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# Rural Development, Migration and Fertility: What Do We Know?

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RURAL DEVELOPMENT, MIGRATION, AND FERTILITY:  
WHAT DO WE KNOW?

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## FOREWORD

This report is part of a series of State-of-the-Art Papers called for under AID Project 931-1170, Rural Development and Fertility. The Project was designed to assist AID officials, overseas and in Washington, to comply with the mandate included in the 1975 Foreign Assistance Act, Section 104d. That section stipulates that "(1) Assistance ..... shall be administered so as to give particular attention to the interrelationships between (a) population growth, and (b) development and overall improvement in living standards in developing countries, and to the impact of all programs, projects, and activities on population growth. All appropriate activities proposed for financing under this chapter shall be designed to build motivation for smaller families through modification of economic and social conditions supportive of the desire for large families, in programs such as education in and out of school, nutrition, disease control, maternal and child health services, improvements in the status and employment of women, agricultural production, rural development and assistance to the urban poor." The amendment to the FAA continues to authorize the President "...to study the complex factors affecting population growth in developing countries and to identify factors which might motivate people to plan family size or space their children."

These papers examine the extensive literature which encompasses rural development and fertility relationships. Seven State-of-the-Art Papers (SOAPs) were produced: addressing the primary determinants of fertility. From this research base the second phase of the project will "...study the complex factors affecting population growth..." in operational settings, particularly through the medium of project implementation. Case studies will be designed to examine development in rural areas and to isolate the fertility implications of changes in the socio-economic environment. Translating the results of this investigation to decision makers in developing nations and within donor organizations is also

a primary goal of the Project. In addition to publications, a series of seminars, workshops, and intensive technical assistance in participating countries are planned as part of an outreach component of the Project.

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The views and interpretations in this publication are those of the author(s) and should not be attributed to the Agency for International Development or to any individual acting in their behalf.

The seven papers were reviewed by an independent panel of experts including:

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The SOAPS reflect the comments of the review panel: however, responsibility for content rests with the authors.

## INTRODUCTION

In the last few years, a number of reviews of migration and development have been published.<sup>1</sup> While smaller in number and scope, there have also been a few reviews of the extent to which we understand the relations between migration and fertility.<sup>2</sup> Then, why is it necessary to produce yet another document reviewing the "state-of-the-art" for development, migration, and fertility? First, the focus for this document is the interaction of rural development efforts, migration out of rural areas, and fertility, especially rural fertility. To our knowledge, there are no comprehensive reviews that explicitly incorporate all these variables. Second, the existing reviews do not adequately reflect the very diverse nature of the migration process, in which migrants, migrant destinations, and migrant origins each vary considerably. Certainly, one lesson development practitioners have learned is the importance of designing programs for specific target groups and specific situations.<sup>3</sup> Therefore, in this review we attempt to provide a level of discussion which is more specific with respect to the nature of the rural outmigration or development context, specific variables inducing migration, the types of persons responding to the migration variables, and the nature and limitations of subsequent rural fertility changes.

Previous reviews tend to refer to rural-urban migration as a homogeneous behavior, which it is not. Rural-urban migrants, their motives, the urban destinations, and therefore migration consequences vary. Without taking these variations into consideration, rural-development programs

may fail to achieve the desired migration, development, or fertility reduction goals.

First, reviewers have tended to assume that most rural outmigration is directed towards urban locations. This may be true for some situations, but there are exceptions, particularly among the rural poor, the target group for development efforts.<sup>4</sup>

Second, rural-urban migration can take on any number of forms: migration to nearby or distant cities, to small, medium or large cities.<sup>5</sup> Not all rural-urban migrants swell the ranks of the unemployed in the capital city. Nor do all migrants permanently leave their rural villages; many leave and return several times.

If we recognize the multi-faceted nature of rural-urban migration, we must ask if the consequences of rural-urban migration for the migrant and for the areas involved differ with the type of rural-urban migration. For example, migration to a nearby small city may be feasible and beneficial to a potential migrant attempting to supplement rural family income. Further, such migration could simultaneously contribute to expansion of a rural-marketing network.<sup>6</sup> By assuming all rural-urban migration to be rural-metropolitan migration, efforts to reduce overall rural-urban migration may thwart the efforts to develop rural areas through integration of urban functions and creation of off-farm employment in nearby towns.

Another difficulty with the current reviews is the general absence of a dynamic perspective on the migration process. As nations become more urbanized, there will be a wider range of potential urban destinations from which to choose. Depending on these changes and

other changes in city-specific opportunities, even without specific rural-development efforts, the level or pattern of rural-urban migration may change.<sup>7</sup> New migration streams can emerge; others may dwindle, stabilize or expand. Thus, in order to estimate the likely migration and fertility consequences of a development effort, we must first ask what likely changes in the pattern could have emerged given the dynamics built into the urbanization and historical migration process.

Migration-rural development discussions often lack specificity and this lack of specificity may lead to misleading interpretations or "conflicting evidence" that is merely the artifact of oversimplifying the analytical categories. For example, it has been shown that the more educated youth are most likely to become rural-urban migrants.<sup>8</sup> But few analyses have discriminated between the educated poor and the educated rich. If their responses differ, as empirical evidence from Tunisia and elsewhere suggests,<sup>9</sup> then we must qualify a conclusion that education increases rural outmigration. The program evaluations or prescriptions based on theory therefore need to be specific to migrant type: persons or families with high, adequate, or inadequate incomes; youth with secondary, primary, or no education; old or young household heads; single or married women; and so on.

Although attempts have been made to summarize evidence regarding the migrant types and contexts under which migrant fertility may or may not change in response to the migration, previous reviewers have tended to overlook the possibility of differential fertility consequences for the women in the communities left behind. Of course, the very limited number of studies dealing with the rural fertility

impacts of migration restricts the detail with which the subject can be treated. Nonetheless, if the existing evidence can be organized according to specific types of rural contexts and migrant types, we may avoid the pitfalls of generalizing across dissimilar categories.

Finally, previous reviews have not highlighted the distinctions between male and female migrants. But for purposes of examining the likely fertility consequences of different migration patterns, it is essential to consider the separate possibilities attending male vs. female migration. Indeed, the different motives or structural situations underlying male vs. female migration may themselves contribute to differential rural fertility responses to migration.

In this review, we shall attempt to treat the topics of rural development, migration, and fertility with as much specificity as the evidence will allow. We will, however, balance this specificity against the need to summarize, to define coherent patterns cutting across diverse situations, and, in short, to distill out the "essence" of the current research. Our goal is to report the evidence in sufficient detail, such that readers are made fully aware of the complexity of the interactions, yet, where there are commonalities, that these be readily apparent.

The discussion is subdivided into three sections. The first section of the paper summarizes the evidence regarding a set of hypotheses concerning the migration response to rural development, or, as is more often the case, to rural non-development. The second section of the paper summarizes research findings with respect to migration and fertility. The discussion of fertility responses will be linked to

the migrant types discussed in the first section. In addition, as with other state-of-the-art papers in this series, a modified Easterlin framework will guide the discussion of fertility consequences of various migration patterns. Both sections will summarize the substantiated hypotheses regarding interaction of development variables, related intermediate variables, and migration and fertility responses. In addition, each section will include a discussion of hypotheses meriting additional research. The third section of the paper synthesizes the previous sections and postulates fertility responses to specific rural development program outcomes.

Selected references used in this document are compiled in an annotated bibliography at the end of the paper.

## WHO MOVES AND WHY: AN EXAMINATION OF CURRENT THEORY AND EVIDENCE

In this section of the paper, we shall examine economic theories of rural-urban migration.\* There is broad consensus that most who leave rural areas do so for economic reasons, and this discussion of the economic theories for explaining rural-urban migration will illustrate the economic contexts or variables that typically result in rural-urban migration.

But for all its strength, the economic approach to migration behavior still has its weaknesses. The main culprit is inability to explain why similarly situated persons differ in migration behavior; of course, if one includes enough proxies for moving returns and costs, the models can deal with these micro-level inconsistencies. More illuminating for our purposes, however, is to approach these weaknesses from the other side, the strengths of the non-economic approaches to migration. In the second part of this section, we examine alternative migration decision models, showing how these improve our understanding of migration variations.

\* This review focuses on internal migration in developing countries. Most of the research deals with rural-urban migration, but where available we have included in the review studies pertaining to other forms of internal migration.

## The Cost-Benefit Model of Migration Theory

### Persons migrate to areas of better economic prospects:

Throughout history, there have always been some migrants that have left their homes as a result of family quarrels,<sup>10</sup> political violence,<sup>11</sup> or other non-economic reasons. But these migrants have been the minority. Most migrants leave their homes for economic reasons. Some are forced by rural poverty, while others with ample present income go to the cities in pursuit of the white-collar or factory jobs which they believe will provide them with much more income in subsequent years than they could ever hope to achieve in the rural area.<sup>12</sup>

Survey after survey has shown that migrants say that they left their villages to find jobs, to obtain a better-paying job, or to supplement the meager earnings of their farms.<sup>13</sup> Given the overwhelming unanimity of the economic reasons, it is no surprise that the dominant theory regards migration behavior as an economic response.

Ravenstein's Laws of Migration are the earliest descriptions of migrants as persons rationally motivated by a desire to improve their economic standing. Migrants are assumed to move from areas of poverty to areas of opportunity. In Ravenstein's model, migration occurs in stages, gradually flowing in generational steps from lower to highest income areas and to the larger and more distant cities.<sup>14</sup>

Since 1885, migration researchers around the world have produced a tremendous volume of evidence validating the economic theory of migration. Although Ravenstein's simple laws have been modified, there is a great deal of consensus about the economic forces that shape migration.

Income differences between areas stimulate migration from the low- to high-income area: Theory, critique, and modifications.

The basic economic model of migration assumes that potential migrants rationally weigh the costs and expected returns to moving. If the expected costs exceed the returns, migration ensues.<sup>15</sup> Ignoring for the present the difficulties associated with the assumption of conscious, rational decision-making, let us focus on the sometimes inconsistent findings from various operationalizations of the costs and returns variables, income, employment, and cost of moving.

The major problem researchers have encountered has been explanation of continued migration under seemingly irrational conditions. Why do migrants continue to pour into cities already filled with the unemployed, where housing is not to be had, and living conditions are anything but comfortable?

Todaro has demonstrated that it is not the real income or employment differences but the perceived income and employment opportunities which motivate migrants.<sup>16</sup> In his formulation, the probability of rural-urban migration is directly related to the perceived rural-urban income differential and the probability of obtaining a job in the city. Costs of moving reduce the probability of migration. This model has been empirically tested in a number of countries, and it performs fairly well in both aggregate, censal and survey data.<sup>17</sup> There are some differences in the relative strengths of influence in the different tests, and these may reflect a continuing difficulty to accurately define the costs and benefits to which migrants truly respond.

Migration researchers also have had difficulty obtaining a good

measure of the returns of migration. Most models have treated the rural and urban income factors as separate push-pull factors. Where census or survey data on income were available, these data have been used for both rural and urban income levels. However, in many cases, such data do not exist, so proxies must be found. Because the traditional models of development assumed that rural migrants would find factory jobs in the industrializing cities, the economic "pull" usually has been represented by the urban minimum wage for factory work.<sup>18</sup> Rural incomes have been more difficult to quantify. Because rural incomes tend to be agricultural and, therefore, linked to land, analysts have used the man-land ratio.<sup>19</sup> Others have assumed that agricultural sector wages are necessarily lower than those in the non-agricultural sector, hence the proportion employed in the agricultural sector can serve as a proxy for low rural incomes.<sup>20</sup> Note that none of these rural and urban income measures are comparable; they pertain to individual, per capita, and family incomes. Given likely differences in rural-urban dependency ratios, these differences introduce a bias when used to reflect per capita differences. Furthermore, the rural measures ignore the likely unequal distribution of land, particularly of arable land. The net effect of these biases is probably to raise the estimated rural income level, thereby lessening the strength of its estimated effect as a "push." Perhaps for this reason, the rural land-based income measures have not always had significant or consistent coefficients when used to estimate migration out of rural areas.<sup>21</sup>

Another problem with interpreting the economic costs and returns of migration has been that migrants do not necessarily report income

gains after moving.<sup>22</sup> If they did not gain, why did such persons move? If we assume that they were informed about likely income gains (or non-gains), an expectation of higher future earnings can also induce migration. Migrants do not necessarily expect short-term income gains, but they do expect higher future earnings.<sup>23</sup> Thus, in Todaro's formulation, migrants respond to the difference in the discounted present value of their rural and urban income streams. This modification accounts for a higher migration rate among the young persons aged 15 to 30 years. Youth expect to earn the higher urban income for a greater number of years; therefore, given the same actual difference in earnings, younger persons anticipate a greater rural-urban income difference than older persons.<sup>24</sup> If potential migrants also consider the tendency for urban incomes to inflate faster than rural incomes, the perceived differential for youth becomes even larger. Surveys in the Philippines, Colombia, and Guyana show that declines of rural incomes relative to urban incomes have spurred rural-urban migration.<sup>25</sup>

Income security also motivates migration. Dorner has shown that income security is a very real concern to rural peasants.<sup>26</sup> If that future income is perceived as unstable or dropping, clearly this will reduce the expected rural income level, as, for example, when agricultural prices are "regulated" by the government or a series of bad crop years lowers yield expectations.<sup>27</sup> In Nicaragua, for example, the precarious nature of income derived from turtle and other fishing income has forced many Miskito households to send some members away in search of more stable plantation incomes.<sup>28</sup>

The other aspect of future income is income mobility. If the

potential migrant perceives urban income mobility to be greater than rural income mobility, the perceived differential will also be larger and increase the chances of migration. In rural areas, a good measure of low rural income mobility has been inequality in the distribution of land. Studies in Latin America show that the greater the inequality, the lower the income mobility and the higher the rate of out-migration.<sup>29</sup> Theoretically, the Todaro "expected future income differences" captures both the security and mobility aspects of rural incomes, but to observe their separate effects it may be important to include separate variables for income fluctuations or inequality, as Shaw has done in his analysis of land "push" factors.<sup>30</sup>

A final issue related to the rural-urban income differential concerns the skill level to which the differential refers. Because it has been assumed that the unskilled rural residents aspire to factory job wages, the differential has been couched in terms of farm income versus urban modern sector/factory income. Empirical tests, however, have shown that it is the educated who are more likely to move. If this is so, the more relevant differential is that for educated or skilled work. Because the returns to education tend to be greater in urban areas, without a correction for comparable wage or income levels, the differential may be under-estimated.<sup>31</sup>

In their study of rural-urban migration in Tanzania, Barnum and Sabot demonstrated the substantial differences in rural-urban migration rates associated with ever widening rural-urban wage differentials for additional years of schooling.<sup>32</sup> But use of specific income differentials for each skill or education level does not always increase

the explanatory power of the income-differential variable. Analysis of 1963 Costa Rican census data shows that while some types of migrants are more responsive than the differential appropriate to their skill level, some types of migrants (e.g., unskilled workers, farmers) are more responsive to the average level. In addition, migrants to small towns are not nearly as responsive to occupation-specific income differentials as are migrants to the bigger cities.<sup>33</sup> These unanticipated results suggest that the degree to which migrants respond to their "own" skill level wage differential depends on the size of the destination employment market and its related specialization or degree of mobility between skill levels. If the unskilled migrants are moving with hopes of moving into a semi-skilled position, they will be more responsive to a general wage difference than to one for unskilled workers. If, however, opportunities are perceived as limited, as in towns or rural areas, movement by unskilled can respond to the wage differential for unskilled workers. Similarly, areas of "low opportunity" must offer a much larger skill level specific wage increase to attract the professional or white-collar workers away from the larger cities of greater opportunity.

The income differential is central to the economic model of migration. Empirical tests have demonstrated the significance of the differential, yet as we have shown here, the measures of the differential may introduce bias. Comparisons of farm income to urban individual income can understate the differential because farm income includes the work of all household members. On the other hand, a man:land ratio for rural income can overestimate the rural income

for areas with highly unequal land distributions. Consideration of future income probably tends to increase the difference if potential migrants expect higher and rising, secure urban incomes in contrast to low and falling, unstable rural incomes, as in the cases of inequitable distribution of land and government manipulation or control of farm prices to the advantage of the urban worker. Use of an educated or skilled wage difference can also increase the perceived differential.

How then might we expect migration to respond to changes in the differential--via rural income changes? Theoretically, a smaller difference will reduce outmigration. Remember, however, that the important variable is relative future differences in income. Unless urban incomes fail to rise at least as much as rural incomes, a simple rural income increase may not alter outmigration. Factors that increase the stability and mobility of rural incomes could reduce outmigration, particularly if these changes reach the uneducated who are more sensitive to rural income changes and have less chance of high urban income mobility than the educated.

Persons move to areas with a higher perceived probability of employment:  
Theory, critique, and motivations.

But income differences are not the sole economic factor influencing migration; the income difference is realizable only if the migrant can find work. High levels of unemployment, therefore, are likely to reduce migration to that destination. Why then is there evidence of migration to cities with high rates of joblessness? Tests of the economic model in several countries, including Brazil, Costa Rica, Kenya, Mexico, and Sierra Leone, show that urban unemployment levels

have no significant or a positive relation to immigration.<sup>34</sup>

As with the income criterion, the employment condition to which migrants respond is not necessarily immediate or absolute chances of finding a job. The relevant criterion is overall employment prospects, i.e., the chance of obtaining a better job than is available at the origin. Numerous studies report that the migrants chose to move to the city because employment prospects were better than in rural areas.<sup>35</sup> Moreover, it is not just the educated migrants who say their chances are better. The large cities with their diversification and large informal sectors also offer a wider scope of opportunity for the unskilled or semi-skilled workers. Particularly for teenage girls, employment as domestic servants in the city may be the only alternative to unpaid farm work.<sup>36</sup>

Just as the relevant income criterion is future income, the relevant employment criterion is the probability of obtaining a formal-sector job by the end of a specified "wait" period. During the wait period, migrants are either unemployed or "underemployed" in the traditional or informal sector. Because Todaro's model assumes an increased probability of employment with length of residence as migrants make more contacts, eventually migrants will find jobs at the desired income levels. Younger migrants are assumed to have a longer maximum waiting period, partially because they expect payoffs spread over a longer period once they obtain a job, but also because their waiting "costs" are lower. Younger migrants generally are unmarried and without dependents, so their income needs are smaller. Also, studies show that young migrants often stay with friends or family until they find

some form of employment.<sup>37</sup> Thus, the model can account for the exceptionally high rural-urban migration rates of the young, even to cities with high unemployment levels.

Todaro's "lottery approach" to job search behavior has encountered criticism by those who claim that migrants are recruited on the basis of educational or skills criteria. Fields shows that if there is a priority for educated persons in all jobs (skilled or unskilled), the probability of migration for uneducated persons drops.<sup>38</sup> Rempel postulates the existence of two separate lotteries. Educated youth with friends in the high wage modern or "sheltered" sector first try their luck there. If they fail, they drop down to the "competitive" employment lottery. If they succeed, after gaining additional skills and experience, they can attempt the sheltered lottery again. If they fail at both lotteries, they enter the informal sector. Here, too, they can fail if their income does not match their aspiration wage, in which case they move on or return home. But once in the informal sector, they are unlikely to recycle into the employment lotteries.<sup>39</sup> Thus, while Todaro's model envisions the informal sector as a temporary "holding pool" for migrants continuing their job search, in Rempel's model entry into the informal sector rules out subsequent formal job search activity. Empirical studies in Latin America and Malaysia lend support to this conceptualization of mobility within but not between the informal and formal sectors.<sup>40</sup> Thus, in Rempel's model, the size of the informal sector does not necessarily represent unemployment levels. This would mean that the size of the informal sector as a proxy for unemployment might not result in any improvement

in our ability to estimate migration flows. Following both Rempel and Fields, the more relevant criteria are education and kin and urban contacts who can expediate the job search. A number of studies are consistent with their suggestions.<sup>41</sup>

Another explanation for the failure of high urban unemployment levels to deter urban in-migration lies with the difference between migrant and urban native aspirations. In Jamaica, for example, rural-urban migrants are willing to take lower-paying jobs that natives disdain.<sup>42</sup> In general, when migrants and natives are compared, migrants tend to have lower unemployment levels, in part because they may be more willing to take the low-paying, insecure jobs that natives pass up.<sup>43</sup> Therefore, high urban unemployment does not necessarily deter migrants.

If limited rural employment prospects compel rural youth to look elsewhere for jobs, would better off-farm employment prospects reduce outmigration? Empirical findings from Turkey, Puerto Rico, and Nigeria show that areas that offer off-farm employment have reduced net outmigration.<sup>44</sup> On the other hand, survey data show that migrants are more likely to have worked off the farm.<sup>45</sup> How are we to interpret these seemingly contradictory findings? The discrepancy results from attempting to compare aggregate and disaggregated data. For persons who move to supplement meager rural farm earnings, availability of jobs in rural areas or nearby cities can reduce the need to look for jobs in more distant states or cities.<sup>46</sup> Therefore, aggregate, inter-state or rural-metropolitan migration rates drop. But this does not

mean that rural-urban migration is necessarily lower. If persons move to the nearby cities to take jobs, then this can still be considered rural-urban migration. We would only observe reduced rural-urban migration if the jobs are within commutation range and those employed in nonagricultural jobs continue to live on their rural farms, a phenomenon increasingly witnessed in parts of Africa.<sup>47</sup>

Costs of moving reduce migration between two areas: Theory, critique and modifications.

The last component of the economic model of rural-urban migration is the cost of moving. Generally, this has been operationalized as the distance between the origin and urban destination. Increased distance results in increased transportation costs of moving or of visits back to the origin community, hence represents both the actual and "psychic" costs of moving.<sup>48</sup> Communities further away from cities are also assumed to have fewer contacts with the potential destination, which reduces employment probabilities. Because reduced contacts generally mean less reliable information, persons in more distant communities have a larger component of uncertainty to their decisions. Uncertainty causes potential migrants to discount information about urban income or employment differences; therefore, distance reduces the perceived income difference.<sup>49</sup> Finally, where various ethnic groups are clustered in distinctive regional groupings, distance represents the "psychic" cost of living among other ethnic groups. Where the ethnic groups stress involvement in the home community, migration to far-away destinations is less likely.<sup>50</sup> Distance has been proven a

significant deterrent to migration in the majority of studies in which it is included.<sup>51</sup> Yet, it is not always a deterrent.<sup>52</sup> If the rural-urban employment and income differences are extremely great, they can swamp the effects of distance and related migration costs. Alternatively, distance between origin and destination may no longer correlate with migration costs. As will be shown below, this latter is the more plausible explanation. Other migration costs not necessarily captured by the distance variable include the urban cost of living, urban crime, and other negative lifestyle factors.<sup>53</sup>

Some researchers have suggested the inclusion of a population size measure as a proxy for the cost reduction factor of having kin or friends with whom to stay after arrival. Because larger cities are more likely to have friends or kin who migrated previously, size of the urban destination or percent urbanization has been used as a proxy for the migrant stock measure.<sup>54</sup> Interpretation of this variable is not straightforward, however, because population size can also be used to measure the amenity value of the destination, the size of the urban labor force with whom migrants compete, or the level of industrialization.

#### Empirical evidence regarding the economic approach to migration:

Allowing for variations in the specification of the income differential and unemployment variables, what are the findings emerging from empirical tests of the economic model of migration? Table 1 gives the direction of influence of the independent economic variables; the most important variable(s) in the correlation or regression is (are) noted. In most cases, the migration is rural-urban, but in

some instances it is interstate migration. Measures for the independent and dependent variables vary. Some use the state's per capita income while others use wage rates. Some use the reported unemployment rates while others use the size of the labor force not in the modern sector. Despite these differences in measures, a common pattern emerges from the few studies covered here.

1) Cost of moving: Of the "economic" factors, the factor that most consistently and strongly determines rural-urban migration is the cost of moving. Distance, a proxy for the cost of moving, consistently deters outmigration, while the presence of kin in urban destinations increases the probability of moving. Among other things, kin reduce the expected costs of moving through provision of shelter, food, and help in obtaining employment.

2) Unemployment at the destination: High levels of urban unemployment frequently do not deter migrants from coming. Of the analyses for which an urban unemployment variable is included, it is a significant deterrent for only half the cases.

3) Rural income: Likewise, the model's formulation of a relative rural income push is not consistently supported, and the inconsistent or nonsignificant results raise questions about the validity of the rural "push" component. Clearly, certain types of potential migrants respond more strongly to low rural incomes than others. The lack of significance may result from imputing individual responses to aggregate conditions.

4) Urban or destination income: There are far fewer exceptions to the theory regarding a migrant response to higher urban incomes.

