contient aussi la géographie du développement économique et social pour aider à la compréhension des rapports entre la migration et la fécondité.

Introduction

One of the enduring features of demographic studies is that migration process has been and still remains the less researched component of population dynamics. They are largely marginalized and neglected from major developments in the subject. Migration has been recognized across the demographic field as important in its own right and requiring detailed investigation. Several studies have therefore recognized the existence of the association between it and fertility (Zarate and Zarate, 1975). However, the shortcomings in its study include data, methodological approaches and analysis (Gould, 1992; Lee,1992; Shapiro, 1991; Timaeus and Graham, 1989; Zarate and Zarate, 1975).

More fundamental to its limited study and research and continuing marginalisation is the `differences` in the data and methodology compared with those of mortality and fertility studies. While mortality and fertility studies are separately strong, with a synergy that comes from an overlap in their data sources, methodology and analytical methods, and are manifestly considered together in many studies, there have been very limited studies of the relationship between migration and fertility, and migration and mortality (Goldstein, 1973; Omondi, 1998). The absence of systematic interaction between migration and the other components of population dynamics has been particularly apparent in sub-Saharan Africa, and with serious consequence not only for migration studies themselves, but also for mortality and fertility studies (Gould, 1992; Omondi, 1998).

Studies of migration have been more linked to development issues and problems than to demographic issues and problems. Even where migration was the primary focus of demographers' concerns like in Jack Caldwell's early and pioneering work in Ghana in the mid-1960s, they did not examine migration with mortality and fertility relationships in any systematic way (Caldwell, 1968). Migration studies were particularly prominent in Africa in the 1960s and 70s literature, at a time when major population movements, both rural to rural and rural to urban, were clearly an important issue for public policy (Oucho and Gould, 1993; UAPS, 1990).

From 1980s, fertility studies have become dominant, driven by concerns over the impact of rapid population growth, migration and associated public policies. This has been reflected in the prominence given by population scientists as well as by governments to the World Fertility Surveys (WFS) and Demographic Health Surveys (DHS) analyses, for these have been at the conceptual and methodological leading edge of African population studies since the early 1980s .

Migration studies, however, have been rather left out on a limb by these developments. Mobility has continued to be given little attention. Everyone has acknowledged it exists and can be an important parameter in population change, but there are neither the data nor the techniques to deal with it adequately, either in its own right or in its relationship with other aspects of population dynamics" (Ayiemba, 1990).

Nowhere is this more apparent than in the Kenya volume of the United States National Science Foundation Population Study (USNFPS) (Brass and Jolly, 1995). Its authors recognized the importance of migration for the population dynamics of Kenya, and commissioned a working paper for the study, only to conclude, significantly relegated to footnote as follows:

> "Migration remains the most under researched area in Kenya demography. Population migration of all types interact in important ways with fertility and mortality changes, and a full understanding of these latter trends can only come when there are better data to permit a deeper understanding of the migration patterns in Kenya" (Shapiro, 1991).

Thus, the interrelationship between these two demographic events has not been and needs to be systematically explored in Kenya. Studies available have suggested that concealed behind the varied fertility manifestations in Kenya exist the intricate and complex interrelationships between migration and fertility. (Shapiro, 1991;).

At a more general level, migration has played a vital role in determining how the population is redistributed in Kenya. However, migration is important not merely because of the redistribution of population *per se* but migration may lead to the redistribution and restructuring of the overall population structures in general and migrants' attributes in particular, both spatially and temporally.

These spatial and temporal changes in migration status and characteristics are concomitant with changes in the overall population dynamics . Thus, there is a need for better questions and understanding of the migration fertility relationship to precede the development of better methodologies and data collection techniques.

This paper takes up the challenge offered by the above conclusions of the National Science Foundations' Kenya study to explore some aspects of the relationship between migration and fertility in Kenya. In particular, it examines the role of migration, a very characteristic and widespread form of demographic behaviour in Kenya on fertility behaviour.

The argument proceeds by defining migration in the context of the Demographic and Health Survey (DHS) data; exploring some of the theoretical aspects of the possible relationships between migration and fertility before moving on to explore some empirical evidence from West, Central and Eastern Africa, with particular reference on the situation in Kenya. The concluding section seeks to reconcile the conflicting evidence, and identifies a few of the still unresolved problems that warrant further investigation.

Migration Research Design and Data

Established research on migration and fertility analysis makes it clear that the ideal design for testing the relationship between migration and fertility requires life histories of migration and fertility, with appropriate information on background characteristics at different points in the life cycle. Such data allow determination of whether migrants do, in fact, differ from never-migrants at origin; how they differ from the host population into which they move; and how these differences change with duration of residence.

Migration and fertility histories also allow assessment of whether or not migration itself results in longer than average delays in childbearing by permitting comparisons of fertility behaviour of migrants with women who did not migrate at point of origin, as well as with women at destination. However, in most studies undertaken to date, data sets available for analysis of migration and fertility interaction have fallen far short of these ideals .

Nonetheless, although data and questions on migration available have limitations, the use of the information collected has allowed imaginative and innovative assessment of the relationship between migration and fertility .

Migration Definition in the Context of the DHS

Data for this study comes from the Demographic and Health Surveys of Kenya (KDHS, 1989, 1993). The Demographic and Health Survey is an international data collection and analysis project sponsored since 1984 by the United States Agency for International Development (USAID). The DHS is a follow up of the World Fertility Surveys (WFS) and the Contraceptive Prevalence Survey (CPS) projects of the late 1970s and early 1980s. The DHS are intended to serve as a source of population and health data for policy makers and for research community.

A distinctive feature of the DHS, integral to this study is the inclusion of questions on residential experience, unlike in the past surveys or censuses. These include, type of residence for most of the childhood up to age twelve, classified as city, town, village or countryside; number of complete years lived at current location; for women who have lived outside their current location at sometime in their life, type of previous residence (categorized as for the childhood residence). Thus, the questions on the years of residence in a particular location in combination with information on current place of residential experience identify a broad array of migration types and categories.

In the case of this paper, years lived in a particular residence, that is, how long one has lived continuously in his or her current place of residence is used to determine migration status and types. Those whose answers are "always lived in current residence" are treated as never-migrants whereas those whose answers are "number of years lived in current residence" are treated as migrants.

Emerging Issues

Fertility of migrants has been considered in the literature, including in analyses based on World Fertility Surveys (WFS) and Demographic Health Surveys (DHS) data. Hypotheses of migrant selection, disruption and adaptation are invoked to explain the familiar findings of fertility changes in migrants' fertility regimes compared to those of non-migrants.

Though the extent of selection, disruption and adaptation seems highly variable in space and time, migrants become assimilated into the demographic as well as the social and economic feature and regimes of the destination area, whether rural or urban, and the fertility regimes of second and third generation migrants are often scarcely distinguishable from those of long established urban and rural families (Goldstein, 1973; Zarate and Zarate, 1975). This general relationship seems to be valid also in sub-Saharan Africa (Lee, 1988, 1992).

Such analyses, however, make a presumption about permanent migration of family groups, for they are based on cross-sectional data. Where there is permanent migration, often associated with population pressure, migration may be seen as the alternative to a fertility response to that population pressure. Effect on fertility of those remaining in the rural source is a function of the selectivity of the permanent migrants. Migrants adapt at the destination of the migration to the new culture and economic conditions prevailing in the urban areas. Nonetheless, migration is not a simple temporary phenomenon to be attributed to the shift from traditional economies to new larger capitalist economic structures. Migration has its own momentum and rationale, and is characterized by its persistence. For example, such persistence has been especially intensified by economic insecurity in the commercial sectors of several impoverished economies that gives an additional rationality to maintaining rural production from family land and maintaining a commitment to rural social structures (Gould, 1992, 1998).

In these circumstances, important sets of questions must concern the effects of migration on fertility. Where there is a large element of mobility, there is an implication to changes in fertility proximate determinants such as behaviour within marriage and changing patterns and use of traditional and modern methods of contraception. Thus, the most critical question for understanding fertility differential in Kenya, is how migration affects total fertility?

General Evidences

Direct Effects

Firstly, migration has direct effect. With prolonged periods of spousal separation, there would be a normal expectation of lower coital rates for

women, though not necessarily for men. However, one might raise caution about too ready acceptance of such a conclusion (Gould, 1994). For example, in many parts of Africa, "extra -marital" sex is not uncommon, often integrated into traditional behaviours. Furthermore, while temporary absence may affect the timing of coitus, periods of return with very high coital rates may keep the overall fertility level fairly constant. Absence of husbands, however, is likely to be associated with longer periods of post-partum abstinence than would otherwise apply. All these clearly depend on the length of absence and seasonality and length of periods of return (Omondi, 1998; Gould, 1992, 1994).