Table 1: Empirical Tests of the Economic Model of Rural - Urban Migration

Independent Variables

- = Negative Correlation    + = Positive Correlation    ns = Not Significant    o = Not Included    \* = Most Explanatory Power

| Country/Migrant Type                     | Rural (origin) Income | Urban (Dest'n) Income or Wages | Rural Unemployment | Urban Unemployment | Distance | Rural Mar. Land Ratio | Rural Land Ineq. Distrib. | Rural Wage Emp. Avail. | Urban Dest. Size | Mig. Stock |
|--|-----------------------|--------------------------------|--------------------|--------------------|----------|-----------------------|---------------------------|------------------------|------------------|------------|
| Crossnational/Aggregate mig.             | + Differential        |                                | 0                  | -                  | 0        | +                     | 0                         | 0                      | -                | 0          |
| Sierra Leone/Educ R-U mig.               | -                     | ++                             | 0                  | +                  | -        | 0                     | 0                         | 0                      | 0                | 0          |
| Sierra Leone/Uneduc. R-U mig.            | -                     | ++                             | 0                  | -                  | -        | 0                     | 0                         | 0                      | +                | 0          |
| Sierra Leone/R-R mig.                    | ns                    | +                              | 0                  | ns                 | -*       | 0                     | 0                         | 0                      | 0                | 0          |
| India/Interstate mig.                    | -                     | +                              | 0                  | 0                  | -*       | 0                     | 0                         | 0                      | +                | 0          |
| India/Interstate mig.                    | -                     | -                              | 0                  | 0                  | -        | 0                     | 0                         | 0                      | 0                | 0          |
| Tunisia/Rural out-mig.                   | -                     | 0                              | 0                  | 0                  | 0        | -*                    | 0                         | 0                      | +                | 0          |
| Ghana/Interstate mig.                    | -                     | +                              | 0                  | 0                  | -*       | 0                     | 0                         | 0                      | +                | 0          |
| Puerto Rico/State out-mig.               | ns                    | 0                              | 0                  | ns                 | 0        | 0                     | 0                         | 0                      | +                | 0          |
| Egypt/Interstate mig.                    | -                     | +                              | 0                  | 0                  | -*       | 0                     | 0                         | 0                      | 0                | 0          |
| Venezuela/Interstate mig.                | +                     | -                              | 0                  | 0                  | -        | 0                     | 0                         | 0                      | 0                | 0          |
| Venezuela/Young male interstate mig.     | -*                    | +                              | -                  | -                  | -        | 0                     | 0                         | 0                      | 0                | 0          |
| Kenya/Male interstate rural-urban mig.   | ns                    | +                              | 0                  | +                  | -        | 0                     | ns                        | -                      | 0                | ++         |
| Kenya/Female interstate rural-urban mig. | ns                    | +                              | 0                  | ns                 | -        | 0                     | +                         | -                      | 0                | ++         |
| Brazil/Interstate mig.                   | -                     | +                              | 0                  | ns                 | -*       | ns                    | 0                         | 0                      | 0                | 0          |
| Columbia/Interstate mig.                 | +                     | 0                              | 0                  | 0                  | -*       | ns                    | ns                        | 0                      | 0                | 0          |
| Chile/Rural out-mig.                     | 0                     | 0                              | 0                  | 0                  | 0        | +                     | +                         | 0                      | +                | 0          |
| Turkey/Rural out-mig.                    | -                     | 0                              | 0                  | 0                  | 0        | 0                     | 0                         | -                      | +                | 0          |
| Mexico/Interstate mig.                   | ns                    | +                              | ns                 | -                  | -        | +                     | ns                        | 0                      | ns               | +          |
| Mexico/Male Interstate                   | +                     | ns                             | +                  | ns                 | -*       | -                     | ns                        | 0                      | ns               | +          |
| Mexico/Female Interstate                 | +                     | ns                             | +                  | ns                 | -*       | ns                    | ns                        | 0                      | ns               | +          |

Note: Some of the regression equations included other variables not shown in this table, therefore, these are not to be interpreted as the most robust equations - expl. rural-urban migration.

SOURCES TO TABLE 1

- |                              |                           |                    |
|------------------------------|---------------------------|--------------------|
| 1. Annable, 1972.            | 8. Boswell, n.d.          | 13. Sahota, 1968.  |
| 2 - 4. Byerlee et al., 1976. | 9. Greenwood, 1969.       | 14. Schultz, 1969. |
| 5. Greenwood, 1971.          | 10. Levy & Wadycki, 1973  | 15. Shaw, 1974.    |
| 6. Hay, 1974 (OLS Model)     | 11. Levy & Wadycki, 1972. | 16. Munro, 1976.   |
| 7. Beals et al., 1967.       | 12. Rempel, forthcoming.  |                    |

1967

However, when the migrant stock variable is included in the regressions, it is interesting to note that the urban income coefficient changes sign and drops in significance for both Indian and Venezuelan data. These results lend credence to the interpretation of the facilitating role of migrant stock, in that migrants may follow kin to cities despite lower city aggregate income levels.

5) Variation by type of migrant: There are limited comparisons of coefficients for different types of migrants; where these are available, the results illustrate the variations in migration response by age, sex, and education level.

6) Rural employment: Rural unemployment per se was tested in relatively few models; ditto the availability of rural wage employment in nonagricultural or cash crop sectors. The latter results suggest that improved rural paid employment prospects can deter some outmigration. Similarly, a less unequal distribution of land could produce the same result through improved future rural income prospects for the landless and small farmers.

What are some possible explanations for the inconsistent and insignificant coefficients of the rural income and urban unemployment variables? In addition to the operationalization problems mentioned in the preceding discussion, there are some inherent structural weaknesses to a purely economic model of migration behavior.

The most fundamental difficulty with the economic model of migration is the implicit assumption that people follow jobs. Granted, there is ample empirical evidence to justify this assumption, but there are exceptions. Jobs are not always a sufficient or even a necessary

condition for migration.<sup>55</sup> Some migrants may move to situations which they believe offer better "life chances;" jobs may be part of these chances, but not all. Furthermore, it is possible that jobs follow people, as Stiennes has demonstrated with aggregate United States data.<sup>56</sup> Problems of simultaneity bias in migration estimating equations generally do not enable us to determine the jobs-movement causal direction.

The fact that many migrants enter the informal sector which typically lacks the formal structure of "employment" demonstrates the weakness of the jobs-migrants assumption. The economic model of migration allows for migrant "underemployment" in the urban informal sector, but all migrants are assumed to aspire to formal sector jobs. In fact, studies of migrants in the informal or small-scale sectors of Lima, Belo Horizonte, Nairobi, and other cities show that migrants are responding to the perceived urban opportunities for entrepreneurship. Many move, start out working in a family enterprise, and eventually develop a small firm of their own. As the number of educated job-seekers increases, the informal sector opportunities for mobility will be increasingly attractive to rural-urban migrants.<sup>57</sup> Thus, the urban formal sector wage and unemployment rates are unlikely to affect the migrants who envision themselves ultimately as independent entrepreneurs. For these migrants, urban contacts, closeness to the rural community base for marketing endeavors, and a large potential demand for their products or services are desirable. Using this rationale, we can understand the importance of migrant stock, distance, and destination size in the regressions discussed above.

The economic model correctly highlights the fundamental condition of relative rural poverty as a migration stimulus. But to assume that the only response is rural-urban migration narrows the scope and explanatory power of the model. Low rural income levels are a persistent, worldwide phenomenon and rural-urban migration is only one possible response. It is encouraging to see that Byerlee, Carvajal and Geithman, et al. and Rempel allow for rural-rural, rural-metropolitan and rural-small town migration.<sup>58</sup> We need to build these other migration options directly into the modeling process. Until then, to the extent that rural-rural or non-interstate migrants are considered "nonmigrant," the rural-urban migration functions will contain errors. In particular, a number of empirical studies in Africa and Latin America show that the rural poor who live close to cities respond to rural poverty by supplementing their incomes with urban earnings. However, they do not move to the city; hence, although they effectively participate in the urban labor market, they are not considered rural-urban migrants.<sup>59</sup>

When nations were little urbanized and most modern sector jobs were found only in the biggest city, a monolithic model of rural-metropolitan migration may have been realistic. But with increased levels of urbanization and more cities from which to choose, modelling of the rural-urban migration decision must be cognizant of alternative urban destinations. To a certain extent, analyses pertaining to interstate migration incorporate alternative destinations, but these analyses are still too aggregated. Analyses that have allowed for alternative destinations show that migrants do evaluate alternatives and select destinations that are not always the closest cities.<sup>60</sup>

If migrants decide among alternative destinations, then a more useful model of migration decision-making would allow for two phases: a decision to move and a decision concerning destination. Often but not always they are made simultaneously; therefore, a more appropriate migration model would incorporate two phases. In the next part of this paper, we shall show how a two-step model of migration decision-making improves our ability to understand the different urban and rural destinations selected by migrants from the same area.

One last discrepancy between the economic model and the "real" world of migrants is that the model assumes that the only or most appropriate response to the rural-urban income and employment prospects is permanent rural-urban migration. In fact, permanent, "once only" rural-urban migration is only one possibility, and recent research in Africa and Latin America suggests that for many potential migrants it is least likely.<sup>61</sup> First, migrants, especially those leaving for schooling, often intend to return; even if they do not return, portraying the decision process with a rational weighing of life-time benefits is erroneous.<sup>62</sup> Second, many migrants move frequently: in steps to larger cities; back and forth between country and city (a common African pattern); or circulating between various cities. Thus there may not be one but several rural-urban migration decisions, each with varying constraints and time perspectives.

Essentially, the economic theory needs to be translated into micro or household level terms. The theory and its operationalization needs to allow for expansion of the scope of possible responses to the rural-

urban income differential, both in terms of which type of migration may be the most appropriate response and what migrants consider alternative urban destinations.

### Non-Economic Theories of Migration

Researchers in non-economic disciplines do not dispute the basic economic realities behind rural-urban migration. Rather, the thrust of their work focuses on the socio-cultural differences that shape the potential migrant's response to the economic pressures. In particular, their research helps explain why some don't move and why destination choice is not always consistent with the economists' expectations.

#### Migrants respond to a set of attractive and repulsive forces at the origin and destination: Theory and modifications.

Most non-economic theories of migration are based on the premise that migrants are attracted to a set of positive factors at the origin, while they are "repulsed" by negative factors in the destination. To move toward the attractive factors of the destination, migrants must overcome a series of intervening obstacles. The greater the net attraction, the more migrants are likely to overcome intervening difficulties.<sup>62</sup> Many of the attractive and repulsive forces are economic in nature, but non-economists stress the additional importance of social, cultural, and geographical factors, such as cultural compatibility, constraints on land transfers, or family conflicts.<sup>63</sup> Intervening obstacles include cost or availability of transport, lack of integration with the national road system, closer acceptable destinations,

limited information about potential destinations, no urban contacts or kin to assist the migrant upon arrival, no linkage to urban areas through governmental services, familial constraints on the movement of a household member, and so on.<sup>64</sup> Personal characteristics of the potential migrant facilitate or restrict his ability to overcome intervening obstacles. In general, those who are young, educated, and relatively well-off will be better able to overcome intervening obstacles; therefore, migrants tend to be positively selective for youth, education, and household income with respect to nonmigrants in the origin. Over time, it is assumed that there will be less difference between sending and receiving areas, more kin in the destination, and greater ease of access, thereby reducing intervening obstacles and resulting in less pressures for highly selective migrants.<sup>65</sup>

Thus, it is the non-economists' version of the "costs of moving," namely intervening obstacles, which determine why similarly situated persons do not move. Indeed, many of the intervening obstacles are the same cost of moving variables used by the economic analysts. But, there are differences. Perhaps the most important difference is the allowance for intervening obstacles generated by the family or the potential migrant, that is the obstacles are not only related to location or community but also to self, family, or culture.

Some studies have shown that ceteris paribus migrants are more likely to leave under certain familial or cultural situations. First, larger households are much more likely to send some members out as migrants.<sup>66</sup> In Mexico, for example, Arizpe has shown that rural families with more than five children are four times more likely to have migrant

daughters, while Weist has demonstrated that unless there are a certain minimum number of adults, migration will not ensue.<sup>67</sup>

Second, communal or cultural bonds or expectations may facilitate or slow outmigration. Several researchers have shown that individuals or even villages that have a strong migration history are much more likely to continue the migration tradition.<sup>68</sup> Current migration may be adapted to different purposes or destinations; nonetheless, the tradition continues. Likewise, groups which are relatively isolated or culturally "closed" or have very strong communal ties tend to have lower rates of outmigration. For example, among the Pahari of India, the traditional response to a mismatch of land-to-till and mouths-to-feed has resulted in one of two adjustments: modification of the household composition through one of several possible marriage conventions or establishment of a new household on the village's more distant land holdings. In this culture, migration has not been common, probably because it has been possible to meet the changing demands within the societal and ecological structure. (Recent ecological changes associated with lumbering and limestone quarrying have changed the balance, and migration is becoming a more common response among the Pahari.)<sup>69</sup> Evidence of other cultural practices that have restricted outmigration has been presented by ul-Haq and Reliman for Pakistan and Clignet and Sween for Cameroon.<sup>70</sup>

Migration is selective.\*

Elaborating on Ravenstein's Laws of Migration, Lee posits the following hypotheses:<sup>71</sup>

- a) More attractive forces at the destination increase migrant selectivity; conversely, stronger influence of repulsive forces of the destination reduces selectivity.
- b) Increased difficulty of intervening obstacles raises migrant selectivity.
- c) Certain lifestyle stages are more susceptible to migration; therefore, migration is selective for these ages and statuses.
- d) Migrant selectivity is bimodal for all migrants.

Each of these hypotheses is an attempt to be more explicit about the relation between the structural factors stimulating (or opposing) migration, the intervening obstacles or conditions limiting a migration response, and the characteristics of individual migrants. Except for the last proposition, all have been fairly well substantiated.

With the exception of the South African nations for whom mines have been a major migrant attraction, generally the place with the most attractive forces has been a nation's metropolitan area(s). Hence, if these places have the most attractive forces, they will also have the highest proportion of selective migrants. Logically, this follows because the more attractive places are seen as offering the highest payoffs or returns to the potential migrant. Because migrants are expected to maximize their returns, those who can go to the big cities will attempt to do so. The better educated, the well-off or middle

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\* Selectivity is defined as being significantly different from the parent (origin) population with respect to certain characteristics. Generally, migrant selectivity relates to age, sex, education, income and skill level, but can include other variables such as ethnic groups.

class, those with some non-agricultural job training, and so on will be overrepresented among metropolitan migrants. Studies that have compared metropolitan and other urban migrant characteristics support this hypothesis.<sup>72</sup> The more selective migrants do go to the largest, most "attractive" places. It should be noted, however, that if the level of attraction does not correlate with population size, as for example, for a technician whose only chance for promotion is through migration to a small regional center, then migration by the selective may no longer correspond to a generalized level of attraction, as Cardona and Simmons and Herold have observed.<sup>73</sup>

The converse has also been proven, i.e., that migrants who are "pushed" out by economic or social necessity are less or negatively selective. Those who we expect to be most subject to "repulsive" forces are those who are very poor and have no recourse but to move. To accurately discriminate these migrants from others who are responding to attractive forces, however, we need an additional adjective, namely that they are not strongly motivated by the attractive forces that motivate the more selective migrants. Using the same logic as that used for selective migrants, it follows that migrants who go to "less attractive" destinations would be those subject to more "push" than "pull"; such places would ordinarily include rural areas and small towns. Using this methodology, the hypothesis is substantiated. The less educated, the very poor, the unskilled have a greater likelihood of choosing a rural or small town destination in Mexico, Bolivia, Thailand, and the Philippines. Near Bogota, Colombia, for example, the poor farmers do not move into Bogota, despite its proximity.<sup>75</sup>

Generally, however, we expect exceptions to this among the less selective living near metropolitan areas or whose only migration option is moving to the metropolitan area.

Increased difficulty of intervening obstacles increases selectivity.

Even if potential migrants are aware of the relative benefits to migration, not all will move because achieving those benefits is seldom a certainty. Migration involves risks, and only those who are willing to take risks will move. As the perceived risks of "payoff" increase, migration will be more selective for those who are risk-takers, who by virtue of education, contacts, or other resources feel they have a better-than-average chance of success or can survive while waiting the requisite amount of time for success. In his research, Wilkie showed that middle-class migrants from an Argentine village were "innovators" who were willing to take risks by going to lesser known, more distant cities.<sup>76</sup> Butterworth also characterizes those who move out of the Mexican village of Tilantongo as "risk-takers" who have tried non-traditional customs.<sup>77</sup>

Education, a primary measure of selectivity, operates both to increase risk-taking ability and to help the potential migrant more accurately assess the advantages, disadvantages, and likely difficulties associated with migration to a specific destination. Studies demonstrate that education orients persons toward seeking out information,<sup>78</sup> toward developing aspirations for a "better life,"<sup>79</sup> toward acting to achieve congruency between goals and behavior,<sup>80</sup> and toward taking the risks involved in adopting an unknown or uncertain behavior.<sup>81</sup>

Any of these increase the potential migrant's willingness to consider migration and then to actually do so.

Moreover, educated persons clearly experience a higher probability of substantial income gains in the cities of developing countries. Given all these effects of education, we expect the more educated to overcome the most obstacles to migration. When "obstacles" are operationalized as greatest distance, greatest monetary cost of moving, most willing to go to a place for reasons other than the presence of kin or friends, the more educated are indeed those who overcome obstacles.<sup>82</sup>

How do we reconcile these findings with evidence that the uneducated are also strongly represented among migrants? From the same Indian villages, Connell et al. observed both well-educated and illiterate migrants. They suggest that this is due to the fact that the educated and uneducated have completely different sets of constraints, goals, and expectations. The educated wish to use their education as a tool for individual betterment, which is possible only if they migrate, while the illiterate have no choice but to migrate. For the first, consideration of relative payoffs and risks may be a real concern; for the latter, survival forces household members to move, but not to an area of uncertain payoffs, albeit high payoffs. For the illiterate, migration means primarily seasonal, rural-rural movement in pursuit of known employment opportunities.<sup>83</sup> In short, the less educated are more likely to be stopped by the first intervening opportunity, and will not continue searching for other more elusive opportunities.

The very poorest of the rural poor will not go to the cities unless

they live within close proximity to the city, can stay with kin, or are assured a job prior to arrival.<sup>84</sup> Why does this hold? First, by and large, the very poor are uneducated. Other households can combine verbal and written information to weigh alternatives and select a destination. The poor can only rely on verbal communications; therefore, the poor have more limited information about destinations. Second, the poor cannot finance a long-distance move to a city. Third, their limited resources do not permit risk-taking.<sup>85</sup> With their lower levels of education and skills, obtaining work may be much less likely, and without kin who can afford to feed them while they look for work, the poorest simply cannot afford to take the substantial risk of a long period of job-searching. Finally, and perhaps most important, the poorest do not have the skills or education pre-requisites for "making a go of it" in the city. Their traditional response has been and continues to be rural-rural migration, both temporary and permanent.

Studies in Argentina, Brazil, Bolivia, Mexico, the Philippines, Malaysia, Ghana, Sierra Leone, Zambia exemplifying analyses which document the persistence and strength of rural-rural movements by the rural poor.<sup>86</sup> Who are these rural-rural migrants, and where do they go? Regardless of region, they tend to be older than rural-urban migrants, are more likely to be married with dependents, are definitely pushed by poverty, and move relatively short distances to areas where they have kin or friends. Except for the somewhat better-off who may be able to compete with urban-rural migrants for farms in scarce settlement areas of newly developing, "frontier" regions, at least at first, they do not move permanently. In the Bolivian case, Whiteford and Adams

demonstrate that because rural-rural migrants are motivated by low and extremely unstable incomes, the rural-rural migrants seek out the more secure rural positions. Contracts for annual seasonal work on one plantation are preferred to jumping from one job area to another during the "season," while permanent hired-labor is preferred to the more limited seasonal contract.<sup>87</sup> Thus, the rural areas that send out rural-rural migrants are those that lack opportunities for regular off-farm work and the attractive regions are the cash crop or plantation zones and mining areas with high demand for wage labor.<sup>88</sup>

What about the poor who do move to cities? What are the implications of their lower selectivity? First, by virtue of their older age and less education, the less selective tend to have shorter time horizons. They are much less likely to move to the city with the intention of staying permanently. Instead of the educated youths' goal of eventually obtaining a salaried, "protected" sector job, the goals of the less selective migrant households focus on more immediate income-earning possibilities such as street vending or construction work.<sup>89</sup> Therefore, their migration decisions may be more responsive to the immediate availability of work through a "job program," an opening in a fellow villager's enterprise, or to the word sent back that there is a family who need a domestic servant. Second, because they do not view their urban residence as permanent, the less selective migrants need to retain their rural options. Particularly in Africa but also in parts of Latin America, the instability of urban tenure results in split households with the head living in town sending back remittances, while the wife and children remain on the family's small rural plot. Children may be sent to town

for schooling and the father may return to help with heavy seasonal workloads.<sup>90</sup> If the person in the urban area loses his job, he can return to the rural area before trying again elsewhere. This pattern of dual households has been variously shown to depend on the existence of one of the following conditions: a matrifocal pattern of residence for husband's migration, a geographically extensive clan-network,<sup>91</sup> at least two adults in the household,<sup>92</sup> a less rigid social structure that is not inconsistent with movement out of the area or adoption of non-clan based prestige sources,<sup>93</sup> and a "loose" urban employment situation.<sup>94</sup> Because family enterprises appear to offer the most flexible employment situations,<sup>95</sup> the emergence and prevalence of the "dual household" strategy is highly dependent on migrants using a family-based, rather than a formal sector, jobs-only migration strategy.

However, as soon as job turnover drops or the family has a permanent investment in maintaining its urban enterprise, the dual household becomes non-adaptive. Urban migrants can no longer afford to quit their jobs to return for seasonal planting and harvesting.<sup>96</sup> At this point, the family moves into town, and the rural farm is rented out<sup>97</sup> or sold to other family members.<sup>98</sup> Rural-urban interactions may continue, but the intensive visiting and remittances may drop without the rural-based household.

The hypothesis concerning differential migration propensities at different life-cycle stages is based on the risk-taking concept of migration. Younger persons without dependents may have fewer responsibilities than older persons, or, especially, mothers with children; therefore, if the single young person does not start earning money

right away, the family is less likely to suffer. As noted above, young persons also have a longer time horizon over which to spread future earnings, hence, they can tolerate longer job-search periods without reaching the point where they have literally "eaten up" all potential gains. Finally, young persons marrying and setting up their own households may be moving out of the house anyway; moving on to another place can easily be incorporated into the same move into independency. Studies documented above illustrate the universality of migration among the young.

Traditionally, studies of the life-cycle effect on migration implicitly examine male migration rates and male life cycles. Numerous studies show the increased probabilities of moving at times of reaching maturity, marriage, and retirement.<sup>99</sup> Increasingly, migration is undertaken by single women, often with children. As always, women often migrate when they marry, but some may move before marriage. In Latin America, the young teens go to cities to work as domestic servants; and in East Asia they move to find factory jobs. Both send remittances back to their families, when possible.<sup>100</sup> Thereafter, the pattern may be typified by the Mexican pattern. Women in their early 20s move to Mexico City in search of husbands or "to see the world." After marriage, women are likely to move to town only to join their male kin who have previously left, or upon separation, divorce, or widowhood.<sup>101</sup> One question for future research is to determine if female life-cycle migration patterns are growing more or less similar to the male patterns and, if so, are the relative changes interactive?

The last of Lee's hypotheses concerning migrant selectivity

concerns his expectation of a bimodal distribution of migrants with respect to the selectivity characteristics, especially education. Bipolarity can be expected if "pull" forces attract the selective migrants to the same destinations as those to which the less selective migrants are "pushed." We expect such a phenomenon when despite the passage of time the original destination chosen by "selective" migrants remains the most attractive one for them at the same time that better communication links, presence of kin and so on make possible migration by less selective migrants. Alternatively, less selective migrants would be the short-distance movers while the long-distance movers would be more selective. Although there is evidence of declining selectivity over time, there is fairly little empirical validation of the bipolarity hypothesis.<sup>102</sup> Bipolarity continues to be accepted as likely, however, because it is one of the clearest theories by which to interpret the seemingly conflicting evidence of surveys regarding migrant characteristics.

Table 2 summarizes the major differences in migrant types that have been discussed in this and preceding sections of the paper. As the table shows, the findings regarding migrant type are consistent with Lee's selectivity hypotheses, given the interpretation of attractive and repulsive forces and intervening obstacles discussed above.

Migration decisions are a two-step process: Theory and modifications.

Whereas economists tend to view the migration decision as one basic decision, i.e., to move to the city, many sociologists conceptualize the migration process as a two-step decision: first, the decision

Table 2: Individual Characteristics of Rural Out-Migrants Compared to Rural Non-Migrants

| Characteristics                       | More Selective Rural Urban (Innovation)                       | Less Selective Rural-Metro   | Less Selective Rural-Other Urban   | Less Selective Rural-Rural                              |
|---------------------------------------|---|--|--|---|
| Age                                   | Young (15-25 yrs)   | Young (15-30)  | Young to Old (15-45)   | Older (30+)   |
| Sex of Migrant                        | Male; Female also in Latin America                            | Male but wife may join later<br>Single Females for domestic service                                  | Entire family O/wise Male unless Latin America in which case Female                    | Same as Rural-Other urban less selective.               |
| Education                             | At least primary and probably secondary schooling             | Some primary; perhaps some secondary   | Some primary   | Uneducated  |
| Family Size                           | Not relevant to decision                                      | Large natal families for single migrants; Small migrant families for married unless only spouse goes | Same as Less-Selective Rural-Metro   | Large household size                                    |
| Family Income                         | High to moderate  | Moderate to low  | Moderate to Low  | Low   |
| Land Ownership                        | Large landowners<br>Some medium size farm owners              | Medium & Small farm owners   | Small farmers or landless  | Mostly landless   |
| Occupation/Skills                     | Tend to have little employment experience                     | Some with non-agric. skills  | Mainly agric/unskilled. Some with job training or exper.                               | Agric/Unskilled   |
| Urban Contacts and Awareness          | High urban awareness via educ. & media                        | Metro contacts and kin important   | Other urban contacts and kin important   | Kin in rural areas determine destn. Low urban awareness |
| Modern Attitudes                      | Aspiring seeker, Risk taker                                   | Willing to take some risks, but much less  | Same as Rural-Metro  | Limited ability to take risks                           |
| Family Old Age Support                | If children do provide, selective migrants do provide support | Dependent on children in city  | Dependent on children in city  | Children in rural areas take care of parents            |
| Ethnic Variables                      | Less inhib. by need for proximity of same language            | Matrifocal resid. facil. dual household  | Need to be near kin or language constantly may restrict movement. Only close to cities | Move to areas of cultural similarity or same region     |
| Importance of Distance to Destination | Little  | Moderately Important   | Important  | Important   |

to leave followed by a second decision regarding destination. Wolpert's model of the two-step decision process shows that these decisions depend on three basic variables: the place utility of the origin, a search for alternative destinations with a higher perceived utility, and life-cycle related changes in minimum place utility thresholds. Thus, as an individual changes or as the origin changes character, the perceived utility for the place of residence may drop; if so, the individual will become dissatisfied with his community. At the point at which the place's utility drops below his threshold or minimum level for place-utility, he will decide to leave. Having made this decision, the person begins searching for better locations. If the person experiences stress--such as unemployment--during this period, the search will be more limited, resulting in stereotyped and rigid choices or sub-optimal choices with respect to potential utility of other destinations. Thus, the more stress the potential migrant experiences, i.e., the more he is forced or pushed to move, the greater is his likelihood of making a mistake based on limited information. For this reason, the potential migrant's awareness space at the time of the decision to leave is especially critical to his destination choice.<sup>103</sup> On the other hand, potential migrants experiencing little or no current stress, namely the school leavers not forced by economic constraints to find immediate work can undertake a lengthy and complex search, involving attempts to locate urban jobs prior to leaving the rural area.<sup>104</sup>

Empirical tests of the two-step decision model demonstrate the validity of the approach, particularly for the selection of one out of several possible destinations. Brown and his co-workers have shown the

importance of socio-economic status in determining awareness space, which in turn constrains destination choice.<sup>105</sup>

Rempel's test with Kenyan data is by far the most ambitious empirical validation of the two-step decision model.<sup>106</sup> Rempel models the decision to leave rural areas as a yes/no decision which includes the economic variables of urban and rural incomes, urban employment prospects, measures of physical and "psychic" moving costs, rural aspirations (level of education), degree of inequity in the rural income distribution (proportion of farms with cash crop income), degree of commercial and social integration (roads per km<sup>2</sup>), access to rural resources (proportion of small farmers and land-less), type of inheritance system (representing a cultural constraint on mobility), urban-based kin (prior migrants from that state), and relative difference in the level of amenities (differences in proportion urbanized).

Using 1969 census data, estimated coefficients are significant for both males and females for all coefficients except rural income level, social and economic integration with outside areas, and, for male potential migrants, access to rural resources, while for females urban employment prospects are not significant. The signs are not those expected, however, for the urban employment variables. For males, lower urban employment prospects are associated with more rural-urban migration. This result may be due to two factors. First, because the migration is measured by place of birth statistics while the employment variables are all for the five years prior to the 1969 census, it is possible that high rates of lifetime migration have caused the high unemployment rates observed in 1969. Alternatively, migrants are not

deterred by unemployment, but are attracted to it, in that the unemployment is correlated with the large informal market which they aspire to enter. The models explain 86 percent and 85 percent of the variation in rural outmigration rates for males and females, respectively. These results demonstrate that economic variables discussed in the section above generally do well at capturing the decision to leave rural areas.

The second step of the migration decision, selection of a specific destination, is modeled using survey data obtained by interviewing male migrants resident in several urban areas of Kenya in 1968. For both males and females, the selection of any given destination is shown to vary with the numbers of previous migrants at the destination. Selection of a given destination is deterred by the psychic distance or cost of the move and the presence of alternative, closer destinations with high expected income and employment prospects. A high perceived amenity level for a close alternative city reduces the probability of males selecting the city, while for females a closer city with high amenities raises the probability of going to the more distant city. The other economic variables of perceived income level, perceived job prospects, perceived urban amenities, informal sector opportunities, ethnic differences, and actual distance between the origin and destination exert no significant effect on the selection of a specific destination. Thus, the model clearly demonstrates the importance of non-economic factors for the selection of the actual migrant destination.

Taken together, Rempel's results underscore the importance of viewing the migration decision as a two-step process in which economic factors determine the decision to leave while non-economic factors of

amenities, presence of co-ethnics and fellow regionals, and attractiveness of competing destinations determine selection of one out of several urban destinations.

Rempel continues the line of research that has been followed by Wolpert, Brown, Levy and Wadycki, and Greenwood, all of whom demonstrated that migrants appear to consider several alternative destinations. With growing complexity in urbanization patterns and prior migration streams, this approach to migration analysis is potentially one of the most powerful techniques for understanding and predicting likely migration responses to the changing urban and rural dimensions.

Kin reduce the uncertainties and risk of migration:

The differences in migration options for the poorest demonstrate the importance of kin or friends for reducing intervening obstacles. Ceteris paribus, the poor (as well as the non-poor) are likely to choose the destination where they already have friends or relatives. Their information about the destination can reduce some of the uncertainty about potential migration outcomes, and their assistance with shelter, food, or help getting a job all reduce the chances of failure after arrival.

In one rural area of Mexico, married or illiterate (i.e., less selective) persons go to large cities only if they or their family have previously visited the city.<sup>107</sup> Elsewhere, especially in parts of Africa, the "chain" of migrants following in the steps of fellow villagers or relatives is well documented.<sup>108</sup>

Families give a social organization and continuity to geographical mobility. The mobile members of the household are "encapsulated in a

system of social relations."<sup>109</sup> Because these social relations are considered vital to the migrants' success in the city, migrants may take great pains to fulfill their kin obligations. Typically, older siblings living in town are expected to shelter, sustain, and educate younger siblings.<sup>110</sup> In the Latin American region, these efforts are reflected in the annual sponsorship of fiesta days and in Africa, migrants stress the importance of visiting in order to fulfill ritual or clan obligations.<sup>111</sup>

The maintenance of kin networks has its payoffs, however. Keyser has shown that the tight-knit, cooperative inter-family organization of a rural Turkish village is repeated in the migrants' social structure in the city. Children are sent to stay with relatives while obtaining schooling. When their schooling is completed, the co-villagers also help their charges obtain positions. As a result, the migrant group has generally prospered. In contrast are the difficulties and low mobility of a migrant group not characterized by cooperation or mutual assistance in town or country.<sup>112</sup> Many migrants claim to have obtained their first job through a friend, relative, or fellow villager. The very low unemployment levels of recently-arrived migrants demonstrate that many had arranged for their jobs before moving.<sup>113</sup> Other migrants enter the "urban informal sector" where they may be employed by kin or friends or where kin networks are vital to the establishment of a family enterprise.<sup>114</sup>

As Joan Nelson thoroughly documents, many migrants do not pursue one of the scarce salaried jobs. They choose the informal sector because it allows them a freedom and potential not found either in the rural areas or in the formal sector of the cities.<sup>115</sup> For these persons,

the information that kin or urban contacts provide concerning potential markets, where to set up "business," how to obtain (or avoid obtaining) the necessary permits is far more valuable than factory wage levels or the length of time spent waiting for a job.

In fact, the very existence of options within the informal sector opens up rural-urban and rural-metropolitan migration options for the poor and uneducated. Given the paucity of employment or income opportunities in many rural areas, larger poor families virtually have no choice but to try a migration strategy. We know also that in many rural areas the poor previously found large families essential to gaining more access to productive resources (more land, agricultural labor), therefore, many of the poor have a strong incentive to adopt migration: excess labor which cannot be employed at home and a large enough family and kin network to be able to extend their linkages to urban areas.<sup>116</sup>

Deere's recent study of changing household strategies among the rural peasants of highland Peru demonstrates this transition from a high fertility to high migration response to poverty. When peasants worked in the hacienda system, the family was only able to accumulate an earnings surplus by working more land and providing additional labor to the hacienda. Children were the only resources by which the poor could accomplish this goal, hence patriarchal control of family labor and high fertility were encouraged. With the break-up of the hacienda system, the poor lacked the capital to buy large farms with good soil. As successive generations of sons have split up their father's land, the original farm size has dwindled. But it is no longer possible to acquire more land in usufruct or to sell children's labor to the hacienda.

In response, families have increasingly turned to migration. By 1976, half of the surveyed rural households had migrant children, of whom one-third had gone to Lima or other locations outside the province of origin. Whereas in the hacienda days, temporary, seasonal migration to coastal plantations was common, migrants now go to the cities, particularly Lima. They become the city links in the family's strategy. They send back remittances, provide shelter and schooling for younger siblings, and an urban base from which siblings or other relatives can start their search for work in the city.<sup>117</sup>

Empirical evidence regarding the non-economic theories:

Findings resulting from this line of research have been summarized elsewhere, and we do not intend to repeat those findings on migrant characteristics, differences between origin and destination areas, or the intervening obstacles restricting movement.<sup>118</sup>

We note only that the importance of economic push-pull forces, the "awareness" of potential destinations, and the presence of social support groups in the destination have been repeatedly identified as critical influences on the migration process.

Too little known about non-migrants at the destination--

As with the migration research utilizing the basic economic model of migration, there are methodological limitations to the non-economic research. Most of the "non-economic" studies have used retrospective or longitudinal survey data, and therefore have avoided some of the problems of simultaneity bias that plague economists using aggregate, censal data.<sup>119</sup> On the other hand, heavy reliance on surveys has opened the way for other weaknesses.

First, many of the surveys interview migrants only at the destination.<sup>120</sup> While we recognize the vast logistical difficulties attending an effort to interview potential migrants in their original communities, the destination sample bias has the following consequences: exclusion of migrants who moved on or returned, focus on one specific destination as opposed to the range of possible destinations from which a migrant may have chosen, exclusion of both the non-movers in the destination and those who moved to other destinations. Depending on the destination chosen for the survey and the type of migrant surveyed, this could result in a bias towards more selective migrants. Recent studies by Speare in Taiwan, Byerlee et al. in Sierra Leone, Thompson in Uganda, Butterworth in Mexico, and Hay in Tunisia are much needed exceptions to the pattern of interviewing migrants only in the destination.

In addition, studies interviewing families of migrants and non-migrants in rural origin areas have contributed to our knowledge of the variation in migrants going to different destinations.<sup>121</sup> The vast majority of surveys, however, continue to reach only migrants in a limited number of urban destinations. This limits our knowledge of those who did not move or of those who chose destinations not surveyed.

Prediction of the likely migration consequences requires information not just on those that responded to a certain set of conditions by moving to the capital, for example, but also data pertaining to those who moved elsewhere or did not move at all. All these types of persons potentially will be affected by rural development activities, and unless we also know what situations triggered their moves and non-moves, we will have only an incomplete picture of likely migrant responses to programs.

Limited information about cyclical or non-permanent migration --

A more serious bias of the survey research is the assumption of migration permanence. As Nelson has shown, a large volume of migrants, particularly those with rural origins, are "sojourners" who do not intend permanent residence.<sup>122</sup> Although there is a secular trend toward increased permanence of migration, we cannot neglect the fact that many rural-urban migrants do not envision their stays as permanent. If the move is not permanent, it is possible that there may be much less significance to the selection of a destination, in that the selection is not perceived as an important, once-in-a-lifetime decision. The expected duration of residence and expectation of repeat moves correlates with a number of characteristics that distinguish the sojourners from the permanent migrants. They are, for example, less willing to experience lengthy employment and may not want to invest in a long-distance move.<sup>123</sup>

Furthermore, seasonal or cyclical migration to other rural areas may be a characteristic response for individuals at one stage of rural development, but at another, migration to cities may be more likely. The Miskito of Nicaragua have long had a tradition of seasonal migration to help with fishing expeditions and so on, but when their local economy shifted from a subsistence to cash economy, the increasing numbers of households which needed to supplement their income were forced into more long-term migration, often to the cities previously not visited by Miskito migrants.<sup>124</sup> Similar seasonal rural-urban migration responses to the introduction of cash cropping are described

by Portes for Mexico and Peru.<sup>125</sup> Therefore, an understanding of the structural rural factors associated with non-permanent versus permanent moving may enable better prediction of the specific types of migration responses to a rural development project.

Many of the social, political, or anthropological surveys, like the aggregate economic analyses, tend to be very time-bound. There are almost no studies which reflect the ongoing changes in the national urban settlement pattern, transportation and communications networks. While the theory to a certain extent accounts for changing relative differences between specific origins and destinations, it is less useful for predicting where or when new streams might emerge. As the number of potential destinations changes, so too will migrants' decisions. Further, what were salient factors at the time of the survey may be almost inconsequential ten years later. For example, at an earlier time period if there is no variation among urban unemployment levels, those choosing among several urban areas are not likely to be responsive to this invariant "variable." Later, if significant unemployment differences emerge, urban unemployment may become a more salient factor distinguishing potential destinations. Programs that fail to anticipate likely structural changes in the pattern or variation of urban areas are likely to encounter migration consequences differing from the projected responses.

Focus on migrants as individual decision-makers --

Finally, the surveys by and large continue to be locked into the view of migrants as individuals whose decisions are only indirectly affected by the household. Evidence increasingly suggests that migration can be characterized as a household's response to a set of socio-

economic constraints.<sup>126</sup> Even if only one person actually moves, the decision regarding who goes, when, and where may be a family decision. It is time to shift our perspective from individuals to the family.

Caldwell's theory of demographic transition rests in part on the concept of the household sending some of its members to other areas to participate in capitalist modes of production. Some of the household members remain at the family home, continuing subsistence production and reproduction, while others are sent to the cities or plantations to earn cash income in the capitalist production mode. Thus, despite changing economic constraints, the family is able to retain its social customs and traditional power structure by meeting new demands for cash via migration of some members.<sup>127</sup>

Viewing migration as a household response may also enable a more concise comparison and evaluation of potential migration and fertility responses to development programs. Just as the spacing and timing of births can be viewed as a household response to socio-economic, contextual factors, migration can also be viewed as a behavior that households vary in response to some of the same constraints, often for the same purposes of household sustenance and security. Ultimately, this perspective may improve our focus on questions central to the purpose here: Are specific migration and fertility changes responses to the same set of contextual variables? If so, why do some households use the "fertility" response while others go the "migration" route? Are they mutually exclusive responses or are there interaction effects?

Synthesis of the Economic and Non-Economic Approaches  
to Migration: Findings and Proposed Research

Findings:

This review of evidence confirms the basic tenet that migrants move in search of better economic prospects. But the review also demonstrates that this movement is not influenced solely by economic considerations. Indeed, family and cultural considerations play major roles in determining who migrates and in what form. What may be economically "optimal" for one type of person will be wholly inappropriate for someone of a different family, education history, or cultural group.

The discussion above reviews the set of basic hypotheses that have guided migration research. We have shown in what instances these hold and in what conditions they are less likely to be appropriate. The following is an attempt to summarize the major findings together with the qualifiers or constraints on their general validity.

1) Migrants move from areas of low to high economic opportunity:

Of all the migration hypotheses, this is certainly the one most overwhelmingly accepted. The key to observing this effect is appropriate definition of economic opportunity. The following are the range of qualifiers that have proven necessary:

- a) Difference between origin and destination income;
- b) Perceived difference between origin and destination income;
- c) Perceived difference in attainable, future incomes, as weighted by the different origin and destination probabilities of employment and expected future income;
- d) Perceived difference in attainable future incomes, discounted by the cost of realizing that difference (i.e., the opportunity cost of moving and unemployment after moving).

This list of qualifiers demonstrates that migrant decisions are influenced by a complex interaction of perceived economic expectations.

In the rural and urban contexts, this has meant that potential migrants tend to weigh heavily their expectations of a somewhat higher, more stable, and hopefully increasing urban income against the expectation of low, instable, relatively declining rural incomes.

2) The greater the level of "attraction" to a destination, the greater the selectivity of the migrants: If the difference between the economic and social opportunities of two places is great, migration to the area of greater opportunity (the biggest city or cities in general) will tend to be selective for the better educated, the young, the skilled, and those with some financial or familial resources to facilitate the migrant's efforts to realize the desired opportunities. These are the risk-takers, but given the differences in rural and urban opportunities, these are also the ones who are likely to receive the most payoff to pursuing an urban career and the least return for remaining in a rural area. By virtue of their skills, youth, etc., they are also the ones most likely to overcome all the obstacles between a decision to move and accomplishment of the goals for which that move was undertaken.

Conversely, the more potential migrants respond to repulsive factors at the origin, the lower the selectivity of the migrant stream. Persons pushed by poverty, by being the oldest in a large family, by family stress, or other negative factors will tend to be less well educated and generally less able to take large risks. For this reason, these migrants prefer destinations where they are more certain of finding

work, regardless of salary level. Depending on the type of job and resources available to the migrant, the chosen destination may or may not be the largest metropolitan area. Many go seasonally to other rural areas to work on plantations, in mines, or at other rural wage labor positions.

3) Costs of moving or intervening obstacles reduce migration and increase selectivity of the migrant stream: The review

of economic studies shows that cost of moving is often the strongest variable influencing migration. The cost of moving can also be conceptualized as intervening obstacles which the potential migrant must overcome in order to succeed. As with the economic differential, the precise form of the relevant "cost" varies. It has been shown to include the following:

- a) Road distance between the origin and destination;
- b) Cost and frequency of transportation means;
- c) Limited information about the destination;
- d) Different cultural or linguistic groups in destination;
- e) No friends or family to stay with at the destination;
- f) Non-transferrable responsibilities for children or a subsistence farm plot.

4) The decision to move and the selection of a destination are influenced by different factors: Migrants' decisions to leave

are largely influenced by their perception of differences in economic opportunity, but the selection of a specific destination depends on the presence of specific contacts or family in that place, the cost of the moving there, and acceptable destinations closer to the potential migrants' home. Ceteris paribus, migrants choose the closest

destination which balances their desire for economic gain against the difficulties of actually realizing that gain. Faced with the same basic sets of rural-urban income differences, male and female migrants may choose vastly different destinations, depending on their spatial awareness, monetary resources, sex-related employment constraints, and familial restrictions on movement. For example, a young woman in Peru may choose to go to Lima to work as a domestic servant because she has friends who have arranged a position for her prior to arrival; she does not need to provide herself with separate lodging or meals, and the position is seen as quasi-familial, therefore "safe" for young girls. Her brother, on the other hand, may choose to go to one of the coastal plantations where he has heard that jobs are available.

The selection of the most "appropriate" destination is also limited by the potential migrants' resources available for destination selection. Young school leavers may visit one or more cities before moving to one of them, while others move to the closest or only known destination because they have neither time nor resources to undertake a search. In general, the more "pushed" a migrant, the less he or she is likely to "shop around" for alternative destinations.

Selection of a specific destination has been shown to be influenced by:

- a) Proximity to the city (to minimize moving and visit costs);
- b) City amenities or quality of life;
- c) Specific types of employment available;
- d) Presence of kin in alternative destinations;
- e) Information about alternative destinations;

- f) Duration of migration (seasonal, cyclical, permanent);
- g) Cultural similarities.

The similarities between the "destination choice" qualifiers and the "cost of moving" qualifiers demonstrate the basic phenomenon of destination selection; i.e., choice of the destination which reduces the cost or risk of moving.

The discussion above also underscores the critical role played by the potential migrant's family or kin. The kin or friends provide information about opportunities in likely destinations and help the migrant after arrival. In many senses, family and friends are the ones that make migration possible. Thus, we are not surprised at the finding that family or kin exert a dominant influence on the migration process.

#### Hypotheses for future research:

The recent interpretations of relative economic differentials and the explicit nature of the "cost of moving" and obstacle variables clarify many of the reasons why some persons move while others do not. Similarly, we are in a better position to predict destination selection or migration duration.

But we still are unclear about several questions: How does the migration process start in any given village? What prompts the first migrant? Is he different from later migrants? Given the growing levels of spatial differentiation with increased urbanization, how might destination selection change in the future? Family members foster the development of migrant streams between two places. Are

there additional roles that family members fulfill in the migration process? Conversely, does migration fulfill certain familial needs?

We suggest the following hypotheses for future research:

1) Migration is a familial response to spatially limited economic or social opportunities: Although this hypothesis already has received limited attention, more research is needed. There is a growing body of evidence that explicitly demonstrates that migration is the consequence of household decision-making. In some instances, individuals independently decide to move away, but often the decision is a familial (parental) response to the household's constraints. More than one migrant has left because he or she was the "excess" member. Older children or adult members of the household are sent to town to earn money to supplement the inadequate or unstable rural incomes. By extension of the household over space, the household is able to take advantage of spatial differentials in opportunity.<sup>128</sup> In addition, to the extent that the migrant extended household members' remittances or support are sources of future support (e.g., for elderly parents or for younger children), migration is also a household's investment for future security and support. Depending on the household's resources and constraints, spatial extension through migration may be short or long term.

We offer the following qualifier propositions:

- a) Households with more resources (familial, economic, literacy) are more likely to send children for schooling as a long-term strategy by which to secure future income.

- b) Children sent for training and prospective urban careers are more likely to be the oldest, who if they succeed will be able to help the parents sooner than younger siblings.
- c) If household sustenance derives primarily from the labor of one sex, the other sex is more likely to migrate.
- d) Households with limited resources are more likely to choose a flexible migration-extension strategy, i.e., their migration is more easily reversible or changeable to allow members to return if needed. Thus, these households are more likely to send members non-permanently or to nearby areas.
- e) Household extension via migration is less likely as necessary urban investments become larger, fixed, or more long term.

2) The first migrants to move from one place to another are innovators. The concept of migrants as innovators is not new, but past research efforts have suffered from deficiencies in the definition of innovators. Most innovation definitions are tautological, in that the innovator is described as the first to adopt the new behavior or product. Such definitions tell us nothing about why the individual adopted it first; nor can we discern whether his choice differs from non-innovators in timing, quality or both. The definition developed by Midgely and Dowling<sup>129</sup> avoids the tautology:

"Innovators of any one innovation are those members of society prepared to adopt this new product early in its diffusion and therefore without the personal or social support gained from discussions with prior users."

The innovator criterion is "without personal or social support gained from discussions with prior users." Thus, innovators are not innovators simply because they are the first to adopt a behavior; they are innovators because they are willing to make a decision based on secondary or impersonal sources, such as the radio or newspaper. Use of these sources is more likely if the potential migrant or a member of the household is literate; hence, innovators--the early migrants--tend to have more schooling than the non-migrants.

What are the potential implications of migration decisions utilizing primarily secondary information sources?

- a) Early migrants are more likely to be literate.
- b) Early migration decisions are more likely to be based on the material reported in the media, e.g., newspaper reports of jobs, average wages, films.
- c) Early rural-urban migrants are more likely to go to the biggest city, because the media and transportation networks focus on this city.
- d) Early migrants are more likely to come from villages integrated into the national media, educational or transportation networks.

3) The more positive feedback that early migrants send back to their home village, the more likely it is that more migrants will follow. Later migration responses are based increasingly

on information from primary sources. Friends, relatives, co-ethnics, or fellow villagers who have moved to the city, return for visits, or return to resettle in the village become the principal source

of information about city life and opportunities. Their feedback determines the information base for the adoption of migration by the second wave of households or household members. If the messages returned to the village are positive, other villagers are more likely to follow.

The response to negative messages will not be as strong as that to positive messages. Surveys consistently show that potential migrants attach less importance to reports of unemployment, poor housing conditions, urban crime, and so on.<sup>130</sup> In addition, migrants themselves may not report their failures or difficulties. On visits, they bring gifts and have every reason to give a favorable impression. If they cannot, rather than give a poor report, they simply do not visit. Moreover, visits cost money and the poor who have not "made it" cannot afford to go.<sup>131</sup> The net result is that negative reports will tend to be underrepresented and even when they appear, a response may not emerge until some minimum level of "badness" has been reached. Thus, the response to negative reports can be expected to be weak and probably lagged.<sup>132</sup>

4) The more that migrants' decisions are based on primary information from friends or family, the more their migration strategy will be based solely on opportunities provided by family or friends. In this second stage, innovation diffusion, migration adoption is heavily influenced by interpersonal communications. And, as Marshall McLuhan would say, "the medium is the message."<sup>133</sup> Diffusion of migration is determined not just by the fact that the persons in rural areas have more awareness of urban

economic opportunities as seen through the eyes of visitors or returned migrants. They also have a new way of perceiving migration itself. Rather than viewing the "migration innovation" as migrants competing for jobs in a somewhat alien urban world, migration emerges as the means by which families can tap other familial or personal resources. Hence, those who move are not just the selective migrants who hope to land one of the scarce, urban salaried positions. Migrants increasingly are those who have urban contacts or family. A wealth of contacts is interpreted as offering greater options for the migrant household. Thus, the presence of kin--the previous innovators--becomes the variable which determines subsequent migration diffusion.

In any given stream, migrant selectivity declines over time.<sup>134</sup> The declining selectivity of the migrants reinforces the likelihood that they will be more sensitive to the "knowns" of urban contacts or family and moving costs at the same time that they are less responsive to the more uncertain information pertaining to income or employment opportunities.

We expect to see a predominance of the migration household extension strategy among the later migrants. Thus, the innovation and information based approaches to migration are also the vehicles by which to explain the variations in incidence of the migration-extension strategy.

## MIGRATION AND FERTILITY: WHAT DO WE KNOW?

Migration and fertility are both demographic phenomena that are assumed to involve decision-making by individuals or households. In the preceding review of migration theories and findings, we have shown that migration can be viewed as a conscious attempt by individuals or households to increase their income by moving to an area where they perceive employment opportunities to be superior to those available in their present community. Of course, the degree to which migrants actually weigh alternatives and "optimize" their choice of destination varies. There is ample evidence that migration decisions are somewhat constrained by limited information, little resources or time to invest in moving per se, and by family-related concerns.

Fertility decisions are also assumed to reflect a conscious consideration of the economic gains or losses associated with childbearing. Yet these decisions--and their degree of conscious analysis--are also constrained by limited information, ability of the household to take risks with respect to childbearing, and by expectations of the family or partner. Easterlin has developed a generalized model for these factors.<sup>1</sup> According to his model, a woman or household varies childbearing in order to optimize its utility. The childbearing decisions are affected by:

- 1) Income: To the extent that children increase household income, large families are favored. Yet the net effect on income does not depend solely on the children's monetary contribution. It also depends on their time contributions and other contributions which allow other household members to increase household income.

- 2) Price: If children are costly, there will be an incentive to limit childbearing. A major component of the price of children is the opportunity cost of the mother's time spent on childrearing exclusive of other income-generating activities. The more time a woman must devote to childbearing and the higher the level of foregone income, the less likely she is to favor a large family. The other major component of price are expenditures on children, especially for education. If the household prefers to invest heavily in child "quality," the household is expected to opt for fewer children, demonstrating the widely anticipated child quality-quantity tradeoff.
- 3) Costs of regulation: Fertility limitation may not be a "free good." In order to regulate fertility, a woman must possess information about and the actual means by which to regulate births; if the costs associated with obtaining these items are high, fertility regulation will be less likely. Likewise, fertility regulation may be associated with certain social costs, such as loss of prestige, parental disfavor, or other social sanctions against women or couples that do not have as many children as expected. Thus, the "costs of regulation" include the costs of not upholding the familial or cultural norms regarding childbearing.

Theoretically, these variables determine desired family size.

Bongaarts argues that actual fertility behavior is almost completely determined by the four proximate variables of age and duration of marriages, contraception, lactation, and induced abortion.<sup>2</sup> It is through these proximate variables that the income, price and cost of regulation variables affect fertility behavior.

To correctly identify the effects of migration on fertility, we must examine the net effects via these proximate variables and, indirectly, the Easterlin model variables. The purpose of this section of the paper is to review the evidence regarding the effect of migration on these variables.