Indirect Effects

Secondly, migration has also indirect effects. As with any pattern and type of mobility, migration may bring migrants into the cash economy and expose them to broader modernization effects, including new attitudes to children and the family and on knowledge and use of modern contraception (Shapiro, 1991; Timeaus and Graham, 1989; Omondi, 1998).

Specific Evidences

Reduced Fertility with Migration

Although conclusions in the literature on the relationships between migration and fertility are contradictory, the most familiar conclusion is that fertility is reduced as a result of migration. For example, in India, Yadava et al (1990), have tackled the relationship directly in a survey of over 3000 rural households in Uttar Pradesh that differentiated between migrant and non-migrant households.

They showed that, for all age groups and all social classes, the fertility of migrant households was lower than the fertility of non-migrant households, and that "husband-wife separation reduces migrant's fertility to a considerable extent. However, the gap between completed fertility of migrants and non-migrants was not as much as the extent of separation between husband and wife". This they attribute to "very high coital frequency of migrated husbands when they visit the household after prolonged separation "and the gap was found to be wider for higher status groups than for the poor (Yadava et al., 1990).

For Africa, there is both indirect and direct support for similar conclusions as follows: Mabogunje (1989) developed strong modernization case to argue that the indirect effects of migration will push fertility downwards. He uses a case study evidence, particularly from southern Nigeria to argue that rural out-migration in general, including circular and permanent migration bring social change and nucleation of family relationships with declining levels of polygamy. With migrant involvement in the cash economy, the household economy becomes less dependent on

family labour, and there is more hired labour. Women then exercise more control over the allocation of household resources of land, labour and capital, including remittances from absent husbands and other household members. The creation of commoditized labour markets will spur a reappraisal of the value of children and will tend in the medium term to lower fertility, though he does raise this possibility as a question.

His is a rather generalized argument about the role of migration in economic change and its indirect effects on the relationships within the family and therefore on fertility. He raises issues about the nature of the family and flows of wealth within it that remain much discussed in Africa population studies (Dow et al., 1994).

Direct evidence are presented by Timaeus and Graham (1989) in their analysis of World Fertility Survey and other data for Botswana and Lesotho, countries where contract labour migration to South Africa is characteristic. Male migrants are absent on labour contracts, typically of between six and twelve months, with no visits home for short breaks during the contract. This migration system directly affects the proximate determinants of fertility. There are relatively low marriage rates for male and female, especially in Botswana, and there is relatively late marriages, by Africa norms, and high rate of marriage dissolution. With a high death rate of mine migrants due to mine fatalities and long term effects of mine diseases on reducing male life expectancies, there is also a high widowhood rate, hence exposure period in marriage is reduced.

Within marriage, long periods of spousal separation mean low coital rates. However, traditional periods of post-partum abstinence have been largely maintained (mean of 9 months in Botswana and 15 months in Lesotho). Low levels of polygamy have given an impetus to high proportion of *de jure* as well as *de facto* female-headed households, with a substantial level of extra marital sexual activity. However there is a high level of acceptance and usage of modern contraception to control fertility, especially by young women outside marriage. The overall effect is estimated that the migration system has the effect of bringing fertility down to a level that is between 9% and 25% less than if there had been no labour migration.

Furthermore, Timaeus and Graham (1989) provide quantitative support for Mabogunje's (1989) more general arguments that migration contributes to the disruption of traditional relationships to bring fertility down. It gives new roles and responsibilities to women as decision makers within the family, reducing exposure to conception, either as a result of reduced coitus or as a result of increased use of contraception.

Increased Fertility with Migration

The case study evidence to support an opposite view is rather less in quantity and less formally quantitative in its data and methodology.

However, it is more recent and contextualized within the broader perspective of development studies that makes explicit links between population change and contemporary economic and social relationships as follows:

Cleveland (1991), an anthropologist, uses a political economy approach at the household level to explore his field material from Bakwu District, Northeast Ghana, in the early 1980s. This is an area of savanna ecology and economy, with long established migration patterns of seasonal and longer-term male out-migration

From his evidence on the factors affecting fertility regulation at the household level, he argues that migration disrupts traditional fertility behaviours and relationships in the direction of increasing the already high levels of fertility. Unlike in Botswana and Lesotho, migration acts to lower the age of marriage for men and women, for migrant men can accumulate sufficient wealth for bride price at an earlier age than non-migrant men. Younger brides can be more readily affordable by increasingly younger men in a polygynous society.