In the previous section of the paper, we documented the relationship between large families, limited economic opportunities, and rural

outmigration. In this section, we review the evidence regarding the fertility consequences of migration. Two propositions are examined:

- 1) Migration results in a decline in fertility for migrant women.
- 2) Migration results in a fertility change among women in the origin.

Rural-Urban Migration Results in Lower Fertility  
for Migrant Women: Theory, Critique, and Modification

Migration-fertility theory takes up where migration theory leaves off! Migration theorists postulate that migrants move to a destination because in the long run they will earn more money there than in the origin. The "theory" regarding migrant fertility basically assumes that migrants are earning more. In the process, they will become more like urban natives. Urban-born women generally have fewer children than rural women,<sup>3</sup> thus migrant fertility is expected to change and approach urban fertility levels.

Disregarding age, education, and economic activity, the findings are mixed and often qualified concerning migration as a cause for fertility change. In their review of the socio-economic correlates of fertility, Mason et al. find that geographic mobility and fertility have at best a weak negative relationship.<sup>4</sup> Anne William's review reached similar conclusions.<sup>5</sup> Zarate and Zarate conclude their review of migration-fertility studies with the finding that in Latin America, overall migrant fertility tends to be higher than urban non-migrant fertility, but elsewhere findings vary.<sup>6</sup>

Methodologically, there are several potential causes for discrepancies in the magnitude and direction of effect. These are:

- 1) Different comparison groups: Some studies compare rural-urban migrants to urban natives, while others contrast rural-urban migrants to rural non-migrants. If rural fertility is higher than urban fertility, obviously the selection of a comparison group strongly affects the observed differential.
- 2) Failure to control for age at migration: If migration occurs late in the childbearing years, there is little chance for migration to affect fertility.
- 3) Assumption of homogeneous populations: Obviously there is great variation of childbearing among the urban and rural populations, and much of the variation is due to socio-economic or age differences. Valid assessment of the migration consequences would require comparison of similar populations. Likewise, not all migrants in cities have come directly from rural areas. If the fertility effects of rural-urban migration are to be evaluated, only rural-urban migrants should be in the migrant sample.
- 4) Incomplete specification of the migration-fertility relation: According to the model presented above, it is necessary to specify the potential migration-related fertility changes as a function of changes in the proximate variables which in turn are a function of migration-related changes in the socio-economic variables. Migration analyses do not always allow for this sequence of causality, and without one of the model's elements estimation of effects may be biased.
- 5) Equation of modernization and urbanization: Some analyses have been based on the assumption that anyone living in a city is subject to modernization influences, which in turn relate to employment, income, and "taste" changes that lead to smaller families. Researchers have shown that this is not so, therefore assumption of residence-related attitudinal or behavioral changes is not appropriate. Many migrants may continue in traditional lifestyles, substituting subsistence informal sector work for the subsistence farm work of the rural area.
- 6) Inappropriate assumptions about migrant household structure: Migrant women are not a homogeneous group. Some are married, many are not.<sup>8</sup> We cannot assume that all migrant women are married and make fertility decisions with a spouse.
- 7) Static assumptions about migrant characteristics: Migrant fortunes may rise or fall after arrival. If income or the other Easterlin variables have changed since arrival, then comparisons of present socio-economic characteristics with present fertility are spurious, in that the present fertility relates not to the present but to the past levels of socio-economic variables.

With these methodological pitfalls in view, we have organized the discussion of migration-fertility literature in such a way as to eliminate or reduce the confounding effects of migrant-non-migrant socioeconomic differentials. The focus is on rural-urban migrants, but not all studies controlled for place of origin, hence the results reported generally should be interpreted as reflecting urban in-migrants, except as noted. The following discussion addresses the mechanisms underlying a migration-related reduction in fertility.

Rural-urban migration results in a downward revision to fertility among migrant women: Theory and critique.

The factors which operate to reduce the fertility of both native urban and migrant women are early age at time of arrival, lengthy separation from spouse while migrating, increased educational attainment, commitment to work outside the home, working at a position where children cannot be cared for, little reliance on children as workers at home or in the market, participation in family decision-making processes, access to and use of improved health care and family planning services, development of attitudes, and increases to the level of family income. Each of these factors is discussed below.

Fertility reduction is more likely for younger women:

If a woman is nearing the end of her childbearing years, migrating to the city has little effect on her fertility, as studies in Brazil, Honduras, India, Puerto Rico, and Thailand show.<sup>9</sup> However, most migrant women are in the peak childbearing years, therefore, Goldstein

concludes that most have the potential for reducing their fertility.<sup>10</sup> Testing this hypothesis is complicated by the interrelationships among age, marital status, educational level, and occupation, each of which affects both fertility and migration.

Fertility reduction is more likely for migrant women who delay marriage.

Migration may be a factor in causing women to delay marriage or to experience lengthy separations from their spouses. Such delays<sup>11</sup> and separations<sup>12</sup> can cause a reduction in the birth rate, as is shown by data for selected Latin American countries, Ghana, India, and Thailand. However, higher age at marriage or lengthy separations are often related to education or occupational level, which also affect fertility and family size.

Migrants have lower fertility because they are better educated and take advantage of urban opportunities.

Numerous studies have shown that one of the principal determinants of fertility is education.<sup>13</sup> According to Miro and Mertens,<sup>14</sup>

No other socioeconomic variable shows such clear-cut negative relations to fertility as does education. This relationship shows clearly in the urban as well as in the rural-small urban areas. . . . somewhere at the primary level, especially at the completed primary level, a large decrease in fertility occurs; differences for the secondary and higher levels are much less marked.

Nonetheless, education is not consistently related to lower fertility.<sup>15</sup>

In Tanzania, for example, women with one to four years of schooling have more children than those with no schooling, or those with more than four years of schooling.<sup>16</sup>

If we are to make any sense of the observed differences in effect, it is important to recognize how education may produce fertility declines. Education itself does not reduce fertility. Education is inversely related to fertility through a variety of possible intermediate variables: delay of marriage, better knowledge of contraception, aspirations for upward mobility, preference for modern goods, a higher opportunity cost of childrearing, desire for "quality" rather than "quantity" in children, better hygiene and lower infant mortality, practice of joint decision-making, and possession of a sense of self-efficacy.<sup>17</sup>

These intermediate variables remove some of the confusion concerning urban-rural differences in the fertility response to education. First, education has a stronger inverse impact in urban than rural areas because women with aspirations often move to town where they perceive a higher likelihood of goal attainment. Second, a little education is less likely to have an inverse impact on fertility because a certain minimum may be necessary to generate change in aspirations or the sense of self-efficacy.<sup>18</sup> Third, if education operates through aspirations, education leads to smaller families only among women for whom large families and aspirations are incompatible. If well-educated women can afford to hire servants to care for children while they work, large families do not necessarily conflict with their aspirations.<sup>19</sup> Fourth, education may actually delay marriage and thus shorten the period of childbearing. If post-primary educational opportunities are available only in urban areas, a stronger correlation between education and delayed age at marriage will exist in urban rather than rural areas.<sup>20</sup> Thus, we expect education to have a more inverse impact on fertility of urban than rural women.

More selective migrant women have lower fertility if their jobs are incompatible with child-care responsibilities.

As shown in the migration discussion above, migrants to cities are better educated than those who do not go to cities. Given sizeable urban-rural differences in employment opportunities for educated persons, especially for those with more than a little schooling, it is reasonable to expect that migrants are more likely to find opportunities using their knowledge in cities. Thus, for educated migrants, we postulate the following set of fertility-related influences:

- 1) Education increases the probability of finding a job.
- 2) Jobs for educated persons may pay more than for uneducated persons.
- 3) Skilled or white-collar jobs pay more in urban than rural areas.
- 4) Rural-urban educated migrants earn more than same at origin.
- 5) Income effect increases demand for children as "consumer durables," leading to higher fertility.
- 6) "Price" effect will offset income effect if educated migrant is woman who cannot keep children with her at work and cannot find family or friends to care for children.

Migrants are positively selected for education, which is often correlated with higher levels of labor force participation. It follows that higher education among migrant women may lead to lower fertility through the intervening variable of labor force participation. Controlling for educational level, Macisco, Bouvier, and Weller found that Puerto Rican migrant women in the labor force had 18 percent fewer children than those not in the labor force.<sup>21</sup>

Some studies of labor force participation and fertility, not

explicitly concerned with migrants, find a strong inverse relation,<sup>22</sup> while others find little or no relation.<sup>23</sup> To deal with these contradictory findings, researchers postulate that fertility falls if women work at jobs incompatible with the housewife role, such as white-collar and live-in domestic work. Collver and Langlois verified this theory by demonstrating a strong negative relationship between the child/woman ratio and female labor force participation rates when domestic servants are excluded.<sup>24</sup> Subsequent analysis by Gendell et al. in Guatemala and Stycos and Weller in Turkey add further support to the theory of role incompatibility.<sup>25</sup>

The theory concerning labor force and role incompatibility is similar to that dealing with occupation. It is hypothesized that women who work in higher level occupations will have lower fertility, in part because these occupations tend to be incompatible with the housewife role and in part because higher level occupations pay better. With higher wages, time is more valuable. Because children are time consuming, the opportunity costs of raising children increases, and the higher "price" of children results in a drop to fertility goals. Inverse relations between fertility and women's occupational status (proxy for role incompatibility) have been found in Brazil, Chile, Greece, Thailand, and Turkey.<sup>26</sup>

But even role incompatibility is not a sufficient condition for a fertility decline among working women. Paula Hass finds no relation between fertility and role incompatibility in Rio de Janeiro and Buenos Aires. Instead, the critical variables associated with lower fertility among urban women are an approval and perception of non-

domestic roles for women. More education is correlated with this approval, hence Hass concludes that education is the key factor responsible for the development of this attitude. When education is held constant, occupation has no significant influence on the level of approval of non-domestic roles.<sup>27</sup>

Effectively, this reinterpretation of the role incompatibility theory shifts the education-migrant fertility linkage away from the labor force "price" effect toward the "tastes" effect. Income and work responsibilities outside the home are not sufficient criteria for fertility reduction among educated migrants. An attitudinal component associated with education is also important.

A variant of the income-effect theory relates fertility to the husband's occupational status and mobility. The fertility differential seems most marked between agricultural and non-agricultural occupations, which implies that rural-urban migrants shifting occupations will reduce their fertility. Mason et al. cite several studies supporting this theory, but Zarate's and Heer and Turner's analyses tend to contradict the hypothesis that a shift to non-agricultural occupations reduces fertility.<sup>28</sup> Abu-Lughod's study of Egyptian fertility finds an inverse relation between fertility and status of husband, but not all studies confirm this view.<sup>29</sup> In Puerto Rico and Nigeria, for example, the wives of the highest status workers have higher fertility than those at mid-range occupations, perhaps because women at the highest income levels can afford servants to care for children.<sup>30</sup> In some instances, the husband's occupational mobility is related to a desire for smaller families.<sup>31</sup> Oppong has shown that of all white-

collar "mobile" male clerks, desired family size is lowest for migrants.<sup>32</sup> Optimism generated by rising incomes also can produce higher fertility, as Schultz, Heer and Turner, and Nance and Thomas suggest.<sup>33</sup> These findings suggest that if education has a positive impact on fertility via the income effect, it will be through the husband's occupation.

Families in high status occupations generally have higher incomes, and often invest more in their children, raising their "price." Many studies in developed countries support the thesis that higher income families substitute fewer, higher quality children for more, lower quality children. A number of studies find an inverse relation between the level of the urban family's income and its size.<sup>34</sup>

Yet, this finding is not universal. In cities of Mexico, Nigeria, Puerto Rico and Uganda, for example, the highest income families, including ones with high occupational or educational status, do not have as low a level of fertility as expected, perhaps because they hire servants or because they take children to other family members for day care.<sup>35</sup> Zarate suggests that part of this difference is reflected in the differences between urbanization and urbanism.<sup>36</sup> Families may live and prosper in the city, but their family size patterns are still determined largely by a rural or traditional culture.

Based on his research in Lagos, Nigeria, Morgan postulates a curvilinear relation between income and fertility. For the poorest pursuing traditional lifestyles and living at or near subsistence level, fertility is high, as high as in the rural areas. The urban middle class with some schooling and part-time salaried labor are expected to have larger families because they still need to fulfill the rural

norms of a large family. Fulfilling rural obligations and norms is essential for this group in case they fail and need to return or call for help from rural kin. Only the upper class who have completed secondary school and have full-time jobs have smaller families than the traditional rural norm. They are secure enough that they do not require the dual standard of the urban middle class, and they are beginning to experience the child quality-quantity tradeoff.<sup>37</sup>

Caldwell and Caldwell differ in their approach, also based on Nigerian data. They observe that those who have significantly lower family size goals are the middle class who have a strong commitment to their children's future, which entails education. Because they are aware of the high costs of education, they want smaller families. Of the "middle class," migrants are more likely than non-migrants to be using contraceptive methods to limit births. This is also true of some of the very poor, but the rich are not subject to this combination of aspiration and financial constraint, hence they are not expected to have smaller family size goals--and they don't.<sup>38</sup>

The Caldwells' theory is more consistent with the Easterlin model in that the upper-income families who can afford more children will have more. Even if their "tastes" are for highly educated children, their wealth enables them to finance their children's education. For the "middle class" or the less poor, price effects dominate over the income effect, and presumably their education and income level cuts the cost of regulating fertility. Among the very poor at the bottom, income effects from parents do not stimulate a desire for large families, but contributions from children may do so. However, if a very poor

woman does have aspirations for her children, she may use contraceptives to limit her births.

Educated migrants are more likely to limit their births if they have aspirations for their children:

A major education-fertility linkage is the development of aspirations for oneself or one's children. In their analysis of 1971 Venezuelan census data, Kennedy, Paul-Bello, and Rojas-deLara analyzed the indirect effects of education on fertility via improved access to information about family planning methods, employment, higher social status, and higher social aspirations. Of the four indirect effects, the effect of education via aspirations was strongest.<sup>39</sup> The aspirations effects is likely to be even stronger for rural-urban migrants, because the migrants often leave rural areas in order to actualize their hopes and dreams. In the Philippines, the more educated migrants are rural-urban migrants. They are more innovative and have higher aspirations than the less educated, rural-rural migrants. After controlling for age, Hiday shows that the more educated rural-urban migrants have smaller families than the less educated, largely because they stop childbearing at an earlier age.<sup>40</sup>

For many, moving to town to pursue studies is the first step toward the aspired goal.<sup>41</sup> These young persons generally stay with family or friends; but not all join a relative's household. In Colombia, Mexico and elsewhere in Latin America, young girls go to town and find positions as domestic servants, planning on attending night school.<sup>42</sup>

Once the migrants have completed their education, few return. Uzzell's description of migrants from the village of Zautla in the

Oaxaca valley of Mexico demonstrates this pattern. Most children who go to Oaxaca or Mexico City for secondary education stay with family members. When they have finished their schooling, most stay because their education gives them no economic advantage in the village. Some return to villages near their home community of Zautla, but such returns are likely only if the educated migrant has access to village land and can find a teaching job nearby to supplement the inadequate farm income.<sup>43</sup>

Thus, education is more likely to result in pursuit of an urban-focused lifestyle. And once in the city, if the migrant prefers a smaller family, the "costs of regulation" are smaller, due to better access to information about small families, the existence of small families as "reference groups," and better access to fertility regulation methods (as will be shown below).

As noted in the discussion of the aspirations-fertility linkage, education operates on fertility by changing preferences for small vs. large families, primarily through the child quality-quantity tradeoff. Another way of capturing this interaction is to look at education, modern attitudes and fertility.

Miller and Inkeles report that modern attitudes more strongly correlate with acceptance of family limitation than urban or rural residence.<sup>44</sup> Because psychological modernity is largely determined by education, modern attitudes seem to be a principal link between education and use of contraceptive methods.<sup>45</sup> The education-attitude change is more likely after at least four years of schooling, generally after literacy is obtained.<sup>45</sup>

The specific modern attitudes most likely to correlate with acceptance or use of contraceptive methods are belief in science, medicine, and technology; secularism;<sup>47</sup> approval of a wife's activities outside the home;<sup>48</sup> interest in owning modern consumer goods;<sup>49</sup> acceptance of planning; an orientation toward the future;<sup>50</sup> aspirations for one's child;<sup>51</sup> a sense of personal efficacy or ability to influence the course of one's life;<sup>52</sup> and a sense of relative economic deprivation.<sup>53</sup> The important thing to note here is that modern attitudes, not necessarily modern behavior, correlate with approval of smaller families.

City life may stimulate development of these modern attitudes more than village life. Because female enrollment rates are much higher in urban areas, the attitudinal changes associated with education are likely to be more common in urban areas. For both men and women, the urban environment may offer ample exposure to media, to opportunities to purchase goods, and to opportunities to earn money with which to do so. Finally, contraceptive information and methods are more widely available in cities.

City life may also increase the salience of modern attitudes for determining fertility aspirations. For example, modern attitudes do not correlate with fertility aspirations among non-urban Bugandans, but among urban Bugandans the modern attitudes of consumption aspirations and a sense of relative economic deprivation are inversely related to fertility aspirations.<sup>54</sup>

Empirical results generally support the hypothesis that educated migrants have lower fertility (desired or achieved) or use contraceptives

more frequently than uneducated migrants.<sup>55</sup> Stycos' recent re-analysis of 1963-64 Latin American survey data illustrates the general relation reported in other studies. In San Juan, Bogota, and Mexico City, migrants who had completed primary school were roughly two times more likely to use contraceptives than migrants who had not completed primary school.<sup>56</sup>

Migrants who interact with groups who have low fertility norms are more likely to desire smaller families!

When a person moves from one place to another, his or her social network will change. Distance from family and friends raises the cost of interaction, and, although bonds will be maintained, they will necessarily be of a different nature. To a greater or lesser extent, the migrant will increasingly build a social network involving residents of the destination. Although Wirth postulated "anomie" and isolation for migrants to cities, there is substantial evidence that migrants not only maintain but also develop new supportive social relationships.<sup>57</sup>

Fischer demonstrates that the urban environment contains a much more diverse population, including many subcultures that could not survive in small towns or rural areas.<sup>58</sup> Accordingly, in cities, migrants are more likely to meet, interact with, and establish relations with persons unlike themselves.

Most relevant to a potential fertility consequence is contact and involvement with persons who have small families. How can contact with women having small families influence migrant women's childbearing behavior? Schnaiberg and Reed show that unless women know about

small families and small families are not associated with uncertain or undesirable consequences, women whose cultures have traditionally supported large families are not likely to choose the uncertain or undesirable small family option. Among the uncertainties that prevent adoption of small family norms are safety and effectiveness of contraception, expected infant mortality levels, level of children's labor inputs, support for old age, and so on.<sup>59</sup> If migrants meet women who have small families they will have more opportunities to assess the consequences of small families and reduce the level of uncertainty or risk associated with a life with fewer children. If the "small family" consequences are perceived favorably, a young migrant may be more likely to take steps to have a smaller family.

Because urban fertility levels are generally below the rural levels, the simple probability of encountering women with small families is higher in the city. But if migrants are to perceive the consequences, brief encounters are not enough to influence fertility. The encounters must be lengthy, repeated, and varied. In short, this means living near or working with such women.

There are very few explicit tests of the relation between residential heterogeneity and migrant family size. Goldberg's analysis of Mexican and Turkish migrants is the most explicit study of this relation, and his results confirm the hypothesis. Those who live in a relatively homogeneous neighborhood with people of the same background and characteristics have experienced much less change in their childbearing patterns.<sup>60</sup> Clignet and Sween conceptualize the neighborhood variable in terms of limited integration with other ethnic

groups. Migrants from more isolated groups who are less integrated into the "modern" aspects of the city of Douala, Cameroon experience significantly less changes to fertility, despite their residence in Douala for more than five years.<sup>61</sup> Both studies support the hypothesized relation of urban residential heterogeneity, but more explicit studies of the relation are needed.

There is more evidence that certain types of work relationships are correlated with contraceptive use and desire for smaller families. Rosen and Simmons show that educated Brazilian migrant women who work for women with small families or in industries with women who have small families are more likely to want or have smaller families. This is more likely for migrants to more industrialized cities.<sup>62</sup> In a Caracas barrio, 90 percent of the women working favor use of contraceptives, though not necessarily to limit births. Bamberger et al. attribute this result to the information that employed women receive from coworkers, coupled with their enhanced perception of their abilities to control their lives.<sup>63</sup>

Holmstrom also reports that Istanbul rural-urban migrant women who work as apartment managers are more likely to share decision-making with their husbands and see themselves as more modern.<sup>64</sup> Although Holmstrom did not measure family size differences, the decision-making role, independence, and "modern" attitudes tend to correlate with smaller desired family size and use of contraceptives. Oppong's results also suggest that migrants who work with upper status individuals are more likely to want fewer children under certain circumstances.<sup>65</sup> There seems to be some indication that work with higher status individuals who have smaller families correlates with smaller

family size aspirations, but, again, more explicit analyses are needed before this hypothesis can be considered generally valid.

Another way of looking at the group interaction effects on migrant fertility is the Fishbein-Triandis model of attitude change. In this model of behavioral intentions, it is assumed that a woman's fertility decisions are based on her belief about the consequences of having or not having a child at any given time, weighted by the importance of those consequences; and by her belief of what "relevant others" think she should do and her desire to act in accordance with their desire.<sup>66</sup> Studies in Mexico, Venezuela, and the U.S.A. have demonstrated the model's validity. If a woman's reference group approves of her use of contraception to limit births, she is much more likely to do so than if she does not believe that others will approve of her action.<sup>67</sup>

Ethnicity can influence the degree to which migrants become involved with and accept new "reference" groups. Some cultures are more integrated with other groups, more flexible in their social norms and expectations, and more oriented towards change, as opposed to conservatism or stability. In their comparison of several Cameroonian ethnic groups, Clignet and Sween show that the rural-urban migrants who are most likely to have revised their fertility expectations and behavior are the migrants from the open, integrated, more flexible and progressive groups. Among the other groups, childbearing is traditionally tightly ruled by cultural norms, which are relatively unchanged by migration. That is, the migrants whose culture traditionally expects compliance with a rigid set of norms continue that compliance regardless of residential context.<sup>68</sup> Studies in

Pakistan, Uganda, the U.S.A. and Canada also demonstrate the mediating influence of culture on migrant fertility responses.<sup>69</sup>

Ceteris paribus, migrant women will have fewer children if they experience fewer infant or child deaths.

In societies where post-partum amenorrhea and voluntary abstinence while nursing constitute the major impediments to high fertility, any shortening of either period may lead to an earlier exposure to the risk of pregnancy, thus to more frequent births. Traditionally, rural areas have had higher infant mortality, contributing to higher rural than urban fertility.<sup>70</sup>

But lower urban infant mortality levels do not necessarily lead to lower urban fertility. Urban mortality declines may not result in proportional fertility declines if city women do not uphold sex taboos while nursing.<sup>71</sup> Urban women also tend to nurse their children for a shorter period of time, thereby reducing the period of amenorrhea or sex taboo.<sup>72</sup> Finally, if the urban mother supplements her breast milk with a formula, the probability of lactation-induced amenorrhea is much lessened.<sup>73</sup>

In addition, not all migrant women experience lower infant mortality. For many rural-urban migrants, clean water and a sanitary disposal system are more scarce than in their home villages, thus infant diarrhea and mortality may be higher than in rural areas. In Lima, Peru, migrant women who had experienced at least one child death had significantly more live births than women who had experienced no deaths. Because childhood deaths were most common among the "more poor" women, the apparent chain of causality is poverty-high child mortality-high fertility.<sup>74</sup>

Under what circumstances might migrant women experience a decline in infant mortality? Urban areas are more likely to have maternal and child health care programs, and if women attend these clinics, they may experience lower mortality. If so, migrant fertility might drop if the migrant practices lengthy lactation and sexual abstinence, uses contraceptives to space births over the traditional intervals, or wants fewer births and uses contraceptives to actually limit births. The success of the Chinese family planning program is attributed to the fact that women experiencing lower infant mortality became more interested in limiting births.<sup>75</sup>

Proportionally more family planning clinics are located in urban areas, so theoretically urban migrants can more easily obtain contraceptives. But we have demonstrated that the access to contraceptives does not guarantee use. For example, women in Baghdad, Iraq, do not use a nearby clinic because using contraceptives is against their religion or their husband's wishes. And in Caracas, women use the clinic only if they can afford the cost of transportation, loss of work time, and have friends who recommend the clinic.<sup>76</sup>

Summary: Factors precipitating a migrant fertility decline:

Depending on their circumstances, some will choose to use family planning methods, but others will not. Based on the review here, we summarize the findings as follows: Migrant women will desire or have smaller families after moving if they:

- 1) Are young at time of migration;
- 2) Delay marriage or first union;
- 3) Experience lower infant and child mortality in conjunction

with continued lactation and abstinence or use of birth control methods;

- 4) Have or obtain literacy skills;
- 5) Have aspirations for self or children;
- 6) Interact with reference groups supportive of small families;
- 7) Are committed to work outside the home and a non-housewife career;
- 8) Are less reliant on children for help and plan more investment in children's education and support;
- 9) Cultural openness to modernization and change;
- 10) Are aware of and can obtain contraceptives.

Of all the factors that are likely to result in migrant fertility declines, education for the migrant woman is probably the most critical. Through education and residence in the city a migrant woman is more likely to develop a desire to limit births and to evolve into a situation where such limitation is feasible, supported, and economically advantageous. But the relation between migrant education and fertility reduction is complex; many circumstances, such as cultural norms, can alter the expected size or direction of influence.

Limited prospects for decline --

For which women is migration less likely to produce a lowering in fertility goals or attainment? Basically, the women who may not reduce fertility are women whose situations are opposite to that stated in the nine propositions above.

- 1) If a migrant is old (over age 30), she has probably had children, and moving to a city is not likely to reduce her family size.

- 2) If a migrant woman marries shortly after arrival, she is less likely to have fewer children. This results both from an increased exposure to risk of pregnancy and a lower probability of setting in motion the education-aspiration link.
- 3) If a migrant woman continues to experience high infant mortality, she will continue to have closely-spaced births and replace deaths.
- 4 & 5) If a migrant woman has little education, she is less likely to develop aspirations or a commitment to work outside the home. She is also more likely to be impoverished and locked into traditional child-dependency situations.<sup>77</sup>
- 6) If a migrant is unable to obtain employment outside the home, or has a "traditional" attitude towards women's roles, she is not likely to deviate from the expected pattern of childbearing. Domestic servants whose goal is a "suburban" home and several healthy children are a case in point.<sup>78</sup>
- 7) If a migrant is relatively isolated from groups who might stimulate and support a desire for small families, she is also not likely to have a small family. Thus, women who live in neighborhoods with little observable family size variation or who work primarily with those like themselves are not likely to experience a fertility decline.
- 8) Perhaps most important, unless the economic realities for

women differ substantially, the migrant in the city may be just as dependent on a large number of children as her rural sister. Families with low incomes generally cannot afford to send children to school; instead, children are needed to help out at home and with the families' income-producing activities. Studies generally demonstrate a positive correlation between the perceived economic utility of children and number of children.<sup>79</sup> In addition, families living at the margins of subsistence prefer the certainty of children and their known costs and benefits to the risks of smaller families.<sup>80</sup>

- 9) Even if a woman wishes to limit or space births, she may not do so if she has no close friends who use contraceptive methods. Studies have shown that the most effective communication medium for messages concerning family planning are personal friends and family.<sup>81</sup> If a woman is not interacting with persons unlike herself in terms of family planning experiences, one is not likely to have friends who will recommend using birth control methods.

The migration findings outlined in the previous section suggest three additional, related conditions under which migrant women would not be expected to alter their fertility goals or actualities.

First, many migrants do not go to cities, and the differences between the origin and destination communities may be more limited, particularly with respect to the variables outlined above. Because

we model the migration-fertility relation as a change in fertility behavior in response to contextual or personal changes experienced because the person has moved to a new community, if the new community and its adaptive lifestyle do not differ substantially from the old patterns, there is little stimulus for fertility change. A limited number of studies show that rural-rural migrant fertility is little or no different from rural non-migrants.<sup>82</sup> Because the volume of rural-rural migrations is large, it is important that future migration research explicitly address the fertility differentials for rural-rural migrants.

Second, much migration is not once-in-a-lifetime. Migrants may move back and forth between the home village and one or more destinations, depending on changes in opportunities in the various places.<sup>83</sup> In this instance, a migrant may be in and out of the rural context many times. Because of the changing destinations or durations of migration, the migrant may not develop strong commitments to urban living. For him or her, the home rural community may continue to be the central reference point for decisions. Thus, fertility expectations would continue to be shaped by rural norms. Again, duration and the repetitive dimensions of migration are much needed variables in subsequent migration-fertility studies.

Third, migration often is the vehicle by which rural households spread their resources between different areas. If families pursue the "dual household, extension strategy" discussed in the previous section, they maintain a rural base, the stem household from which others branch out.<sup>84</sup> For these households, migration is the means

by which the household adapts its large household size to the changing economic constraints of rural and urban areas. Any nascent economic pressures to limit births are diffused by geographical relocation of "excess" members. In addition, the strategy works best if there are several children: some to continue subsistence farm work, some to assist with household chores and child care, and some to seek out wage labor in other rural or urban areas. Thus, the migration strategy of household extension may perpetuate or even intensify pro-natalist forces operating through perceptions of child utility. This is a top priority item for migration-fertility research.

Some authors suggest that the whole issue of migrant fertility differentials condenses down to the single issue of migrant selectivity. According to these researchers, the observed rural-urban migrant fertility differentials are entirely due to the fact that migrants were selected for lower fertility expectations prior to migration. It is hypothesized that the migrant women with lower fertility after moving are simply those who, by virtue of their age, education, skills, or resources, would also have had smaller families in the rural community. Studies in the Philippines, Thailand, Mexico, Honduras support this "selectivity" hypothesis.<sup>85</sup>

Yet, support for the selectivity hypothesis is not uniform. Several researchers have shown that after controlling for migrant selectivity, migration status or place of residence is a significant variable.<sup>86</sup> In other words, there is evidence that cities or migration status itself exert an additional fertility-reducing effect above and beyond migrant selectivity. This effect has variously been called

the "adaptation" effect; the effect of place variables," contextual" effects, and so on. The effect may be additive or interactive.

The findings presented above suggest that migrant fertility differentials are the joint effect of individual and contextual differences. Using Hendershot's terminology, both selection and adaptation may operate to reduce migrant fertility. In some instances, the selectivity effect dominates over the adaptation effect.

Another important research item is specification of the explicit conditions which cause an "adaptation" response above and beyond the selectivity response.

#### Migration Results in a Fertility Change Among Women in the Origin: Theory and Evidence

Most migration-fertility literature has focused on the effect of migration for migrant fertility. Very little research addresses the related issue: Does out-migration influence the fertility behavior of women left behind in the rural origin? If such effects exist, there are limited mechanisms through which they operate. These include:

- 1) Change to the sex ratio resulting in a higher probability of women remaining single. Alternatively, where women are the migrants, limitations on male marriage.
- 2) Reduced exposure to the risk of pregnancy due to lengthy separations.
- 3) Returnees who introduce new "small family" ideas and examples, especially over a long period of time.
- 4) Remittances which operate via the "income effect."

- 5) Increased information about urban lifestyles, consumption goods, and opportunities, operating to change "preferences" for children vs. other goods.
- 6) "Demonstration effect" of successful educated migrants, which would operate via a change in perceptions about the number of children necessary for "success" and the quality (education) necessary for success. Essentially, the demonstration effect operates through the "price" effect.
- 7) Continued maintenance of large family norms via the migration household extension strategy.

There is limited evidence regarding the first four mechanisms, the last three constitute issues for additional research.

When both young men and women migrate, their departure diminishes the number of persons in the reproductive years. More frequently, rural-urban migration is sex-selective, for males in Africa and Asia and for females in Latin America.<sup>87</sup> This sex selectivity alters the sex ratio of the remaining population and may lead to fertility declines. Studies in India, New Guinea, and West Africa, and a study of international migration all show lower fertility among women left behind in villages.<sup>88</sup> The Indian study shows that the ratio of children (ages 0-4) to women of childbearing age drops from .6050 for low-migration villages to .5335 for high-migration villages. But, separations and fertility may be only temporary, particularly where visits are frequent. One Indian researcher has claimed that husbands on home visits are highly effective at inducing conception.<sup>89</sup>

Male-selective migration raises the dependency burden, as evidenced

in Chile<sup>90</sup> and India.<sup>91</sup> In response, women in Hong Kong, Taiwan, Guadalcanal, New Guinea, India, Tanzania, Turkey, and Zambia have taken over the agricultural jobs vacated by their husbands.<sup>92</sup> There is no information on the subsequent fertility levels of women involved, although Boserup suggests that in the long run the higher status conferred upon working farm women may result in lower fertility.<sup>93</sup>

Not all rural women are able to adapt to the exodus of the men. In cases where the men's work cannot be or is not transferred to women, the women have no choice but to move to the cities also. A recent study of migration in Zambia points up the fact that women increasingly join the migration streams to towns when there are not enough men to cover the male responsibilities, including husbanding.<sup>94</sup>

One major obstacle to smaller families in rural areas is the lack of knowledge concerning family planning. Without the means by which to practice birth control, rural women are ill-prepared to take advantage of any changes in their status. In commenting on urban migrants moving to smaller urban places in Thailand, Goldstein suggests that returning migrants spread new values and information about family planning.<sup>95</sup> Returned migrants may also constitute a group supportive of fertility regulation decisions. Thus, returnees could in the long term alter the "costs of regulation."

Migrant remittances are an additional vehicle by which migrants can alter fertility, most likely via the "income" effect. Migration studies including the remittance variable show that a majority of migrants send back some of their earnings. The highest remittances derive from international migrants, but even rural-rural migrants remit

small sums. Depending on their earnings, migrants may remit up to 50 percent of their earnings.<sup>96</sup> In point of fact, remittances are the measurable short-term returns to the migration household extension strategy.

Remittances increase the income of the receiving households; if income is directly related to fertility, more income will mean more children. But the relation is not that simple. In some cases, the remittance is really a return on previous education or food expenses and is not counted as "extra" income. Rather, remittances are seen as the result of attempts to diversify income sources and to obtain a higher "return" for human capital investments.<sup>97</sup>

It would seem likely, then, that the use of the remittance would depend on whether the remittance was perceived as regular or "extra" income. If "extra" income is used for consumer durables, then it is likely that it will have little "income" effect, at least in the short run. In the long term, remittances used for radios and other forms of conspicuous consumption may lead to changes in tastes for children versus other goods, and through the "price" effect to lower fertility. Alternatively, if households are largely dependent on remittances for subsistence or maintenance of their current standard of living, the remittance may contribute to maintaining high fertility levels through the "income" effect. We expect this effect especially for poorer households adopting a migration household extension strategy. In India, for example, the poorer, low caste families have increasingly sent household members to cities. Between 1954 and 1968, their dependence on remittances as a regular income source increased. By 1968, 56 percent

of these households' income came from remittances.<sup>98</sup> Future migration-fertility research needs to focus on the short and long-term effects of remittances in shaping rural fertility.

Even if actual monetary remittances are minimal, migration can involve an implicit remittance in that migrants who do not depend on the rural household for support reduce the household's dependency burden. This reduction in the dependency burden is one of the major rural "pushes" to outmigration. To date little attention has been addressed to the extent to which the migration response to dependency delays or substitutes for other responses, such as pressure for re-distribution of resources or revision to fertility expectations. In an intriguing article on migration and underdevelopment, Portes suggests that as soon as migration to Lima was effectively curtailed, the pressures for agrarian reform mounted and were successful.<sup>99</sup>

In the long run, "successful" migrants either through visits or returns may demonstrate the efficacy and benefits of small families, thereby reducing the uncertainties, risks, or perceived negative consequences currently associated with small families in many rural settings.<sup>100</sup> Based on the findings outlined above, we anticipate such "demonstration" effects to operate to reduce the "cost of regulation" via reduced uncertainties and via the "price effect," by facilitating a shift from child quality to quantity... In what situations might this occur?

- a) Migrants are "successful" in realizing aspirations for income mobility.
- b) Migrants send children to school.

- c) Migrants spend more for children and receive less in return, i.e., reduced child-parental income flows.
- d) Migrants utilize other sources of prestige than family size.
- e) The migrants' experience is not perceived as exceptional or unattainable by others back home.

Each of these propositions concerning the long-run interaction between migrant feedback and fertility needs additional research.

Migration and fertility: A summary of proposed research items.

Although many portray the literature regarding migration and fertility as "conflicting," we find in this review that much of the conflict results from simplistic models of migration and fertility. This model has been successively modified, and with these modifications the results can be arrayed in a more consistent manner. Basically, migrants will have lower fertility than non-migrants if they are previously selected for characteristics associated with low fertility. In addition, the nature of urban opportunities, the structure of the migrant household, and socio-cultural constraints affecting migrant attitudes can facilitate or limit a fertility adaptation to the new environment.

Many questions are still unanswered, however. The questions we have identified as being most critical to the understanding of migrant fertility and migration-rural fertility interactions are:

- 1) Which aspects of a culture mediate the migrant-fertility interaction?
- 2) Do migration-fertility responses differ for female heads of household? We expect their lower incomes to determine

a large part of the response--or non-response--to urban forces that can facilitate urban fertility declines. But the limited number of adults in the household, changing male partners, and other role differences can also influence their fertility behavior after moving.

- 3) Does the duration of migration to cities affect the probability of fertility change?
- 4) Does the population size of the destination affect the magnitude of a migrant's change to childbearing patterns? What characteristics of a destination facilitate fertility reduction for selective migrants? For less-selective migrants?
- 5) Are earlier migrants--the innovators--more likely to reduce their fertility after moving than subsequent migrants?
- 6) Does interaction with non-family members or non-coethnics increase the likelihood that migrants will acquire reference groups supportive of small families? If so, does this increase the likelihood of their adopting contraceptive methods?
- 7) Does the fertility of rural households extended to cities via migration differ from those whose members are all non-migrants?
- 8) Do high out-migration villages have lower fertility than similar low out-migration villages? When do any differences occur? What variables are associated with a rural

fertility difference for high out-migration villages:  
remittances, use of remittances, proportion of "dual households," migrant feedback, cultural type, integration with the urban network or national system, duration of migration, migration destinations?

This research will amplify our emerging understanding of migration-fertility interactions. Migration and fertility are both household decisions that respond to the same variables: income, information, and so on. This research can help us understand their similarities and dissimilarities, as well as the important issue: Are migration and fertility decisions in some way jointly determined?

THE LIKELY MIGRATION AND RELATED RURAL FERTILITY  
CONSEQUENCES OF RURAL DEVELOPMENT PROGRAMS

In this section of the paper, we focus on the migration and related fertility impacts of the "new priority" rural development activities. The migration impacts of previous development activities will be only briefly summarized, as these have been reviewed elsewhere. For the new project priorities, wherever possible, we shall cite empirical work concerning those program variables. Because most of these priorities are new, much of this section will be deduced from the review above. Finally, the format for this section will be outline format, because we feel this results in a more concise, consistent, and readable presentation.

The new AID rural development priorities are as follows:

- 1) Increased participation of the rural poor in development activities.
- 2) Expansion of off-farm employment opportunities.
- 3) Development of rural financial markets.
- 4) Extension of social services to the rural poor.
- 5) Development of rural marketing systems.
- 6) Area development.

These program priorities differ substantially from the focus on agricultural development that has characterized previous development programs. Noticeably absent is an explicit focus on crops, water works, and extension agents. This does not mean that crops or extension

agents are not involved in the new program emphases, but they no longer occupy the driver's seat. In this section, we will attempt to show what kind of migration and potential fertility consequences we might expect from these seven program types. To the extent that the traditional agriculture or infrastructure development programs are part of these efforts, they will be addressed in the discussion. Otherwise, the reader is referred to the above-mentioned sources for information on likely migration impacts.

For each of the program priorities, we shall present the following information:

- 1) Brief description of the types of programs included under this priority;
- 2) Assumed program outputs from those programs;
- 3) Likely consequences for rural outmigration by type of migrant;
- 4) Potential fertility responses in rural areas.

Priority 1: Increased participation of the rural poor

1) The goal of this project is to encourage greater participation of the rural poor in the design, financing, implementation, and management of rural development projects. Related to this goal is the second goal of more equitable distribution of the benefits of development.

This priority cuts across practically all the other program goals. In the past, a major criticism of development programs has been their exclusion of the poor both in project development and implementation and from receipt of benefits. Therefore, in the discussion of

all subsequent priorities we will assume that the programs have the participation of the poor built in.

Because we do not believe that programs designed only to get poor together for the sake of participation are intended by this strategy, it is not useful to talk about specific participation programs per se. We shall, however, provide some very limited evidence about how participation in decision-making affect migration decisions. Further, we shall only discuss the possible migration consequences of a more equitable distribution of rural development benefits for benefits not to be considered below.

2) Assumed outputs:

a) Participation in decision-making: More involvement of the poor and women in decision-making goes along with less domination by the rich or well-off, or by men. The involvement of the women and poor can result in a shift of program priorities or to the rejection of programs. In addition, decision-making and project design phases may take longer with more active expression of differing interests. One of the assumptions we make here is that program managers and planners evolve the mechanisms to elicit in a timely fashion the goals and constraints upon program adoption and to resolve conflict and move projects on before they stagnate or die from indecision.<sup>2</sup>

b) More equitable distribution of benefits: Women and rural poor are assumed to actually adopt the improved crop techniques, successfully market their output, obtain credit, purchase land and other inputs, and if prices are favorable, actually raise their incomes. (Other benefits such as education and better health care are discussed below.)

### 3) Likely migration consequences:

a) Participation in program decision-making: More selective migrants who seek secondary schooling or urban careers are not likely to change their migration decisions as a result of more access to program decision-making. Participation of the poor may slow migration for the moderate to less selective migrants if the participation results in programs that are perceived to meet their needs for more earnings opportunities. Without attendant shifts in social norms and economic roles for family members, it is unlikely that non-migration due to participation will have a fertility impact. In limited instances participation in decision-making has been shown to correlate with an increased willingness and ability to make decisions to pursue one's own aspirations;<sup>3</sup> therefore, participation may accelerate outmigration to urban areas, especially by single women or moderately selective households. As shown above, migrants with aspirations for themselves or their children are more likely to adopt smaller family norms after moving to the city.

b) Equitable distribution of development benefits: To the extent that the rural poor are actually able to raise their incomes through participation in development activities, rural-rural migration of the less selective will be slowed. But unless the more equitable distribution of development benefits cuts across rural-urban or regional boundaries, urban income potentials may be expected to continue to outpace rural possibilities.<sup>4</sup> Therefore, we do not expect a significant impact on the rural-urban migration of the more selective migrants. To the extent that the moderately selective perceive

a relative equality of rural only, versus rural and urban options, rural-urban migration by the moderately selective may be slowed. For these households, long-term income security and growth potential is a consideration and without an expectation for rural income stability and growth, more now may not change the logic behind adopting a migration strategy. If the urban prospects are sufficiently dismal, a larger share of the rural income pie for the middle class, moderately selective potential migrant households may deter some rural-metro migration.

4) Potential rural fertility changes:

In the short term, the "income" effect may lead to rising fertility among rural stayers, much as Carvaval and Geithman demonstrate for increasing family size within socio-economic reference groups.<sup>5</sup> In the long term, the reverse may be possible if the more equitable income distribution accompanies a change in preferences for child quality versus quantity.

Priority 2: Expansion of off-farm employment opportunities

1) Off-farm employment expansion: For many rural residents, it is no longer possible to survive from the income of one's own farm; and over one-fifth of rural residents rely on off-farm employment as their major income source.<sup>6</sup> For some of those who supplement farm earnings, the demand for rural jobs is seasonal only, but for others it is year-round. The goal of off-farm employment programs is the generation of agricultural and non-agricultural jobs in or near rural areas. We include jobs available in small-marketing towns near rural

areas as off-farm employment opportunities because in many cases firms generating jobs can only be located in a town environment and, further, it is possible for rural residents to walk, bike, or bus to these jobs without actually moving into the town.<sup>7</sup> Most of the jobs will be in activities closely linked to agricultural, hence, they are most likely to locate in the small, dispersed marketing towns.

Development programs may facilitate the creation of off-farm employment through several strategies: training and credit for establishing rural enterprises, loans and subsidies to firms establishing plants in rural areas, construction of the infrastructure necessary for establishment of agri-processing concerns (i.e., rural industrial estates, rural electrification). These programs are not new to the rural development repertoire, and as Lele, Lipton, and others have shown, the programs do not necessarily create the desired jobs.<sup>8</sup>

2) Assumed outputs: We shall assume that the efforts to establish the rural or market town enterprises have actually succeeded and off-farm jobs have been created in locations accessible to the rural population. Consistent with the goal of increased participation of the poor in development benefits, we also assume that there is a mix of jobs available to the rural unskilled and skilled labor force. To the extent that the jobs created also result from programs to extend social services to the rural poor, positions may also be available for educated, rural youth, although we assume that most persons delivering services will be urban-trained.

3) Likely migration consequences of off-farm job availability: Less selective migration to other rural areas would be reduced if

unskilled rural jobs were available. These jobs, however, must be compatible with seasonal farm responsibilities, and if the jobs do not coincide with the timing at which the household can make available that form of labor, the less selective households may still leave in search of a better mix of rural earnings opportunities.<sup>9</sup>

If women, especially adolescent girls, are able to obtain off-farm, rural employment, several authors expect that they would choose this alternative to domestic service in the city.<sup>10</sup> In the Philippines, Mexico, and Senegal, women able to find work on nearby plantations or industries are staying while others leave.<sup>11</sup>

For the moderately selective, availability of off-farm jobs may slow rural-urban migration for those who actually establish enterprises.<sup>12</sup> In Nigeria, for example, a program of artisan training and credit availability did allow some youths to set up rural enterprises. Others, however, went to the cities where they expected to earn more for their trade.<sup>13</sup> In the long term, these jobs and rural enterprises may only serve to stimulate more rural-urban migration of the children of the entrepreneurs, who can now afford to educate their children for an urban career. Thus, we expect a slight slowing of rural-urban migration, but unless there is considerable deterioration in urban employment prospects, the educated youths with some off-farm employment experience are more likely to seek their fortunes in larger cities.

We expect the less selective potential rural-urban migrants to step into the roles vacated by the second generation of rural entrepreneurs. If so, then their rural-urban migration might slow in the long run.

4) Potential rural fertility changes: The effect of increased job availability and reduced migration of less selective migrants is not likely to alter rural family size decisions in the short term, because the jobs are an accommodation to the existing demand. Instead of some household members moving to town or other areas for work, they will stay at home. A limited exception would be the case of adolescent girls. If their marriage is delayed or if by working their aspirations or sense of self-efficacy is altered, they may be more likely to prefer small families.

In the long run, fertility consequences may be possible if the jobs continue to be available and if salaries are high enough that parents can save, can invest in children's education, and are no longer reliant on their children to help them through bad times or in their old age.

### Priority 3: Development of Rural Financial Markets

1) Credit has often been considered "the cutting edge" of rural development in that without timely credit at affordable interest rates, the small farmers cannot break out of the vicious cycle of indebtedness and sales of output when prices are lowest. As a result, they have no ability to save or invest in the more costly inputs required for either the higher yielding crops or the plantation crops with a long maturation period.<sup>14</sup>

Extension of credit to the rural poor is not easily accomplished, however. In the past, collateral requirements, limited access to credit-granting institutions, improper supervision of loan usage, and poor access to inputs or markets have restricted efforts to increase

loans to small farmers or small entrepreneurs.<sup>15</sup> Limited studies show that rural households do have a capacity to save and, under proper circumstances, use credit to adopt innovations;<sup>16</sup> therefore, efforts continue to develop programs to provide credit and savings institutions to the rural poor.

2) Assumed outputs: We assume that the projects are successful and that rural financial markets are established in many rural areas. These financial markets are assumed to offer both supervised credit for adoption of crop innovations and credit with management training to local entrepreneurs. Individual households wishing credit for family or kin obligations may also obtain institutional credit (with interest rates below those of private lenders) if they participate in the rural household savings program.

3) Likely migration consequences:

It is unlikely that the landless poor will be able to participate in a credit program, and it is doubtful that their small potential savings--probably going to items like wheelbarrows or better roofs--would impact their migration decisions.

If others obtaining credit are able to provide jobs for the unskilled, credit may indirectly slow the rural-rural or rural-near urban migration of some of the less selective because many of the new innovations are more labor-intensive. But given the dynamics of population growth and fragmentation, without a major change in the area's crop technology, we do not expect credit to vastly increase jobs for the landless.

Supervised credit may slow rural-urban migration among the moderately selective, as has been shown for a Brazilian loan-fertilizer program.<sup>17</sup> In the long term, however, without a significant improvement in the rural-urban terms of trade, we do not expect supervised credit to hold the next generation of small farmers. Additionally, credit may not deter outmigration for small farmers, because to prevent further fragmentation of the farm at each successive generation most family members must leave to find work.<sup>18</sup>

4) Potential rural fertility changes: Fertility changes seem unlikely in the short term, but in the very long term, supervised credit may alter the dynamics of child-parental dependency. If credit leads to greater stability and predictability of incomes, then parents may perceive themselves as able to have smaller families because fewer children are needed to guarantee economic survival or security. Such a response, however, would also require other social or community changes, e.g., to the health levels, to education networks, and so on.

#### Priority 4: Extension of Social Services

1) Extension of social services has come to be recognized as a necessary component of agricultural and rural development strategies. Without minimal literacy, farmers cannot read instructions in order to adopt innovations. Poor health limits labor productivity, while the combination of high infant mortality and high fertility are detrimental to the long-term hopes of balancing land availability with available work force, among other things.

Extension of social services can include a number of services. We take them to include education, both formal and vocational, maternal and child health care services (including family planning), services geared to improve nutrition and access to water supplies, other health care facilities, savings or incentive programs that provide social security for the rural work force.

2) Assumptions about output:

a) Formal education programs: Assume that programs provide primary school training in village to rural children, including some poor children. Secondary schooling is assumed to be available in each district, but not each village. Secondary students from other villages are assumed to stay with relatives, board, or travel long hours in order to obtain their schooling.

b) Vocational training: Training for selected enterprises is available to selected rural youths. There are no positions immediately available, but credit is available to those establishing or continuing a rural/small town enterprise.

c) Maternal and child health care and family planning services: Assume that the MCH clinic provides pre-natal, delivery, post-natal care. In addition, the clinic assists mothers in improving infant nutrition and care. Family planning services are not yet utilized by the poor except for the high parity older women.

d) Water and nutrition programs have resulted in cleaning up and maintaining the village water supply. Nutrition programs have served to improve children's and nursing mothers' diets, but as yet, most of the poor have not substantially changed their diets. Results so far include reduced dysentery and lower mortality among infants.

e) Assume that the MCH clinic is also visited periodically by a health team. At the time of the visits, the team gives injections, does minor treatments, and refers patients to the district hospital. Visits are infrequent and even if referred not all patients go to the hospital.

f) Design of a workable rural social security program is difficult, but let us assume that a program is operating. Rural plantation workers are eligible and do use the service.

1) Likely migration outcomes:

a) Formal education consistently correlates with rural-urban migration.<sup>19</sup> We expect that for all types of migrants, more access to formal education at any level will stimulate increased rural-urban migration. In particular, access to primary education is likely to shift less selective migrants from rural to urban destinations. Access to rural secondary schooling may delay the departure of rural youth, but after finishing they will go to cities. Secondary schooling in rural areas will reduce education related, rural-other urban migration and replace it with more rural-metropolitan migration by the more selective. If the urban economic opportunities differentially favor non-metropolitan cities, rural secondary schools may facilitate more migration to these non-metro cities.

b) Vocational rural-oriented education has mixed migration results. If parents reject the schooling in favor of formal education, the migration impacts are expected to be low,<sup>20</sup> especially for the moderately selective who contemplate an urban-based income strategy.