Furthermore, within marriage, there is a shortening of the period of post-partum abstinence. This was traditionally long, up to two years, but periodic and irregular return of men, periods of absence are seldom more than one year and more commonly only several months. That is, periodic and irregular return of men within the period of post-partum abstinence disturbs the significance of traditional norms. Although birth intervals are now shorter than hitherto, increased health care and hygiene practices have meant improved neo-natal, infant and childhood survival. The net effect of migration has been to raise fertility by directly affecting its proximate determinants. In this society, the absence of men raises the need for family labour throughout the year, for there are periods of critical labour shortage, even in the rainy season when absentee rates for men are at their lowest. This raises the short-term value of children and validates the rationality of high fertility.

According to Caldwell (1968), in northern Ghana, there is a thriving practice of child fosterage to distribute the labour resource provided by children more effectively through the whole society, a widely acceptable feature in the demographic calculus in West Africa generally (Bledsoe, 1990). Children are needed to sustain the remittance-dependent domestic economy in the short term, and in the longer term to themselves become the next generation of migrants.

The case study of Western Kenya Provides further evidence to suggest more generalized operations of the migration consequences described by Cleveland from Bakwu District, Northeast Ghana (Cleveland, 1991). Western Kenya is generally a poor and remote region with persistent high fertility, rising in 1970s and 80s with a fall in recent years but to levels that remain the

highest in the country (TFR, 6.4 in 1993, having fallen from 8.1 in 1989) (KDHS, 1993). Here there are very high population densities and severe land shortage. This area has a classic remittance-based economy, with the earnings of absentee men, mostly in Nairobi and other major towns, helping to sustain household survival in a high fertility regime without significant environmental deterioration (Gould, 1994).

In Western Kenya, migration has been the principal response to population pressure, and high fertility is not felt to constitute a major problem as long as remittances continue. Indeed having a large family is widely seen within Western Kenya to be part of the solution to, rather than part of the problem of household poverty, for it produces the next generation of migrants and remittance earners that will ensure long-term household sustainability. Furthermore, by investing in education and schooling rather than in agriculture and other local productive activities, the human resources base of the region is raised, individual job prospects elsewhere are enhanced, and the probability of higher earnings and larger remittances rises (Robins, 1994).

The long tradition of male migration and spousal separation, but fairly frequent return, began in the colonial period. A study in Western Province, Kenya has had an explicit concern for the persistence of high fertility in this high mobility region (Robins, 1994). She shows that birth intervals have progressively shortened over the last 50 years, as the length of the period of past-partum abstinence has been falling. Men leave but return has been and still is fairly frequent.

Furthermore, absentee husbands may be 'called' back for a period of cohabitation once the previous child has been weaned. That is, once a traditional or acceptable period of post-partum abstinence is observed. The return may be for a fairly prolonged period if, as is common, the husband is not in regular employment, or else during a month or two month period of leave from a regular job. In addition, there is little sanction against extra-marital pregnancy, and younger women may have several male partners, some fathering a child, so that absence of a husband may not signify sexual abstinence. Migration, in these terms, is construed to be another of the factors - like the Christian mission and education - undermining traditional birth spacing mechanisms and keeping fertility high.

The persistence of migration and its relationship with high fertility is also indirectly revealed by recent Demographic and Health Survey data . The standard modules for the DHS questionnaires contain some questions on respondents' residence history that can be interpreted as migration questions, and these were included in Kenya Demographic and Health Survey 1989 and 1993 data. However, there is no reference in either published analytical report to their being used in DHS analysis directly (Omondi, 1998).

In the women's questionnaire, there are questions on place of childhood residence (city (Nairobi and Mombasa), town, countryside), length of time at current place of residence (always, number of years, 'visitors') and type of place of previous residence (city, town countryside). Women were also asked to identify the number of localities in which they had lived since first marriage. In the husband's questionnaire, there are the equivalent questions on place of childhood residence and length of time at current place of residence. Although these questions can only provide a limited range of data, and certainly not anything like a full picture of the extent and spatial patterns of population mobility, they can provide some evidence that could prove useful.