If they can gain entrance, we expect the poor landless or children

of small farmers to attend schools. Their household income strategies are essentially rural-oriented and, without land or a large enough farm, establishing a rural enterprise is an attractive option. Given access to credit and counseling with respect to selection of a trade, etc., we expect vocational training to reduce rural-rural migration,<sup>21</sup> but not necessarily rural-small urban migration. Depending on the nature of training and presence of a nearby city in which to operate or work, vocational training may also slow rural-metro migration of the moderately selective.

But if the demand for rural entrepreneurs is saturated, and there are no rural jobs requiring those skills, we can expect vocational training to accelerate rural-urban migration. Those with non-agricultural job-training are much more likely to go to urban areas.<sup>22</sup>

c) Maternal and child health care and family planning services: In the short term, maternal and child health care programs may reduce infant mortality and accelerate population growth, but eventually parents adjust to the new mortality expectations and reduce their desired family size.<sup>23</sup> Thus, in the long term, we expect that these programs will increase demand for family planning services which can lead to reduced rates of population growth. At later migration and urbanization stages with more awareness of fertility variations, urban opportunities and higher levels of educational aspirations, we expect the fertility response to emerge sooner.<sup>24</sup> Therefore, these programs are likely to reduce long-term pressures for outmigration.

The less selective are likely to respond to the long-term fertility changes by moving less frequently to other rural areas. Ultimately,

reduced population growth can also result in less rural-metro migration. Among the more selective migrants, we expect that reduced fertility may have little impact on rural-urban migration. Rather than pursuing a dual household, rural-urban strategy, with fewer adult household members, we expect them to shift to permanent rural-urban migration. Alternatively, the smaller families may enable parents to provide additional schooling for children.<sup>25</sup> If so, this may bump the moderately selective educated youth up into the highly selective category who prefer the large metropolitan areas.

d) Improvement of water supply and nutrition: To the extent that these programs reduce infant mortality levels and that family planning methods are available, the migration consequences are similar to those given above for maternal and child health care services.

In addition, improvement of the water supply may reduce the time that women must spend searching for or carrying water. As Fortman shows through her survey of small farmers in Tanzania, women's work responsibilities limit their ability to adopt the more labor-using agricultural innovations.<sup>26</sup> In addition, some innovations (e.g., chicken farming) require more water; therefore, more water can induce adoption of innovations, which may in turn increase rural family income and reduce rural-rural migration among the less selective households who could not otherwise adopt the innovations.

e) Health clinic: Studies do not show that a general improvement in health levels, if that results from the clinic's services, deters rural-urban migration.<sup>27</sup> Neither does the "amenity value" of a health clinic alter migration incentives. Thus, we expect no migration response to this program.

f) Rural social security programs:

Rural social security savings programs have generally been considered for their fertility impact, but they may also have a migration impact if they are perceived to offer an alternative form of old age support or income security. Those using these programs are likely to be the less selective, landless agricultural workers and small farmers supplementing their meager rural incomes. The programs would serve to stabilize the migrants, thereby reducing subsequent rural-rural migration.

We do not anticipate the moderately or highly selective potential migrants to participate in these plantation or commercial farm programs, hence, their migration patterns would be unaffected, as shown by Carvaval and Geithman's analysis of rural-urban, rural-rural, and rural-metro migration in Costa Rica.<sup>28</sup>

4) Potential rural fertility changes: Because social norms, health levels, and educational opportunities are all variables directly affecting fertility, we would expect many of the above-mentioned social service programs to jointly affect migration and fertility. Where direct effects are expected, they are noted, as in the case of water supply and health services projects.

The indirect rural fertility effects of these projects through migration are by no means clear. Educational projects may increase migrants' skills and propensities to move to cities, rather than to other rural areas. Thus, if rural-urban migrants facilitate a shift toward small family norms by providing information, remittances, or examples of small families, then education programs may have long-term

effects on rural fertility. Likewise, social security programs may enable more would-be migrants to stay and to become less dependent on children for old-age support. Additional research on migrant-fertility long-term interactions will help clarify these interactions.

#### Priority 5: Development of Rural Marketing Systems

1) Rural marketing systems: One of the major bottlenecks to increasing rural incomes has been the marketing system. By expanding the network of marketing facilities linking the villages, rural towns, regional cities, and major metropolitan areas, it is hoped that farmers will have the incentive to produce more and the ability to get their produce to markets where they can realize an adequate price for their efforts. Major components of the expansion rural marketing systems include: farm to market roads, development of storage facilities in rural areas, expansion of the network of traders, buying and selling goods, standardization of weights and prices, and, in some cases, efforts to guarantee or reserve a demand for the produce.<sup>29</sup>

2) Assumed Output: We assume that all of the above components have been included and that the marketing system is working. Farmers are obtaining inputs, increasing yields and increasing the volume of cash crop production. In return, they are able to purchase more consumer goods, including radios.

3) Likely migration outcomes: If the development of a marketing system enables major shifts to a new technology, the migration consequences will differ depending on the crop innovation. Studies of "the green revolution" in India and other parts of Asia show that many large farmers evicted tenants and shifted to less labor-using methods, thereby

sending the evicted tenants and landless laborers to other rural and urban areas, depending on the evictee's knowledge of potential destinations. Elsewhere, a shift to cash crops has increased labor demand, becoming a destination for rural-rural migrants.<sup>30</sup> In this last instance, the net effect would be to reduce the rural-rural migration of the less selective.

If the changes are less dramatic but more broad based, development of a rural marketing system can slow the outmigration of the medium-size farmers who are able to respond to the marketing change. Unfortunately, we have no evaluations of the specific migration consequences of development of a working network. However, unless these changes are accompanied by a substantial deterioration in the future income prospects of urban areas, we expect any reductions in rural-urban migration to be short lived, regardless of stage. Thus, without a major change in agricultural pricing policies and food import programs, the urban demand and price level may not be sufficient to stimulate the production response which signals the shift to a rural-based, as opposed to a rural and urban, dual-household strategy.<sup>31</sup>

4) Potential rural fertility changes: In the short term, less selective migrants or stayers who find wage labor on the new commercial farms probably will experience no or even a slight positive fertility effect due to the "income" effect and reduction in the duration of separation of spouses. In the long term, fertility reductions among the less selective non-migrants depends on a revision of their aspirations for children and other cultural or social norms reinforcing high fertility norms.

For the more selective migrants, the long-term effect depends on the likely fertility responses to remittances, return migration, "demonstration" effects of successful migrants, and so on. Prediction of these outcomes must wait until additional research has been undertaken.

#### Priority 6: Area Development

1) Area development is the regional planning approach to rural development. The projects requiring area development strategies are the very large irrigation or land settlement projects that are capable of exerting significant impact on the indigenous peoples. The major environmental changes produced by the project require significant changes in farm type and technology, and may require major training or assistance in making the transfer. Because the projects ultimately produce a major shift to new products, the projects also necessitate marketing development strategies. Finally, and most important for our purposes, these massive projects generally exert a major influence on migration into and out of the area. Major water works construction such as the Gezira Scheme in Sudan resulted in tremendous upheaval among those displaced by the waters. Many are attracted to the project during the construction phase, and still more come seeking land or jobs in the redeveloping or newly developing area. Of all the rural development projects discussed here, migration consequences are certain. Thus, the problem for planners is anticipating the necessary movements and projecting induced movements in order to incorporate them into the project.

2) Assumed outputs: Because the migration consequences of a major water works project and a land settlement scheme differ, we shall discuss them separately.

a) Major water works: We assume that a major dam is being constructed and that after the lake is filled, the area's economy will shift from arid pastures to irrigated grain crops. Thus, efforts are underway to develop the necessary input distribution and produce marketing system. In addition, project planners have recommended complementary development of the area's major city as an agri-processing and market center. In anticipation of the migrants who will be attracted to the newly-irrigated lands, the government has decided to recruit first in the region and then in neighboring areas. Complicated arrangements are being made for allocation of land and water rights among the indigenous and migrant groups.

b) Land settlement schemes: We shall assume that the in-migrants have already been recruited, largely from among urban households, that all necessary infrastructure is in place, that marketing or input bottlenecks have been identified and eliminated, and that a system of social service delivery linked to market towns has been developed. Settlers will receive credit and, eventually, title to their land.

3) Likely migration outcomes: Of all the rural development strategies, the major land settlement and irrigation schemes have probably received the most attention. In addition, the projects' migration impacts have usually been evaluated, which is rare for most other rural development projects. Therefore, the discussion of migration consequences to major area development schemes is based on fairly "hard" data.

a) Major water works projects: Reviews of water works projects show that, contrary to expectation, except for displacement of those

in the area to be inundated, the in-migration is largely limited to the construction phase of the project.<sup>32</sup> During construction, projects can absorb considerable skilled and unskilled labor. The immediate impact of labor absorption reduces rural outmigration among the less selective and may stimulate reverse urban-rural migration, especially among the moderately and less selective, whose concern for long-term employment is less than for highly selective migrants. Public works employment provides a training function; it may introduce farm workers to the work pattern and organization of formal sector employment. The possession of these skills may increase future propensity for rural-urban migration.

Operating phase impacts on migration depend on the type of infrastructure developed. Studies indicate that the benefits of infrastructure related to agriculture (rural roads, irrigation, etc.) accrue to landowners in proportion to the size of their holdings.<sup>33</sup> Therefore, the biggest beneficiaries are the highly selective households, and because their additional income does not alter their desire to provide children with education and an urban career, the migration consequences for this group are likely to be no different than without the project. Medium-size farmers may be able to avoid rural-urban migration, but because their children will probably be sent to the cities for schooling, in the long term the rural-urban migration of this group is probably not affected. This leaves the less selective migrants as the only group likely to experience a migration impact. Depending on the crop changes, the less selective may be evicted. If the crops are labor-using, these households may stay on as wage laborers. Otherwise, they

are likely to join the ranks of the rural-rural migrants, or in later urbanization phases, the rural-urban migrants. In some cases, the new crops and technology will require more labor, especially at certain times of the year. In this case, the area will become a major rural-rural migrant destination.<sup>34</sup>

b) Land settlement schemes: Land settlement schemes consistently attract migrants; the problem is that for the volume of migration involved, the cost is great. In addition, it is not the less selective rural outmigrants but the more selective urban-rural migrants who generally end up in these schemes. This means that making the project work is an uphill battle because the urban settlers may have little relevant rural experience. In addition, they are less likely to stay, causing problems of turnover or absenteeism.<sup>35</sup> Of the land settlement programs currently underway, only the Malaysian FELDA and Indonesian transmigrae schemes have had close to the anticipated migration consequences.<sup>36</sup> Elsewhere, reports of spontaneous colonization along penetration roads suggest that these may be more cost-effective for altering rural-rural migration flows.<sup>37</sup>

4) Potential fertility changes: In general, we expect the fertility consequences of major water works projects to resemble those of providing wage labor positions in commercial farming. These effects would be modified if the migrants who participate in the construction phases come from a different ethnic group. If these construction workers stay and if their groups have smaller fertility norms, a long-term fertility reduction among stayers may be possible through the "demonstration" effects noted above. In addition, a water project

may affect infant and child mortality. If greater water availability results in lower child mortality, the rural population's fertility levels may decline.

The migration-fertility effects for land development schemes are expected to be similar to those anticipated for medium-sized farmers adopting new technologies.

A conceivable exception to this pattern may accompany increased commitment to staying among the land settlers. If they have a commitment to stay, then changes to their income security and mobility with other changes to "tastes or preferences" may facilitate their adoption of small family norms. A priori we think this unlikely, and in any case, occurring only after a fairly long gestation period.

### Conclusion

Given the assumed program outcomes, most of the programs will have an impact on rural migration. But very few of the programs slow or stop rural-urban migration. Rather, a major effect of the programs which improve the income and opportunities for the rural poor is less rural-rural migration. Only after many years can we expect a possible reduction in rural-urban migration, and then only if the long-term economic outlook for rural areas has changed significantly. Most of the programs accelerate rural-urban migration of the moderately selective, if not immediately, in the long term. Depending on their scope, the off-farm employment programs probably offer the most potential for a change to the rural-urban migration patterns of the moderately selective migrants. In particular, such programs can facilitate more

short-distance rural-urban moves or rural staying with urban commutation. Without substantial changes in the prospects for agricultural income growth via improved rural-urban terms of trade, it is unlikely that solely rural-based strategies will generate a long-term rural staying response among the moderately selective. Migrants respond to conditions of economic opportunity and if the long-term urban opportunity expectations for either a formal sector or family-based informal sector strategy continue to be superior to rural opportunities, migrants will continue to move to cities. If among cities, these economic opportunities are fairly homogeneous, destination choice may increasingly depend on non-economic kin, proximity, or quality of life factors, but the choice will still be in favor of cities. Those differences depend not on rural development but on urban development patterns.

Just as the immediate migration consequences of the rural development priorities are limited to shifts in the magnitude or destinations for less selective rural-rural migrants, migration's indirect effect on rural fertility is fairly limited. But in the long term, the indirect effects may be substantial, depending on the fertility consequences of migration remittances, returnees, visits, positive feedback, demonstration effects and so on. These effects will depend on the migrants' experiences in cities. In particular, if migrants adopt small family norms, then they may introduce these concepts to rural areas when they return or through their visits. As noted above, there are many factors that can inhibit migrants' adoption of small family norms. Thus, even if the indirect, long-term rural fertility effects exist, we cannot expect them to be associated with all migrants.

## FOOTNOTES

### Introduction

1. See for example:  
Brigg, 1973  
Findley, 1977  
Simmons et al., 1977  
Todaro, 1976.
2. See the following:  
Zarate and Zarate, 1975  
Findley, 1977: Chapter 5  
Bouvier and Rosenberg, editors, 1976.
3. For a discussion of the importance of specificity in program design see:  
Chambers, 1974  
Lele, 1975  
Owens and Weiss, 1975
4. Rural-rural migration is shown to be more likely for the rural poor by:  
Romero and Flinn, 1970 for Colombia  
Whiteford and Adams, 1975 for Bolivia  
Hay, 1974, for Tunisia  
Pryor, 1978, for Malaysia  
Connell et al., 1976, for several nations, pp. 9-13.
5. Studies showing that migrants go to different urban destinations within a country are given by:  
Abu-Lughod, 1975  
Herold, 1978  
Skeldon, 1977  
Connell et al., 1976, pp. 72-89.
6. Weitz, 1971, see also Roberts, 1975, for a Peruvian example.
7. The following show that migrant selectivity changes over time:  
Browning, 1971  
Skeldon, 1977  
Connell et al., 1976, p. 68.
8. For a review of the correlation between educational attainment and rural-urban migration, see Connell et al., 1976, 59-71, Simmons et al., 1977, 24-29, and for specific regions, 54, 89-91. Examples of empirical studies are also given by Findley, 1977, 14 ff.
9. Hay, 1974. See also Connell et al., 1976, 66.

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10. Taylor, 1969. See also Gugler, 1969, 140.
11. Schultz, 1971.
12. The following reviews of migration studies document the paramount importance of economic considerations for migrants: Findley, 1977, 11-13, Simmons et al., 1977, Connell et al., 6-37, and Nelson, forthcoming, 2-3 to 2-17.
13. The following empirically demonstrate the salience of economic motives:
  - Caldwell, 1969, for Ghana
  - Herrick, 1971, 72, for Chile
  - Greenwood, 1971, 143, for India
  - Speare, 1971, 117-130, for Taiwan
  - Byerlee et al., 1976, for Sierra Leone
  - Rempel, forthcoming, for Kenya,
  - and the list could go on and on.
14. Ravenstein, 1885.
15. Sjaastad, 1962.
16. Todaro, 1969.
17. For examples to tests of the Todaro model, see Table 1, below.
18. The following have used urban minimum wages to operationalize the urban income factor: Annable, 1972; Falaris, 1974; and Rempel, forthcoming.
19. The following studies have utilized a man-land ration:
  - Schultz, 1971; Hay, 1974; Essang and Mabawonku, 1974. For a discussion of the problems of operationalizing the man-land ratio as a symptom of population pressure and job scarcity, see Connell et al., 1976, 7-22.
20. In their analysis of Indian migration patterns, Connell et al., 1976, 165, used this variable. See also Brunn and Thomas, 1971.
21. Connell et al., 1976, 7-15.
22. Some migrants fail to report an income gain after moving. This group is the most difficult to find, as they are most likely to leave or move on. Downward economic mobility is reported by migrants to Seoul, Bogota, Jakarta. See Findley, 1977, 56, note 24.
23. Sjaastad, 1962.

24. Lewis, 1977, pp. 51-69.
25. Sutlive, 1977.  
Romero and Flinn, 1976.  
Standing and Sukedo, 1977.
26. Dorner, 1964. Evidence supporting the income-security motive is presented by Nelson, forthcoming, 2-6.
27. The migration consequences of price fixing in Africa are discussed by Eicher et al., 1970; Riddell, 1968; and Rehnberg, 1977, discusses the Korean example.
28. Nietschmann, 1977, 21.
29. Kelley et al., 1978. Authors show that the linkage exists between inequality of land ownership and occupational mobility. Barraclough, 1970, and Shaw, 1974, demonstrate the linkage between inequality and out-migration.
30. Shaw, 1974.
31. Moots, 1976. See also Standing and Sukedo, 1977, and Barnum and Sabot, 1976.
32. Barnum and Sabot, 1976.
33. Carvajal and Geithman, 1974, 118.
34. See: Sahota, 1968  
Carvajal and Geithman, 1974  
Rempel, forthcoming  
King, 1978  
Byerlee et al., 1976.
35. Findley, 1977, 19, note 36.
36. Nelson, forthcoming, pp. 3.8 ff.
37. Many studies show that youth stay with friends while looking for work. Between 50% and 75% first stay with kin. For examples of surveys, see Nelson, forthcoming, 3-39.
38. Fields, 1975.
39. Rempel, forthcoming.
40. See studies by Peattie, 1975; McGee, 1971; and Nelson, forthcoming, section 3.

41. The following studies show that destination unemployment is not a deterrent to migration: King, 1978, for Mexico; Rempel, forthcoming, for Kenya; and Jones, 1978, for Venezuela. For additional discussion, see Nelson, forthcoming, and Navratil and Doyle, 1977.
42. Standing, 1978.
43. Nelson, forthcoming, 3-6 to 3-8. Sutlive, 1977, documents the intention to return among Philippine migrants.
44. The necessity of supplementing rural farm income with trade or off-farm work is discussed by:  
Dennis and Uzzell, 1978, for Mexico  
Roberts, 1975, for Peru.  
Outmigration has been reduced in areas offering off-farm employment in Turkey (Munro, 1974); Puerto Rico (Boswell, undated); and Nigeria (Austin, 1977).
45. Hay, 1974. Other studies showing increased out-migration among these with non-agricultural job experience are Caldwell, 1969; Simmons et al., 1977; and Connell et al., 1976, 17-20.
46. The willingness of the less selective migrants to move only short distances to work close by is documented by Weist, 1973, for Mexico; by Whiteford and Adams, 1975, for Bolivia; and for several nations by Connell et al., 1976, 74.
47. Southall, 1975.
48. Sjaastad, 1962  
Todaro, 1971.
49. Kau and Sirmans, 1977.
50. Distance as a proximity for the deterrent effect of leaving one's ethnic group is discussed by Simmons et al, 1977. Empirical evidence for Pakistan is given by ul-Haq and Reliman, 1975.
51. The following studies show that distance is a significant deterrent to migration to a given destination:  
Sahota, 1968, for Brazil  
Goldstein et al, 1974, for Thailand  
Rengert and Rengert, 1973, for Mexico  
Other references given by Findley, 1977, 14-16, and Connell et al, 1976.
52. Distance is not a deterrent to migration for some migrants in Mexico (King, 1978); Chile (Conning, 1972); Kenya (Rempel, forthcoming); and Costa Rica (Carvajal and Geithman, 1974).

53. Consideration of the negative urban quality of life factors as a deterrent is discussed by Renes and Kumar, 1978. Empirical examples are found in Garst, 1978; Jones, 1978; and Connell et al., 1976.
54. Beals et al. (1967) and Annable (1969) have both used destination population as a proxy for migrant stock.
55. Perhaps the strongest case for the argument that migrants do not just move for jobs is given by Nelson, 1978. Adams (1969) underscores the importance of educational opportunities in Colombia. DuToit (1975) also emphasizes the non-economic contextual variables influencing migration decisions in Africa.
56. Stiennes, 1978.
57. See Roberts, 1975; Rempel, forthcoming; and Nelson, forthcoming.
58. For examples of the push of rural poverty in non-Third World countries, see Bussey, 1973, and Hansen, 1970. Empirical studies including other forms of migration are Byerlee et al., 1976; Carvajal and Geithman, 1974; and Rempel, forthcoming.
59. Southall, 1975. See also Elmendorf, 1976, and Connell et al., 1976, p. 77 for Mexican and Indian examples. Nietschmann, 1979, discusses a Nicaraguan example.
60. The importance of alternative destinations as "intervening opportunities" has been postulated by Stouffer and Lee, both cited in Findley, 1977, p. 15-16. Empirical validation is provided by Levy and Wadycki, 1974; Garst, 1978, among others.
61. Conning, 1972, and Harris, 1978.  
See Nelson, 1976, for a discussion of the implications of varying degrees of commitment to urban life.
62. For an exposition of this theory see Lee, 1969, and Stouffer, 1960.
63. DuToit, 1975.
64. For additional discussion of this theory, see Lee, 1969. Empirical evidence for these various obstacles is given by:  
Conning, 1972  
Boswell, no date  
Brunn and Thomas, 1971  
Riddell, 1970  
Mabogunje, 1970  
Rempel, forthcoming  
Connell et al., 1976, 82.

65. Lee, 1969, 295-6.
66. Connell et al., 1976, 45-46.
67. Arizpe, 1978, 313.
68. The following document the influence of previous migration of other family members:
  - Wilkie, 1973, for Argentina
  - Butterworth, 1977, for Mexico
  - Skeldon, 1977, for Peru.
69. Berreman, 1978.
70. ul-Haq and Reliman, 1975  
Clignet and Sween, 1978, 47-65.
71. Lee, 1969, 296.
72. The following show more selective migrants going to metropolitan areas or to urban in contrast to rural areas:
  - Butterworth, 1977, for Mexico City migrants
  - Wilkie, 1973, for Argentina migrants to cities
  - Pryor, 1978, for Malaysian migrants to Kuala Lumpur
  - Conning, 1972, for Chilean migrants to cities
  - Nance and Thomas, 1971, for migrants to Tequigalpa
  - Whiteford and Adams, 1975, for Bolivian migrants to cities
  - Cardona and Simmons, 1975, 28, for migrants to Bogota.
73. Cardona and Simmons, 1975  
Herold, 1978.
74. Butterworth, 1977, for Mexico  
Whiteford and Adams, 1975, for Bolivia  
Connell et al., 1976, 82, for Thailand and the Philippines.
75. Cardona and Simmons, 1975, 28.
76. Wilkie, 1973. Hiday (1978) also characterizes migrants in the Philippines as innovators.
77. Butterworth, 1977.  
For additional discussion of migrants as risk-takers, see Findley, 1977, 9-17.
78. Grunig, 1969.
79. The education-aspirations link is demonstrated by Kennedy et al., 1974, and Reining et al., 1977.
80. Holsinger and Kasarda, 1976.

81. Schnaiberg and Reed, 1974.  
Kau and Sirmans (1972) show that high-risk situations are those characterized by greater uncertainty, which results from less concrete information.
82. The following show that the educated overcome specific obstacles to migration:
  - Wilkie, 1973, for Argentina
  - Butterworth, 1977, for Mexico
  - Balan, 1969, as cited in Simmons et al., 1977, 89-90, for Mexico
  - Pryor, 1978, for Malaysia
  - Connell et al., 1976, 74, for Liberia.
83. Connell et al., 1976, 66-68.
84. The following show that the poor prefer nearby cities or rural locations:
  - Butterworth, 1977, for Mexico
  - Whiteford and Adams, 1975, for Bolivia
  - Wilkie, 1971, for Argentina
  - Rengert and Rengert, 1973, for Mexico
  - Van Es et al., 1968, for Brazil
  - Connell et al., 1976, 82, for Thailand and the Philippines.
85. Schnaiberg and Reed, 1974.
86. The following studies document the rural-rural flows of the poor:
  - Wilkie, 1971, for Argentina
  - Van Es et al., 1968, for Brazil
  - Whiteford and Adams, 1975, for Bolivia
  - Butterworth, 1977, for Mexico
  - Simmons et al., 1977, for the Philippines
  - Pryor, 1978, for Malaysia
  - Caldwell, 1969, for Ghana
  - Byerlee et al, 1976, for Sierra Leone
  - Connell et al., 1976, for Zambia.
87. Whiteford and Adams, 1975.
88. Simmons et al., 1977, 30, 58, 94-95  
Connell et al., 1976, 74-75
89. Nelson, 1976, documents a wide range of differences between sojourners and those who move permanently to the city.
90. The following discuss the need for urban migrants to maintain rural links to compensate for or to allow for urban instability:
  - Weisner, 1976, for Kenya
  - Segal, 1973, for East Africa
  - Standing and Sukedo, 1977, for Guyana
  - Kimmerling, 1971, for Ghana, Uganda and Ivory Coast.

91. Segal, 1973.
92. Weist, 1974, and also Bryant, 1977.
93. Clignet and Sween, 1974.
94. Rempel, forthcoming.
95. Mattesich and Hill, 1976.
96. Rempel, forthcoming.
97. Standing and Sukedo, 1977.
98. Deere, 1978.
99. A few of the studies documenting the increased probability of moving at transition points between life-cycle stages are:  
    Mitchell, 1969  
    INTERMET/IDRC, 1973  
    DuToit, 1975.
100. Migration of young girls or teens is discussed by:  
    Arizpe, 1978, for Mexico  
    Jelin, 1977, for Latin American cities  
    Dorjahn, 1977, for Sierra Leone  
    Chaney, 1977, for Peru.
101. Arizpe, 1978.
102. Limited evidence is presented by Connell et al., 1976, 68, and by Findley, 1977, 9-17. For a theoretical exposition, see Bouvier et al., 1976.
103. Wolpert, 1965 and 1966.  
    This accounts for the higher observed rates of repeat or return migration among lower income or less selective migrants.
104. Hay, 1974, and Fields, 1975, describe the pre-migration job search.
105. Brown, Horton and Wittick, 1970, 175-83. See also Navratil and Doyle, 1977.
106. Rempel, forthcoming.
107. Rengert and Rengert, 1973.
108. The following discuss the chain of migrants following kin:  
    DuToit, 1975, for African nations  
    Caldwell, 1969, for Ghana  
    Connell et al., 1976, 75-76 for India and the Philippines  
    Skeldon, 1977, for Peru.

109. Jacobson, 1971.
110. The following demonstrate that older migrants are responsible for educating their younger siblings:
  - Moock, 1975, for Kenya
  - Deere, 1978, for Peru
  - Keyser, 1975, for Turkey.
111. The following discuss the involvement of migrants in social and ritual activities in their home towns:
  - Roberts, 1975
  - Connell et al., 1976, 98
  - Weisner, 1976
  - Segal, 1973
  - Gugler, 1969.
112. Keyser, 1975.
113. Nelson presents statistics for several nations; even among the poor sampled in the surveys, almost 50% have jobs within one week or month. See also Hay, 1974, 89.
114. Kapferer (1973) shows the importance of the kin network to couple mobility in South Africa. Mattesich and Hill (1976) show the explicit ways that families facilitate establishment of small-scale enterprises. The following discuss empirical evidence:
  - Roberts, 1975, for Peru
  - Eckstein, 1975, for Mexico
  - Connell et al., 1976, 47, several African nations.
115. Nelson, forthcoming, III-4.
116. The following discuss the economic rationales for large farm families:
  - Nag, White, and Peet, 1978
  - Connell et al., 1976, 8.
  - Weist, 1974.For additional discussion of the rural pressures to have children for economic reasons, see Findley and Orr, 1978, 66-81; Repetto, 1976, 77-97; Mueller, 1976, 98-153; and Cain, 1978.
117. Deere, 1978.
118. See Findley, 1977; Simmons et al., 1977; and Rhoda, 1979.
119. For a discussion of research problems and limitations, see Simmons et al., 1977.
120. Studies including interviews at the origin and destination are:
  - Byerlee et al., 1976
  - Thompson, 1974
  - Hay, 1974
  - Butterworth, 1972 and 1977
  - Speare, 1971.

121. The following give information about how potential rural out-migrants choose among competing destinations:
  - Conning, 1972, for Chile
  - Hay, 1974, for Tunisia
  - Van Es et al., 1968, for Brazil
  - Rengert and Rengert, 1973, for Mexico
  - Whiteford and Adams, 1975, for Bolivia
  - Garst, 1978, for Kenya.
122. Nelson, 1976.
123. Examples of the temporary or cyclical migrants reduced willingness to risk long periods of unemployment or long costly moves are given by Whiteford and Adams, 1975; Wilkie, 1973; and Butterworth, 1977.
124. Nietschmann, 1979.
125. Portes, 1978.
126. Connell et al., 1976, document the family decision process in West Africa, Pakistan, Argentina, and India (pp. 25-26). These decisions not only reflect joint or household head decisions but also family, not individual, needs. Additional evidence demonstrating family decision-making and concerns is given by:
  - Moock (1973) for Kenya
  - Deere (1978) for Peru
  - Weist (1973) for Mexico
  - Romero and Flinn (1976) for Colombia.
127. Caldwell, 1978.
128. Portes, 1978.
129. Midgley and Dowling, 1978, 235.
130. Jones, 1978, gives the Venezuelan example. See also Garst, 1978, and Rempel, forthcoming.
131. Plotnicov, 1970. Connell et al., 1976, 90-95, discuss remittances and show that remittances are generally delivered in person; lower-income migrants, therefore, remit and visit less frequently.
132. Kau and Sirmans, 1977, demonstrate this principle using aggregate U.S. data. Levy and Wadycki, 1973, and Greenwood, 1969, provide tests demonstrating the decrease in sensitivity to urban income after controlling for the presence of kin in, respectively, Venezuela and India. In their studies, kin actually are associated with movement to low-income cities.
133. McLuhan, 1967.
134. Browning, 1971. For a discussion of the theory, see Lee, 1969.

## Migration and Fertility

1. Easterlin, 1969.
2. Bongaarts, 1978.
3. Findley and Orr, 1978, 8-31.
4. Mason et al, 1971, 48.
5. Williams, 1976, 142.
6. Zarate and Unger de Zarate, 1975, 134-140.
7. Schaiberg and Armer, 1974  
Armer and Isaacs, 1978  
Thompson, 1974.
8. For examples of studies showing variability among female migrants, see:  
Arizpe, 1978  
Bryant, 1977  
Herold, 1978  
Smith, 1973.
9. Studies showing no decline in fertility for older migrants are:

| <u>Country</u>  | <u>Citation</u>                            |
|-----------------|--|
| India, Thailand | Goldstein, 1973, 238.                      |
| Honduras        | Nance and Thomas, 1971, 118.               |
| Puerto Rico     | Macisco, Bouvier, and Weller, 1970, 51-70. |
| Brazil          | Iutaka, Bock, and Varnes, 1971, 59-62.     |
10. Goldstein, 1973.
11. Studies showing a lower urban fertility associated with later age at marriage are:

| <u>Country</u> | <u>Citation</u>                |
|----------------|--------------------------------|
| Paraguay       | Gillespie, 1977.               |
| Latin America  | Miro and Mertens, 1968, 103-4. |
| Ghana*         | Caldwell, 1969, 183.           |
| Mexico         | Zarate, 1967, 286-7.           |
| Egypt          | Abu-Lughod, 1965, 241.         |
| Brazil         | Iutaka et al., 1971, 60.       |
| Hong Kong      | Salaff and Wong, 1977.         |
- \*Separate study of migrants.
12. Goldstein, 1973, 238, and Visaria, 1969, 257-283.

13. Examples of studies inversely correlating education and fertility are:

| <u>Country</u>       | <u>Citation</u>                               |
|----------------------|---|
| Guatemala            | Gendell, Maraviglia, and Kreitner, 1970, 278. |
| Colombia             | Schultz, 1969, 55.                            |
| Latin America        | Miro and Mertens, 1968, 105.                  |
| Puerto Rico          | Stycos, 1967.                                 |
| Korea, Latin America | Rich, 1973, 28 and 72-73.                     |
| Thailand             | Goldstein et al., 1972, 72.                   |
| Turkey               | Stycos and Weller, 1967, 210-17.              |
| United States        | Slesinger, 1974, 356.                         |
| Taiwan               | Freedman, et al., 1972, 281-96.               |
| Ghana                | Caldwell, 1969, 184 and 214.                  |
| Egypt                | Abu-Lughod, 1965, 237.                        |

An exception is the Brazilian study by Iutaka et al. (*op. cit.*, 60). where education did not significantly influence fertility of migrants or natives. For thorough critiques of education-fertility literature, see Cochrane, 1979, and Graff, 1979.

14. Miro and Mertens, 1968, 106.
15. Graff, 1979.
16. Ewbank, 1977.
17. Holsinger and Kasarda, 1976.
18. Kennedy et al., 1974.
19. Carleton, 1965  
Caldwell, 1976, 214  
Handwerker, 1977.
20. Balakrishnan, 1976.
21. Macisco, Bouvier, and Weller, 1970, 61.
22. Studies finding an inverse relation between labor force participation and fertility are:

| <u>Country</u> | <u>Citation</u>   |
|----------------|---|
| Puerto Rico    | Carleton, 1965, 233-9.  |
| Latin America  | Heer and Turner, 1965, 283. Miro and Mertens, <i>op. cit.</i> |
| Chile          | DeVanzo, 1972.  |
| Peru           | Stycos, 1965, 42-54.  |
| Turkey         | Schnaiberg, 1970, 71-85.                                      |
| Thailand       | Goldstein, et al., 1973, 235-7.                               |
| Brazil         | Rosen and Simons, 1971, 49-69.                                |
| Greece         | Safilios-Rothschild, 1969, 1855-1856.                         |

23. Correlations with only certain activities are found by:

| <u>Country</u>     | <u>Citation</u>                                |
|--------------------|--|
| Turkey             | Stycos and Weller, 1967, 210-7.                |
| Mexico             | Zarate, 1967, 368.                             |
| Japan, Puerto Rico | Jaffe and Azumi, cited in Williams, 1976, 138. |

24. Collver and Langlois, 1962, 284.

25. Gendell et al., op. cit. and Stycos and Weller, op. cit.

26. For a negative relationship between occupation and fertility see:

| <u>Country</u> | <u>Citation</u>                |
|----------------|--------------------------------|
| Chile          | DaVanzo, 1972.                 |
| Brazil         | Rosen and Simmons, 1971, 46-9. |
| Turkey         | Schnaiberg, 1970, 71-85.       |
| Greece         | Safillios-Rothschild, 1969.    |
| Thailand       | Goldstein, 1972, 429.          |

For a discussion of the theory of children's opportunity cost, see Nerlove, 1974, 7.

27. Hass, 1974.

28. Mason, et al., op. cit., 44-46; Zarate, 1976; and Heer and Turner, op. cit.

29. Abu-Lughod, 1965, 244.  
For examples of other studies showing a negative relationship between husband's status and wife's fertility see Miro and Mertens, op. cit. and Iutaka, op. cit., 60-61.

30. Macisco, Bouvier, and Weller, op. cit. and Caldwell, 1976.

31. Occupational mobility as one determinant of lower fertility is shown by Boyd, 1973, 12; Iutaka et al., op. cit.; and Oppong, 1976.

32. Oppong, 1976.

33. Schultz, 1979; Heer and Turner, op. cit.; and Nance and Thomas, 1971.

34. Studies showing reduced family size with increased family income are:

| <u>Country</u> | <u>Citation</u>                              |
|----------------|--|
| General        | } Gronau, 1973, 168-99 and Schnaiberg, 1972. |
| Taiwan         |  |
| South Korea    |  |
| China          |  |
| Costa Rica     |  |
| Uruguay        |  |
| Argentina      | Rich, 1973, 24.                              |
| Philippines    | Hackenberg, 1972, 48-9                       |
| Ghana          | Caldwell, 1968, 183.                         |
| Puerto Rico    | Macisco, Bouvier, and Weller, 1970, 60.      |
| Brazil         | Rosen and Simmons, 1971, 49-69.              |
| Chile          | DeVanzo, 1972.                               |

35. Examples of high income - high fertility urban families are discussed by Mabogunje, 1972, for Nigeria, Carleton for Puerto Rico, op. cit., Zarate for Mexico, 1976, and Thompson, 1978.
36. Zarate, 1967, 293.
37. Morgan, 1976.
38. Caldwell and Caldwell, 1977.
39. Kennedy et al., 1974.
40. Hiday, 1978.
41. Connell et al., 1976, 66-67 and Findley, 1977, 21, note 73.
42. For a discussion of domestic servants' aspirations, see:  
Jelin, 1976  
Smith, 1973  
Harkess, 1973.
43. Uzzell, 1977.
44. Miller and Inkeles, 1974.
45. Armer and Isaac, 1978, 328.
46. Williams, 1976, 133.
47. Miller and Inkeles, 1978, 181.
48. Hass, 1972.
49. Freedman, 1976.
50. Schnaiberg and Armer, 1974.
51. Kar, 1978.
52. Reining et al., 1977, 89-98.
53. Thompson, 1978.
54. Thompson, 1978, 161.
55. The following studies document lower fertility desires or use of family planning methods by the more educated migrants or urban natives:  
Goldstein, 1973, for Thailand  
Stycos, 1978, for Costa Rica, Colombia, and Mexico  
Caldwell and Caldwell, 1977, for Nigeria  
Paydarfar, 1975, for Iran

Kar, 1978, for Venezuela  
Schnaiberg, 1971, for Turkey  
Dow and Benjamin, 1975, for Sierra Leone  
Baldwin and Ford, 1976, for Colombia  
Macisco, Bouvier, and Weller, 1970, for Puerto Rico.

56. Stycos, 1978.
57. Jacobsen, 1971. For examples of the change and amplification of migrants' urban social networks, see:  
Kapferer, 1973, in a study of Zambia couples  
Roberts, 1973, 150-193, for Guatemala  
Cornelius, 1975, 83-108, for Mexico.  
Others who do not explicitly focus on networks, but show general social integration are cited by Findley, 1977, 31-32.
58. Fischer, 1976.
59. Schnaiberg and Reed, 1974.
60. Goldberg, 1976, 387-465.
61. Clignet and Sween, 1978, 47-65.
62. Rosen and Simmons, 1971.
63. Bamberger et al., 1976. The authors note that education remains a stronger correlate of contraceptive use than employment.
64. Holmstrom, 1973, 546-553.
65. Oppong, 1976.
66. Davidson et al., 1976, 3.
67. Shedlin and Hollerbach, 1978  
Davidson et al., 1976  
Kar, 1978  
Vinokur-Kaplan, 1978.
68. Clignet and Sween, 1978.
69. ul-Haq and Reliman, 1975  
Thompson, 1978  
Leonetti, 1978  
Beaujot, Krotki, and Krishnan, 1978.
70. Schultz, 1976.
71. Li, 1973  
Adegbola et al., 1977.

72. Urban women don't breast feed as long.
73. Nerlove, 1974, 210-213.
74. Frisancho, Klayman, and Matos, 1976.
75. Chen, 1973, 238.
76. Ghalli and Gadalla, 1973, 144  
Bamberger and Earle, 1971, 176.
77. For discussion of child dependency, see Schnaiberg and Goldenberg, 1975, and Hackenburg, 1970.
78. Jelin, 1977, and Smith, 1977.
79. Schnaiberg and Reed, 1974  
Kasarda, 1971  
Nag, Peet, and White, 1978.
80. Schnaiberg and Reed, 1974.
81. Lin and Burt, 1973.
82. See Hiday, 1978, for the Philippines  
Goldstein, 1973, 234, for Thailand  
Merrick, 1978, discusses fertility differences between different migration zones on rural frontier areas of Brazil.
83. See Uzzell, 1977, for a discussion of this flux in the Mexican context. For other discussions of circular migration, see Nelson, 1976.
84. For discussion of migration as household extension, see Tienda, 1979, and Portes, 1978.
85. For a discussion of the selectivity hypothesis, see Hendershot, 1976. After controlling for education, socio-economic status, and age, the following find that residence or migration status has no or little effect on fertility:  
Hendershot, 1976  
Goldstein, 1973, 240  
Rengert and Rengert, 1973  
Nance and Thomas, 1971  
Slesinger, 1974  
Speare et al., 1973, for Taiwan.
86. The following show that after controlling for socio-economic variables, place of residence or migration status contributes to additional differences:  
Ro, 1976, for Korea  
Kennedy et al., 1974, for Venezuela

Hendershot, 1976, for the Philippines  
Paydarfor, 1975, for Iran  
Li, 1973, for Korea  
Goldberg, 1976, for Mexico and Turkey  
Anker, 1977, for India.

87. Rempel and Lobdell, 1976, 223-224.
88. Bougainville finds in New Guinea a substantial drop in the birth rate, which he associates with high rates of male selective out-migration. Cited in Connell, et al., 1976, 140 ff. The West African case is by Addo, cited in Rempel and Lobdell, op. cit., 227-228. The India study is by Bandekar, cited in Connell, et al., 1976, 140, and the international case is noted by Nag cited in Williams, op. cit., 141-2.
89. Bandekar, op. cit.
90. Herrick, 1965, 45.
91. Connell, et al., 1976, 169.
92. Connell et al., 1976, 147-8. See also Cliffe, 1978.
93. Boserup, 1970, 51.
94. Cliffe, 1978.
95. Goldstein, 1973, 240.
96. Connell et al., 1976, 91-92.
97. Connell et al., 1976, 95.
98. Connell et al., 1976, 97.
99. Portes, 1978.
100. For a discussion of the perceived disadvantages to small families in the rural setting, see Simmons, 1974; deVanny and Sanchez, 1979; Yengoyam, 1974.

1. See Todaro, 1976, Findley, 1977, and Rhoda, 1979.
2. See Chambers, 1974; Haney and Haney, 1978; and Dozier, 1969, for discussions of the difficulties of including poor in program design and implementation. Other references are given by Findley, 1977, 121.
3. The following show that participation in decision-making can catalyze the pursuit of aspirations:  
Reining et al., 1977, cited in Findley and Orr, 1978  
Hinshaw, Pyeatt et al., 1972  
duGuerney and Hogan, 1977, 19.
4. Lipton, 1977, 160-177.
5. Carvajal and Geithman, 1973.
6. Rhoda, 1979, 66.
7. Weitz, 1971, 121-151  
Johnson, 1970, 183-207.
8. Lele, 1975  
Lipton, 1977, 160 ff.
9. Whiteford and Adams, 1975.
10. Dixon, 1976.
11. Reining et al., 1977, 199-239.  
Elmendorf, 1976  
Kane, 1977.
12. Roberts, 1975, shows this for the Peruvian case and Dennis and Uzzell, 1978, demonstrate the same for Mexico. Rempel and Lobdell, 1976, however, are skeptical that the rural-urban small-scale sector linkages are established at all or with any real potential. Findley, 1977, 122, cites examples of off-farm employment deterring out-migration in Swaziland, Uganda and Morocco.
13. Austin, 1976.
14. Carroll, 1973.
15. Cline, 1978, 315.
16. Lipton, 1976, 247-8 shows that rural savings rates in Pakistan, India, and Thailand run from 8% to 15% of rural income. Findley, 1977, 114-115 gives a number of examples of countries that have adopted small farmer credit programs which have resulted in productivity gains. In Tanzania, lack of credit limits women from adopting recommended innovations. (Fortman, 1977)

17. Streeter, 1973.
18. The Peruvian case is demonstrated by Deere, 1978.  
General discussion of the migration push of fragmentation is given by:  
    Shaw, 1974  
    Simmons, 1978, 28.
19. See Findley, 1977, 14; Connell et al., 1976 (p. 63-65) find the evidence so conclusive that they prefer to conceptualize formal education as "education for migration."
20. Rhoda, 1978  
    Foster, 1965. (Both cited in Rhoda, 1979)
21. Austin, 1976. See also references to programs in Findley, 1977, 84.
22. See note 136 above.
23. Schultz, 1976.
24. Findley and Orr, 1978, 139-160 discuss the Tanzanian case.
25. Kocher, 1976  
    Kennedy et al., 1974  
    See other studies cited by Findley and Orr, 1978, 51-74.
26. Fortman, 1977.
27. Simmons, 1978.
28. Carvaval and Geithman, 1974.
29. For more discussion of marketing strategy components, see:  
    Findley, 1977, 83-84  
    Owens and Shaw, 1972  
    Weitz, 1971.
30. Simmons, 1978.  
    Connell et al., 1976, 22-23 discuss the Indian example of migrants drawn by the "wheat revolution."
31. See Riddell, 1978; Rempel and Lobdell, 1976; and Rehnberg, 1978.
32. Lewis, 1978, 342.
33. Lewis, 1978.  
    Burki et al., 1976, cited in Rhoda, 1979.
34. Land settlement schemes that have resulted in major attraction of migrants are summarized in:  
    duGuerny and Hogan, 1977  
    Ingersoll et al., 1976.  
    Fertility implications of different settlement patterns in Brazil are discussed by Merrick, 1979.

35. For a discussion of the variation in migration response to land settlement schemes, see Findley, 1977, 88-91 and Simmons, 1978.
36. Simmons, 1978.
37. Sawyer, 1967, cited in Findley, 1977, 89.

## ANNOTATED BIBLIOGRAPHY

Some annotations are obtained from abstracting services. In such cases, the source is indicated at the end of the abstract by the following code:

|        |                             |
|--------|-----------------------------|
| P.I.   | Population Index            |
| G.A.   | Geographical Abstracts      |
| B.R.D. | Book Review Digest          |
| A.A.   | Abstract provided by author |

Abu-Lughod, Janet  
(1975)

"The end of the age of innocence in migration theory." in Brian du Toit and Helen Safa (eds.), Migration and Urbanization. The Hague: Mouton.

This article briefly reviews the history of migration theory and research. The author notes that theory is lagging behind recent prolific research, research which has demonstrated previous theories about migration to be limiting. Recent research "has yielded a far greater degree of diversity than prior theoretical formulations could have anticipated. Diversities have been uncovered over time, thus allowing us to formulate a number of models of historic types of migration and to "unhitch", as it were, migration theory from modernization theory, an alliance which, while useful, was also blinding." Diversity has also been discovered with respect to geography and the definition of the term "migrant."

With respect to these comments, the author then proceeds to review the articles in Migration and Urbanization. She notes that they all represent the occurring paradigm shift in migration theory and all treat migration as a universal positive force for change rather than as an aberration or disorder.

Adams, Dale W.  
(1969)

"Rural migration and agricultural development in Colombia." Economic Development and Cultural Change 17(4):527-539.

This study is a discussion of rural migration processes in Colombia. Adams describes the historical background of development and migration in Colombia, the characteristics of rural migrants, and migration effects on agricultural development.

Increasing rural migration is attributed to rural violence, lack of social opportunities, high population growth rates in rural areas, and the monopolization of land by absentee owners. Problems resulting in part from massive migration include increases in the relative price of food, heavy pressure on urban infrastructure, and large imports of some food items and industrial capital. Other associated problems include an inflationary spiral, urban slums, pressure on the balance of payments, widespread crime, and high urban unemployment.

Characteristics of rural migrants are discussed with respect to: a) distance of home from industrial centers, b) levels of formal education, c) the economic background of the individual, and d) age and sex. Adams concludes that local opportunities rather than distance to industrial centers appear to be more important in determining real rural migration in Colombia. Higher education levels correlate to higher migration rates in population groups, but no causal relationship is demonstrated. Economic background may be a determinant or correlated in some way with rural migration, but deficiencies in experimental design of the studies examined preclude any conclusions. Migrants tend to be young, and equally likely to be of either sex.

It appears that, in Colombia, migration is selective with respect to education and age; migrants tend to be those with the most potential ability to manage farm units, organize cooperatives, etc. Adams proposes as policy solutions investments in education and local employment opportunities, specifically land reform programs and improvement in rural education.

Addo, N. O.  
(1975)

"Internal migration differentials and their effects on socio-demographic change." in John C. Caldwell (ed.), Population Growth and Socio-economic Change in West Africa. New York: Columbia University Press.

This study of Ghanaian migration focuses on factors causing migration but does mention migration effects on fertility. Addo found migration universally related to distance and primarily caused by desire to obtain employment or higher education. Addo found no clear evidence that migrants are less fertile but suggested that low fertility in northern Ghana may be due to husbands leaving families for seasonal work.

Amin, Samir, ed.  
(1974)

"Modern migration in Western Africa." Studies presented and discussed at the Eleventh International African Seminar, Dakar, April 1972.

One of the major points of agreement of empirical papers presented and discussed focuses on the effect of rural to urban migration on the area of origin. A common pattern that was widely recognized was that the migrants remitted wealth that supports the conservative elements in the social structure.

Suggested Hypothesis: Rural to urban migration inhibits social change in rural areas. Therefore, rural to urban migration is likely to delay declining rural fertility.

Anker, Richard  
(1977)

"The effect of group level variables on fertility in a rural Indian sample." *Journal of Development Studies* 14(October).

This paper studies reproductive behavior (ideal family size, completed family size and family planning acceptance) in a rural Indian area which was rapidly industrializing. Two castes and eleven villages were sampled. It was found that family planning was quite common and that fertility differentials among couples were related to the couples' unique socioeconomic characteristics as well as to two group level variables (caste and village). The latter result was shown to be statistically significant, for all three measures of reproductive behavior, even after many unique socioeconomic characteristics and attitudes of each couple were accounted for statistically. A.A.

Annable, James E., Jr.  
(1972)

"Internal migration and urban unemployment in low-income countries: a problem in simultaneous equations." *Oxford Economic Papers* 24(3).

An investigation of the relationships between high levels of urban unemployment and the trend toward urbanization. Part 1 deals with the development of operational definitions for the most important variables and hypothesizes relationships between them. Part 2 concerns the testing of these data using intercensal statistics from 26 countries with per capita national incomes in 1963 of less than one-fourth that of the United States. P.I.

Arizpe, Lourdes  
(1978)

"Mujeres migrantes y economía campesina: analisis de una cohorte migratoria a la ciudad de Mexico 1940-70." *America Indigena* 38(2).

Examines the variations in migrant motivations among Mexican women moving from rural areas to Mexico City. A survey of women in Mexico City is used to test propositions that migrant motivations differ by age and socioeconomic status, and that Ravenstein's assertion that women will predominate in rural-urban streams does not allow for the different economic structures underlying migration. The study confirms the variation in motivations by age and SES status of migrant. Younger migrants (9-15 years) are more likely to leave to pursue education. Older teens and women in their 20s are more likely to leave for economic reasons to find work as domestics or to marry or accompany spouse. Over age 30, women migrants to the city come as single women, separated, divorced or widowed. They tend

to find work or earnings sources without looking for a formal job outside the home. The study also demonstrates that the age at which young girls come to the city varies with family size and economic status of the rural family. Women are much more likely to migrate from larger families (more than 5 children), and the larger families are more likely to send the oldest daughters. Except for daughters of landowning or regularly employed agricultural worker families, women come seeking work.

Armer, Michael and Larry Isaac  
(1978)

"Determinants and behavioral consequences of psychological modernity: empirical evidence from Costa Rica." *American Sociological Review* 43(3):316-334.

The authors examine the premise that psychological modernity mediates the effects of background factors and directly affects individual behaviors through social modernizations.

Based on data from a stratified quota sample of 210 Costa Rican adult males, the authors estimate ordinary least squares regression equations of the behaviors as a function of psychological modernity and the background variables of age, rural or urban residence, education, occupation and income. In addition, they test the effect of psychological modernity through behavioral-background variable indices, and they estimate a full structural equation model allowing for measurement error.

Results indicate that psychological modernity has a negligible effect on "modern" behavior when measurement is assumed to be perfect, but a nonnegligible effect when measurements of psychological modernity are assumed to contain error. Psychological modernity directly affects the behaviors of newspaper reading, prayer frequency, involvement in political discussions, and contraceptive use. Psychological modernity and SES variables are, however, perfectly associated, and if this association is taken into consideration, it is shown that psychological modernity is a mediating variable between these SES characteristics and behavior. Education is the strongest variable which operates through psychological modernity to affect behavior.

Austin, Vincent  
(1976)

"Approaches to rural development: lessons of a pilot project in Nigeria." International Labour Review 114(1): 61-68.