Data from the 1989 Kenya Demographic and Health Survey files (Table 1) confirm what is known of population mobility in Kenya from other sources. For example, there is a great deal of population mobility and that much of it involves return migration. The proportions of respondents (women and husbands) who have always lived at the current place of residence, and had lived there for 10 years or more identify, not surprisingly, the population of Nairobi to be the most mobile, least likely to have lived there all life or for more than 10 years, and, for women, most likely to be 'visitors' to the enumerated households. The low proportion of husbands 'visitors' is due to husbands being out of the household at work or searching for work during the day and therefore not captured by the enumeration methodology .

Table1: Length of Time in Current Residence and Male/Female Ratios by Province

Provinces	Women				Husband				
	1	2	3	4	5	6	7	8	9
Nairobi	858	36.1	48.5	13.3		11.5	66.3	1.0	8.5
Central	1280	49.2	73.4	3.0		57.9	84.1	2.8	6.0
Coast	720	75.0	78.2	8.8	178	66.0	89.0	-	7.2
Eastern	896	76.7	85.5	1.9	192	44.4	89.3	-	5.0
Nyanza	1260	61.1	71.6	10.9	208	68.2	74.5	8.9	6.6
R-Valley	1096	71.5	78.9	3.9	132	58.7	82.7	2.4	5.3
Western	1021	30.0	60.0	9.4		42.4	79.6	1.5	7.7
Kenya	**7131**	**56.1**	**70.1**	**7.1**	**1125**	**52.8**	**81.3**	**2.8**	**6.3**

Source: Compiled from KDHS data files

Note

1 and 5	Number of women enumerated
2 and 6	% Always
3 and 7	% Always + over 10 years
4 and 8	% Visitors
9	Female enumerated per husbands enumerated

The most interesting feature of table 1 for this discussion is the calculations of the ratio of enumerated women to enumerated husbands. "Husbands were defined as those who spent the night before the interview in the selected households and whose wives were successfully interviewed''. An 81% response rate was obtained, much lower than for the women due to the husbands be more likely to be out 'at work' during the interview. However, this proportion was 70.6% in Nairobi and 71.6% in Central, but 95.7% in Eastern and 97.1% in Western, an indication of presence of eligible males within the household.

Completely omitted, however, are husbands who were absentees on the night before the interview. Their number is not recorded. Thus a calculation of the female /husband ratio should reflect to some extent the pattern of male absenteeism and mobility. The highest ratios are for Nairobi (8.5/1), Coast (6.2/1), Nyanza (6.6/1) and Western (7.7/1) provinces with a ratio of less than 6 for the other three provinces. Given the high proportion of female-headed households in Nairobi, a high ratio is to be expected. Also, given the high incidents of polygyny in Coast Province (41.4% of all household), its high ratio can also be explained. Western and Nyanza provinces too have high proportions in polygynyous households (33.4% and 29.4% respectively), the second and third highest provincial proportions after coast.

The female/male ratios for Western and Nyanza provinces are higher than those for Coast, and can be largely explained by large numbers of labour migrant absentees. This 1989 KDHS evidence therefore tends to reinforce evidence from other earlier census and survey sources that have been carried out in Kenya for a continuing high incidence of male husband absenteeism in Western Province. Therefore, there is a persistence of high levels of migration.

In addition, the relatively high educational status of the population of Western Province is further confirmed by the 1989 and 1993 KDHS data. Though it is the poorest Province in income and employment terms, it is third overall in educational status after Nairobi and Central Province. Nairobi's proportions are inflated more by the differential selectivity of migrants by education to the capital, the major attraction for well-educated and skilled people, than by better schools provision to give highest proportions by far for both men and women (Table 2).

Furthermore, the fact that Central Province ranks second is also expected, given its large number of private and 'Harambee' secondary schools. However, the proportion of men with secondary education is less than in Western . Though ranked third overall, Western Province has proportions of women with secondary education at near the national average in both years . It falls in fourth place to Nyanza for husbands , at the national average figure, but for KDHS 1993, the proportion of 'men' was much higher and was ten percentage points above the national figure.

Table 2: Percentage with Secondary Education and Above

Provinces	1989 KDHS		1993 KDHS	
	Women	Husbands	Women	Men
Nairobi	43.0	61.0	48.0	55.6
Central	26.7	34.7	31.3	40.7
Coast	15.5	19.0	17.5	29.4
Eastern	15.3	16.6	21.3	29.1
Nyanza	16.9	30.7	18.2	31.8
Rift Valley	16.2	23.6	21.7	35.4
Western	20.2	26.9	25.8	47.4
Kenya	20.4	27.0	24.5	37.7

Source: KDHS, 1989, 1993, data files.

There are two ways in which education plays a significant role in migration-fertility relationship. Firstly, it has an important effect on fertility that in turn determines women's migration behaviour. Secondly, it has its own independent effects on migration that result in an effect on fertility. Female education is most widely reported as a variable that shows a consistent negative association with fertility (Cochrane, 1989). According to her, to estimate the effect of education on fertility, it is necessary to eliminate spurious correlations between education and other fertility determinants such as age and residence.

Evidence shows that the level of education affects both fertility and migration, with higher education generally associated with lower fertility and higher levels of migration often directly related to higher education (Brockerhoff and Eu, 1993).

Table 3: Average Number of Children Ever Born by Education Level by Migration Status[1]

Education Level	1989		1993	
	Non-Migrants	Migrants	Non-Migrants	Migrants
No-Education	4.08	4.44	3.88	3.67
Primary	3.82	3.94	3.31	3.30
Sec+	2.54	2.56	2.19	2.39

Source: Omondi, 1998

Education may release women from traditional and cultural behaviours like accessibility to changing knowledge and modes of action that fortify barriers to mobility such as high fertility and high information costs of migration.

[1] While there are clearly some inconsistencies in these data and interpretation needs to bear sampling errors and definitional changes in mind, the generally expected education and fertility relationships do not seem to operate for Western province. For example, high levels of education in Western Kenya seem to be associated with high levels of fertility (Gould (1994). Education qualification is needed by potentially successful migrants, and households invest in school fees rather than in agriculture to sustain a regular flow of migrants while maintaining a subsistence household economy within the province sustained by women and children and characterized by high fertility.

Educated women are often characterized as possessing lower relative preference for children versus other activities. The broader horizon of knowledge and interest gained from schooling puts the educated women at the centre in terms of the ability to transcend the uncertainties and the risks involved with migration. The better educated woman would be more likely to undertake migration, assuming that by so doing she would minimize the opportunity costs of children while maximizing utility from the non-children related goods and services (Table 3).

Discussion and Conclusion

There is clearly a range of experiences in sub-Saharan Africa with apparently contradictory evidence on the relationships between migration and fertility, especially rural fertility. In some contexts, migration seems to be associated with lower fertility whereas in others with higher fertility than would otherwise have been expected. There seems to be no general relationship that is independent of the economic and social factors in which the demography evolves, and so it is to the contexts of these case studies that any synthesis must turn to make sense of these apparent contradictions. The conclusions that can be made are as follows:

The effect of migration on fertility differs between dynamic and lagging regions. Dynamic regions are regions of out-migration with rising incomes and substantial social change and 'modernization' as in Botswana and Lesotho and areas such as southern Nigeria, as Magobunje (1989) clearly showed. According to him, there seems to be an association between migration and fertility reduction. In these relatively dynamic regions, migration is an integral component in that dynamism, and promotes fertility decline as a feature of overall economic and social development.

By contrast, it is in lagging regions, like Northern Ghana (Magobunje, 1989) and Western Kenya (Robins, 1994; Omondi, 1998) that migration has been shown to be a factor in the persistent influence on fertility. In these regions, there are low levels of remittances, limited commercialization of the rural economy, but an established culture of return migration and dependence on remitted incomes from employment or farming elsewhere. These further sustain influence on fertility with a demand for large families. Despite spousal separation (though probably for shorter periods than in the labour contract regimes that dominate in southern Africa), coital rates per woman may now be higher than they were with traditional marriage and abstinence structures, and birth intervals are certainly shorter.

A conclusion that focuses on regional contrast is further supported by a broader consideration of the situation in Kenya, and particularly in the contrasting fertility between Central Province and Western Province, within the broader national trend of rapidly falling fertility. Like Western province, Central province has a long and continuing tradition of return migration, especially to Nairobi. However, since the province surrounds Nairobi, and

return of absentee husbands can be expected to be much more frequent, though perhaps for shorter periods, given greater involvement by its residents in the jobs sector and need to return to that urban job, this province has experienced substantial increases in family incomes, from local commercial farming as well as from remittances. Income growth and migration are therefore linked, since migrant remittances have been allocated to productive uses in the rural economy, both on and off the farm, thereby widening the income differential between Central Province and provinces like Western Province where remittances have been allocated more to education and thus to perpetuating migration (Table 4).

Table 4: Average Number of Children Ever Born by Provinces by Migration Status

Province	1989 Migration Status		1993 Migration Status	
	Non-Migrants	Migrants	Non-Migrants	Migrants
Nairobi	2.58	2.6	1.53	2.12
Central	3.41	3.66	2.70	2.86
Coast	3.46	3.17	3.07	2.42
Eastern	3.57	3.76	3.22	3.24
Nyanza	4.04	3.87	3.50	3.34
Rift Valley	3.87	3.76	3.56	3.21
Western	4.02	4.24	3.07	3.65

Source: Omondi, 1998

Furthermore, Central Province has experienced the sharpest national provincial falls in fertility rate. In its rapidly modernizing environment, rising incomes and low levels of infant and childhood mortality have provided the incentives for couples to choose the opportunities to use modern contraception. Migration has been a key contribution to that income growth and modernization, although migration may not be the immediate reason for fertility decline.

On the contrary, in the Western Province, the migration system has an opposite affect, sustaining demand for large families made possible by undermining traditional birth spacing mechanisms. However, even here, fertility rates have been falling as part of the national trend, though less slowly and with widening disparities between provinces (Table 5).

Table 5: Total Fertility Rates (TFR) and Changes

Province	1989 KDHS		1993 KDHS		1989-1993 %Change
	TFR	% of Kenya	TFR	% of Kenya	
Central	6.0	90	3.9	72	-35%
Western	8.1	121	6.4	119	-21%
Kenya	6.7	100	5.4	100	-19%

Source: Kenya Government, 1994

It is worth recalling at this point, therefore, that Yadava et al. (1990) found that in rural Uttar Pradesh, the largest gap between migrant and non - migrant fertility was for the richest households. Migration has benefited the rich group more than the poorer one as it has benefited the richest regions in Kenya more than it has the poorer regions and this has contributed to reducing fertility in both cases.

These conclusions therefore, suggest that the development of a general model of the relationship between migration and fertility is not realistic, since the relationship is more dependent on the developmental rather than the demographic context in which it operates. It also implies that diffusionist assumptions about the spread of fertility change, widely assumed in population analysis need to be considered (Coward, 1986; Robinson, 1992, Dow et al, 1994).

Answers to questions such as "Does migration, whether circular or permanent accelerate or retard development?" clearly vary from region to region. Some regions benefit from population loss as others gain. Whether there is benefit or loss will be a function of the structural conditions in the region and its relations with the country as a whole. Peripheral regions generally remain marginalized as a result of out-migration and dynamic regions generally benefit from rural out-migration. In similar fashion, answers to the question, "Does migration raise or lower rural fertility?" will also vary from region to region, depending on the structural conditions within that region and its relationship with other regions.

Further Areas of Research

Clearly further research is needed in this area. This should take the form of further exploration of places of the residence and associated questions in the KDHS, although these questions by themselves are not sufficient, particularly given the need to have an extensive regional dis-aggregation that the above conclusions imply. However, this would need to be complemented by further consideration of some specific issues, two of which might prove to be particularly insightful and certainly researchable to understand comprehensively the impact of migration on fertility behaviour in Kenya as follows:

Frequency and Period of Return

At an empirical level we don't know enough about basic patterns of movement in Kenya and elsewhere in Africa; length of absence; frequency and length of return; and the demographic implications of patterns of spousal separation on probabilities of conception. That is, in bio-statistical terms, how do probabilities of conception during a period of return and cohabitation over one full month after an absence of one year compare with the probabilities of conception where there is a few days cohabitation at two monthly intervals? (Udry, 1993). At a more general level, for example, why

do towns and cities near the lake with frequent absent fishermen and associated periods of spousal separation, not have lower fertility than might be expected?

Migration and Modern Contraceptive Use

This is an important policy issue for African countries. What are the migrants' knowledge, attitude and practice of contraceptives use (traditional and modern methods)? Might husbands be more appropriately targeted in family planning programmes at destination rather than at source, and with what effect? Exposure while resident in the wider, modernized and often urban world, that might inculcate a positive attitude, may be at odds with a perception of the need for large families in the rural setting of a peripheral region.

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