The article deals with a pilot project in Nigeria that was undertaken to find solutions to Nigeria's problems of high and steadily rising levels of unemployment among primary school leavers in rural areas. The object of the article is first to review the activities of the project and to see how the different and apparently unrelated programmes it embraced were in fact integrated, and then to examine the merits of the various approaches that can be adopted to promote employment through rural development.

Baldwin, Wendy H. and Thomas R. Ford  
(1976)

"Modernism and contraceptive use in Colombia." Studies in Family Planning 7(3):75-79.

A KAP survey in urban and rural Colombia is used to provide data to test that contraceptive use is more likely for modern women.

The major finding is that knowledge of birth control methods is an important correlate of use. Urban women are more knowledgeable than rural women and therefore are more likely to use family planning methods. In urban and rural areas schooling increases the probability of knowledge and use, but the effect is stronger in urban areas. In urban areas, schooling leads to selection of modern methods, whereas in rural areas it leads to selection of the rhythm method.

Bamberger, Michael and Margaret Earle  
(1971)

"Factors affecting the success of a family planning program in a low income neighborhood in Caracas." Studies in Family Planning 2(8):175-180.

This article reports the results of a study on the factors that affected the decision of women to attend a family planning clinic. The study was carried out in a barrio in Caracas, within walking distance of a family planning clinic recently opened in a local hospital.

Each woman visited was asked to reply to a series of questions related to her economic and marital status, the number of children she had, and her knowledge of attitudes toward family planning. On the basis of the information obtained an analysis was made of: (1) the characteristics of the women who were interested in the clinic and those who were not; (2) the reasons why women did not wish to

attend the clinic; and (3) the structure of the groups to which the women belonged and the patterns of communication in the barrio.

An evaluation was made of all the factors that persuaded women to go to the clinic and all the factors that dissuaded them from attending. The women who were not interested in the family planning program were usually older and had spent less time living in Caracas. They were also much poorer and appear to have a less stable family life. Those who were interested in family planning were legally married and received a higher income.

The main reasons why the women who had initially expressed interest in the program had not gone to the clinic were: laziness or indecision; fear, whether of pain, of cancer, or simply fear of what might happen; or not being able to get to the clinic either because they were working or because they could not leave their children. Other reasons cited were as follows: husband refused permission; became pregnant again, decided to use another method; too confused to decide; lost the address of the clinic; and embarrassed about the medical examination.

Two conclusions are evident. A strong education program is needed and transportation to the clinic and a system of baby-sitters should be provided to make the clinic more accessible to potential clients.

Barnum, H. N. and R. H. Sabot  
(1976)

Migration, Education and Urban Surplus Labour: The Case of Tanzania. Paris: OECD.

The authors attempt to analyze the determinants of migrant behavior in order to test the hypothesis that causally links rural-urban migration and urban labor market imbalance. P.I.

Barraclough, Solon  
(1970)

"Rural development and employment prospects in Latin America." in A. J. Field (ed.), City and Country in the Third World. Cambridge: Schenkmen Publishing Company.

The author attempts three things: to look at some of the current economic development models, to consider the problem of describing the real trends in Latin American rural and urban employment, and finally, to discuss alternative strategies for rural development that have some relevance for the Latin American situation. He discusses strategies in relation to poor agrarian countries, less poor countries, and richer industrialized countries.

Barraclough believes that the situation of rural Latin American labor is very likely to get worse with national economic growth. He concludes that "if the emphasis is on really rapid growth, and one can imagine the existence of the necessary administrative capacity and political conditions, one will obviously choose a system that will maximize productive investment and keep consumption at a minimum, that will use as fully as possible available resources of labor and capital. This means central planning, and it probably means some sort of collectivization. I wouldn't rule out such a possibility for much of Latin America."

Beals, Ralph E., Mildred B. Levy and Leon N. Moses  
(1967) "Rationality and migration in Ghana." The Review of Economics and Statistics 49(4):480-486.

The authors develop a model of gross inter-regional migration patterns in Ghana. The model examines parameters which are important to the potential migrant's decision process, but does not use an explicit decision function due to difficulties in measuring and predicting the required variables. Variables used in the model as proxies for the more precise variables, specific for each region in Ghana, include: average labor income, number of males age 15-54, percent of males who have attended school, and percent of the population residing in cities. Parameters were estimated using least squares. Loglinear functions were found to fit the data better than linear functions and were reported in the paper.

The conclusions of the paper were: migration in Ghana is responsive to income differentials; distance is a strong deterrent to migration and undoubtedly is a surrogate for differences in culture, social organization, and language as well as for transport cost; and regions of large population are attractive to migrants.

Beaujot, R. P., K. J. Krotki and P. Krishnan  
(1978) "Socio-cultural variations in the application of the economic model of fertility." Population Studies 32(2): 319-326.

Data from a 1973-74 survey of 1,045 women in Edmonton, Alberta are used to test the hypothesis that fertility decisions are economically rational, following the Becker model of children as consumer durables, and that cultural background does not moderate the strength of the relation.

Results indicate that only three of eight major ethnic groups make family planning decisions consistent with the Becker economic mode. For the remaining five groups social and normative factors exert a stronger influence.

Education is negatively related to migration. There is no evidence that education causes migration except insofar as it increases income potential and lessens an individual's abhorrence of cultural and social adjustments. Urbanization and population density are important. Regions with large populations of town and city dwellers appear to be attractive to migrants and also to supply relatively large numbers of migrants.

Berreman, Gerald D.  
(1978)

"Ecology, demography and domestic strategies in the Western Himalayas." *Journal of Anthropological Research* 34(3).

The author examines the cultural response to limited land and a relatively fragile mountain environment. Traditionally the Kirkanda society has recognized that steady growth in the population would overtax resources, therefore the society has evolved methods of coping by sending excess households to nearby areas where they establish new villages. The pace at which offshoots are established is regulated by the necessity to maintain a certain relation between the number of adult equivalents to feed and the number of adult workers in the household. The first adjustment mechanism is to vary the marital strategy to incorporate the appropriate number of adults within the household. The second adjustment, establishment of an offshoot, follows if the household can't make sufficient internal adjustments by changing the number of males, females, and related land access. Increasingly, the offshoot strategy is insufficient. Limestone and charcoal contractors have been depleting village resources and households can no longer balance resources and population. Households now send members to cities to look for work. Berreman suggests that preservation of the mountain environment will enable more to stay and ultimately will benefit India as a whole.

Bledsoe, Caroline  
(1976)

"Women's marital strategies among the Kpelle of Liberia." *Journal of Anthropological Research* 32:372-389.

This study examines ways in which women and men in rural Kpelle communities use marriage and filial ties to improve their status and acquire power. It argues that both men and women try to maintain independence from superiors when economically possible, but try to keep other people bound to them in ties of obligation. Because men use female production and reproduction to enhance their own positions, they prefer to marry. Conversely, women marry only to acquire male labor or a wealthy husband.

However, both men and women try to get their children to support them and marry spouses who will support them. The study concludes that age rather than sex distinctions are ultimately most helpful in explaining Kpelle individuals' goals and strategies.

Bongaarts, John  
(1978)

"A framework for analyzing the proximate determinants of fertility." Population and Development Review 4(1):105-132.

Studies of the causes of fertility levels and their changes often seek to measure directly the impact of socioeconomic factors on fertility. Such procedures have a broad appeal to policy makers, offering pinpoint mechanisms which are capable of manipulation through official policy. Despite this appeal, such approaches are considerably more problematical in their application. Not infrequently relationships are found to differ not only in magnitude but even in direction in different settings and at different times.

Although these relationships have been recognized since the pioneering work of Kingsley Davis and Judith Blake in the mid 1950s, efforts to qualify the link between a set of intermediate fertility variables and fertility have proven difficult and thus far have only resulted in highly complex reproductive models. This paper presents a simple but comprehensive model for analyzing the relationships between intermediate fertility variables and the level of fertility. The model includes only a small number of conceptually distinct and quantitatively important intermediate fertility variables. The model is used to analyze recent fertility changes in Korea and the United States; guidelines for its wider use are provided. This quantitative framework allows the dissection of a fertility level into its determining components, the intermediate fertility variables. The analysis indicates that variations in four factors -- marriage, contraception, lactation and induced abortion -- are the primary proximate causes of fertility differences among populations. The proposed model for the relationship between intermediate fertility variables and fertility is highly aggregate and its data requirements are relatively modest, thus making wide application possible. The model can be used in comparative fertility analysis to determine the intermediate fertility variables responsible for fertility differences among populations or among subgroups within a population.

Boserup, Ester  
(1970)

Woman's Role in Economic Development. London, England:  
George Allen and Unwin Ltd.

Three sections of the book discuss the socioeconomic role of women in the village, the town, and "from village to town," respectively. The latter section deals directly with rural-urban migration. Boserup discusses the problem from the viewpoint that to solve women's role-related problems that result from migration it is necessary to "establish more complete integration of women into the urban milieu," rather than inhibit rural-urban migration altogether. The first chapter of the section deals with subsistence production and its effects on the family economy in villages and towns. The following chapter discusses the changes in economic activity which occur when families transfer from rural to urban areas, and the effect of these on the family economy. The next chapter is devoted to a discussion of the broader effects of these changes on the economy and its growth potential, and the last chapter reviews the change in the position and status of women which accompany transformations in a developing economy.

Boyd, Monica  
(1973)

"Occupational mobility and fertility in metropolitan Latin America." Demography 10(1):1-18.

The relationship between career mobility and reproductive behavior is examined for five cities of developing Latin American nations: Bogota, Colombia; San Jose, Costa Rica; Mexico City, Mexico; Panama City, Panama; and Caracas, Venezuela. The data are obtained from fertility surveys conducted between September, 1963, and August, 1964, in the above-named cities under the auspices of the Centro Latinoamericano de Demografia (CELADE), and the analysis is based on information from 600-800 women per city who have been married only once and married ten years or more. Career mobility is defined as an occupational change of the husband between the date of marriage and 1963-64, based on the Hall-Jones occupational scale. Reproductive behavior is operationalized as the number of live births. The conclusion of the multiple classification analysis is that the process of career mobility in four out of five Latin American samples is not a significant factor in explaining differential reproductive behavior. These results are compatible with a variety of North American Studies which stress that variation heretofore ascribed to the process of mobility is an additive composite of past and present status effects. These findings are discussed; a theoretical and methodological critique of mobility-fertility research is presented. A.A.

Brigg, Pamela  
(1973)

"Some Economic Interpretations of Case Studies of Urban Migration in Developing Countries." World Bank Staff Working Paper No. 151; Washington, D. C.

This review provides a good synthesis of migration field surveys completed before 1972. Areas reviewed include 7 Latin American, 5 Asian, and 3 African countries. Indicates that migration is related to level of education, personal contacts with friends and relatives in cities, expected income from urban employment, and employment opportunities in rural areas.

Suggested Hypotheses: Provision of off-farm employment will reduce rural-urban migration. Improved education in rural areas may slow migration in the very short run, but will stimulate migration after youth graduate from school. Off-farm employment will accelerate migration to small towns in the short run, in the long run those who acquire nonfarm skills from off-farm employment will migrate to metropolitan areas. No matter what rural development activities are implemented, rural-urban migration is likely to accelerate over time as the stock of recent migrants in urban areas increases. Provision of credit in rural areas will slow rural-urban migration.

Brown, Lawrence O., Franke E. Horton and Robert Wittick  
(1970)

"On place utility and the normative allocation of intra-urban migrants." Demography 7(2):175-183.

This paper arises out of the fact that place utility, a basic factor in behavioral conceptualizations of migration processes, has not been specified in operational terms. This is done here through a model that assigns intra-urban migrants to destination areal units within a city, using a normative linear programming framework based on behavioral considerations. Measures of place utilities for each areal unit and of comparative place utilities for each pair-wise permutation of areal units are provided by the shadow prices of the dual of the linear programming model. The primal of the model allocates migrants so as to maximize the household's gain from migration. This is measured by the increase in its realized aspirations with respect to a residence site, tempered by the search effort involved in acquiring the site. Implementation of the model utilizes both questionnaire and published data from Cedar Rapids, Iowa for the year 1966 to 1967. Conformity between predictions of the model and real-world characteristics is such that it is concluded that the posited relationships between place utility and behavior in searching for and selecting a new residential site are reasonable and can lead to valuable insights into place utility and its functioning in the intra-urban system. Due to some misallocation of migrant flows, however, we further conclude that the model should be revised into a recursive format for future use.  
A.A.

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Brunn, Stanley D. and Robert N. Thomas  
(1971)

"The migration system of Tegucigalpa, Honduras." in R. N. Thomas (ed.), Population Dynamics of Latin America: A Review and Bibliography. American Association of Latin American Geographers.

Survey of migrants to Tegucigalpa shows that migrants are more likely to come from other urban or prosperous agricultural areas, not from the very poorest agricultural zones. This suggests that the migrants to the metro area are "pulled" rather than pushed by extreme poverty. Factor analysis of the characteristics of the origin communities shows that the strongest correlates of migration to Tegucigalpa are: moderate to high degree of urbanization, high proportion of households with electricity, and a higher proportion of nonagricultural, administrative workers. Good road access also increases the probability of outmigration. Areas of low urbanization and high rural poverty are also low outmigration areas.

Bryant, Coralie  
(1977)

"Rural to urban migration in Botswana." Study prepared for the Office of Women in Development, U. S. Agency for International Development.

This is a report summarizing the major findings from a December 1975 survey of migrants to Gabarone, Botswana. It is one of the few studies that devotes an entire chapter to women as migrants. As the rural areas have become depopulated of men, the pressures have grown for women to leave, also. Confronted with lack of paternal support for children, unemployment and no rural draught animals for ploughing, women have been forced to go to Gabarone. At least half have come to look for a job, and the remainder to join family members that have already gone to the city. Since 1973, 55% of the migrants to Gabarone have been women, most under age 24. Most intend to stay, because the rural home area offers no solution to their problems. 66% of the women migrants felt that the opportunities for work would be better in Gabarone, and after migrating 70% claim that in fact the opportunities have been better. Except for the educated women, most work in the informal sector.

Bujra, Janet M.  
(1977)

"Production, property and prostitutes." Cahiers d'Etudes Africaines 17(1):13-40.

This is a report of a study of women who live in Atu, 100 miles north of Mombassa in Kenya. The author documents the way that women of Atu use migration to Mombassa to become prostitutes as an escape from bad marriages. When they leave they can initiate divorce proceedings. The very

poor and the rich women do not choose this option, because migration to Mombassa to become a prostitute requires a certain minimum of cash resources for transportation and clothing. The rich women do not go because their husbands generally provide for them well enough to remove the incentive to leave.

Prostitution is a vehicle by which women may obtain an independent source of income with which to purchase a house in the village. Because women do not cultivate or play a major role in the agricultural economy, their only source of income if not married is prostitution. Prostitutes are accepted in the village, and successful prostitutes may return to purchase a house and land which in turn gives them security and the ability to obtain the assistance of other female kin in return for the shelter the returnee provides.

Burki, S. J., D. G. Davies and R. H. Hook  
(1976)

"Public works programs in developing countries: a comparative analysis." World Bank Staff Working Paper No. 224, Washington, D.C.

The study is a good concise overview of experiences of 24 public works programs in 14 countries. The study gives very little attention to migration. It indicates that while the evidence is not conclusive it can be inferred that rural public works are unlikely to have an appreciable effect on urban in-migration. It also concludes that expectations entertained for public works programs have often been unrealistic and that actual performance has rarely matched the potential inherent in this instrument. Physical, budgetary, and organizational limitations imply that public works can directly absorb only a small fraction of the unemployed and underemployed.

Suggested Hypothesis: Employment generated by rural public works programs is likely to have a very limited impact on rural-urban migration.

Bussey, Ellen M.  
(1973)

The Flight from Rural Poverty: How Nations Cope. Lexington, Mass.: (Heath) Lexington Books.

"This book was undertaken to analyze the manpower problems resulting from large-scale rural-urban migration and to study the manner in which these have been faced by three nations -- Mexico, Italy, and the Netherlands." Topics covered include: manifestations, processes, and dimensions of urbanization; causes and implications of rural-urban migration; and government policies in regard to rural-urban migration and balancing the population. P.I.

Butterworth, Douglas  
(1972)

"Two small groups: a comparison of migrants and non-migrants in Mexico City." *Urban Anthropology* 1(1):29-50.

This article questions how the behavior of rural migrants living in the city differs from that of urban-raised counterparts. It deals with two small groups in Mexico City: one composed of urban-born men, the other of male migrants from a rural community in southern Mexico. The author proposes that: 1) there are significant differences in the function, structure, and orientation of the groups; 2) the most outstanding differences lie in the interests and subjects of conversation of the men, the relationship of the family to the groups, the importance of kinship and mutual aid, and the degree of sophistication and cosmopolitanism of each group; 3) these differences are related to the origins of group members.

(1977)

"Selectivity of out-migration from a Mixtec community." *Urban Anthropology* 6(2):129-139.

"Various kinds of data are brought to bear upon the problem of selectivity of migration from the Mixtec town of Tilantongo in southern Mexico. It is shown that out-migration from the community is related to differences in wealth, education, lingualism, and cosmopolitanism. The wealthier, better educated, Spanish-speaking, more cosmopolitan peasants tend to leave Tilantongo more than their poor, illiterate, Indian-speaking counterparts. Within this pattern, there are different kinds of migration to different parts of the nation." A.A.

Byerlee, Derek  
(1974)

"Rural-urban migration in Africa: theory, policy and research implications." *International Migration Review* 8(4).

This work is a good concise overview of existing knowledge of rural-urban migration in Africa. It presents a framework for analysis of migration decisions, a good summary of empirical regularities, and points to policy and research needs. Indicates that rural-urban migration tends to be positively related to: level of education, availability of relatives in cities, lack of opportunities to increase rural income, transportation costs, size of psychic costs (risks, social adjustment, etc.), availability of information about urban opportunities, and economic distortions such as artificially high urban wages and agricultural export taxes.

Suggested Hypotheses:

(1) Provision of additional education in rural areas will stimulate migration.

(2) Projects which raise rural incomes (i.e. rural credit and rural market systems) will slow rural-urban migration.

(3) Projects which integrate rural areas into the national urban economy will accelerate rural-urban migration. Such projects include area development and participation of the rural poor; these can reduce risk and problems of adjustment to urban life as well as provide information concerning opportunities in urban areas.

Byerlee, Derek, Joseph L. Tommy and Habib Fatoo  
(1976)

"Rural-urban migration in Sierra Leone: determinates and policy implications," African Rural Economy Paper No. 13, East Lansing: Michigan State University.

This is one of several case studies which investigate the determinates of migration and attempt to link rural-urban migration to development activities in rural areas. Raising rural incomes is widely expounded as the method for slowing rural-urban migration; this study indicates that raising rural incomes by 1% will reduce migration of the uneducated by only 0.4% and that of educated migrants by a negligible 0.065%. Suggests that raising export agricultural commodity prices (coffee and cocoa) would be unlikely to significantly reduce out-migration because incomes in areas producing these commodities are relatively high and out-migration of unskilled labor relatively low.

Suggested Hypotheses:

(1) Improved rural marketing systems will have a minor impact on migration.

(2) Rural development (off-farm employment, credit, and markets) which increases rural incomes may reduce out-migration of rural uneducated but will have little or no influence on migration or rural educated.

Cain, Mead T.  
(1978)

"The household life cycle and economic mobility in rural Bangladesh." Population and Development Review 4(3):421-438.

The current pattern of unconstrained reproductive behavior in rural Bangladesh appears to be a rational and necessary household response to the existing social and natural environment. Households benefit from many children because children, especially sons, contribute to household production and mitigate the substantial economic risks confronting households. Surviving sons are necessary to inherit land and to maintain control of land in times of crisis. Large landowning families also receive more benefits from their sons, because the parental household controls the sons' contributions for a longer period of

time. Among large landowners over 80% of the sons live at home and when they leave, the mean age is 28.5. Among the landless, only 65% of the sons live at home and when they leave they do so at an earlier age, 22.3 years.

Caldwell, J. C.  
(1968)

"Determinants of rural-urban migration in Ghana."  
Population Studies 22(3):361-377.

This is the first of two studies on migration in Ghana by Caldwell which focuses primarily on causes of migration. Caldwell found the following to positively relate to migration:

1. proximity - inverse of distance
2. economic well-being
3. relatives in urban area
4. education
5. size of family of origin

Caldwell speculates that rural to urban migration may have very slightly reduced the growth of the Ghanaian population because urban fertility is generally lower than rural fertility.

Suggested Hypotheses: Rural to urban migration reduces the society's level of fertility.

(1969)

African Rural-Urban Migration: The Movement to Ghana's Towns. New York: Columbia University Press.

Caldwell's study is an indepth analysis of a large migration survey in Ghana. This is one of the most comprehensive empirical studies of migration in a developing country. Caldwell found positive correlations between rural-urban migration and desire for urban employment, acquisition of nonfarm occupational skills, level of education, literacy, ability to speak English, and closeness to towns (physical and family ties).

Suggested Hypotheses:

(1) Off-farm employment may slow rural-urban migration in the short run; however, employment may accelerate migration in the long run as workers gain urban occupational skills.

(2) Provision of additional education in rural areas will stimulate additional rural-urban migration.

(3) Improvement of rural marketing systems, extension of social services, provision of institutional rural credit, area development, off-farm employment generation, and any other activity which integrates rural areas into the urban economy will stimulate additional rural-urban migration.

(1977) "The economic rationality of high fertility: an investigation illustrated with Nigerian survey data." Population Studies 31(1):5-26.

"Data are analyzed from research programmes in Ghana and Nigeria to show that high fertility is not as disadvantageous as is often suggested. The main source of evidence is Project 2 of the Nigerian segment of the Changing African Family Project, a 1973 sample survey of 1,499 females and 1,497 males, over 17 years of age in the Western and Lagos States of Nigeria. It is concluded that the economic ends of a society are largely determined by its social ends and that the economic rationality of high fertility can be determined only within the context of a society's structure and ends. It is also concluded that the society studied is moving toward a condition where high fertility will be increasingly disadvantageous and that this is being brought about more by Westernization than modernization." P.I.

(1978) "A theory of fertility: from high plateau to destabilization." Population and Development Review 4(4):553-577.

This article elaborates on the author's previous exposition of a theory of demographic transition which allows for two stable states: high fertility and low fertility. This article concerns the transitional phase between the two states.

Caldwell suggests that the transition results from a change in the nature of economic relations within the family (the larger extended family of economic interdependencies). The theory is based on 6 propositions: 1) The peasant economy is a familial based economy; 2) Familial modes of production are characterized by relations of production between kin that give the more powerful the material advantages; 3) High fertility is advantageous to peasant families as a whole and especially to its most powerful members; 4) The familial mode of production may dominate in a society with a limited market economy; 5) Other modes of production may coexist for long periods and families may participate in more than one mode of production; 6) Transition really occurs when the family can no longer use the familial mode effectively within the capitalist mode of production.

The familial mode of production benefits from large families because large households can send some of their members to the city or to other areas of greater economic opportunity. Also, the large family does not have to hire outside labor during peak seasons, and therefore can cultivate larger areas of land.

In the city, the familial mode can coexist with the capitalist mode of production as long as the wife and children consume little. If rising expectations, especially for education, drive up the household's costs, the co-existence of the familial and capitalist modes is threatened.

Caldwell, John C. and Pat Caldwell  
(1976)

"Demographic and contraceptive innovators: a study of transitional African society." *Journal of Biosocial Science* 8:347-365.

This study utilizes data from the Changing African Family Project in Nigeria. The hypothesis is that those who use contraceptives do not necessarily use contraceptives to limit family size; further, those who do use contraceptives to actually restrict family size differ from those who use contraceptives only to regulate the timing of births. Caldwell and Caldwell label those who use contraceptives for timing only as contraceptive innovators and those who do so to limit births as demographic innovators.

Contraceptive innovators in Ibada and Western Nigeria account for 16% of women aged 15-49. The following characteristics increase the likelihood of use: monogamous marital status, more education, migrant status, father in a nontraditional occupation and women as white collar workers. The contraceptive innovators use methods to avoid pregnancy during premarital sex or to space births after marriage. Demographic innovators are only 2% of the women surveyed. The following are the characteristics of the demographic innovators: urban background, strong conjugal bond and sharing of activities between spouses, strong achievement orientation with a commitment to children's future, and a perception that children are costly. Demographic innovators are also unlike contraceptive innovators in that they don't feel that children make net economic contributions to the family, even as adults. Past demographic innovators are found along two groups: professional, white collar workers and the very poor.

Cardona, Ramiro and Allan Simmons  
(1975)

"Toward a model of migration in Latin America." in Brian du Toit and Helen Safa (eds.), *Migration and Urbanization*. The Hague: Mouton.

This paper delineates a preliminary model of migratory patterns in Latin America and, on the basis of this model, establishes some hypotheses with respect to the possible consequences of migration.

"The lack of sufficient information as well as the limited theoretical explanations concerning migrants in Latin America do not offer a basis for a clear understanding of the situation. Nevertheless, recent serious studies indicate that migration stimulates economic and social development."

Several general, but practical observations are made about the rural-urban migration situation in Latin America. They treat the migrant, on an aggregate level, as an organized "holistic" system of personal, socioeconomic, and situational variables which can best be grasped through the construction of migrant "profiles." These profiles, described in McGee, 1975, incorporate wherever possible the migration history as well as the characteristics of the migrant at one point in time, thus allowing an analysis of migration trajectories as well as migrant types. The authors posit a "migration history" and cycle in which motives, selectivity and adaptation mechanisms characteristic of large numbers of movers, change in the long-term process of the cycle.

Carvajal, Manuel J. and David T. Geithman  
(1974) "An economic analysis of migration in Costa Rica."  
Economic Development and Cultural Change 23(1).

There are three major sections to this paper: the first estimates the magnitude and direction of population movements for various groups in the country to help ascertain who migrates and his/her origin and destination. The next section tests for statistically significant differentials of certain decision variables (income, unemployment, occupation, education, age, and marital status) among populations grouped by migration status. The third section develops an empirical model to infer the responsiveness of migration to several economic and socioeconomic developments (local wages and salaries, local unemployment rate, local average educational level, average distance from farms to nearest large town, and extent of coverage under the social security system) in the urban, town, and rural sections of society.

The broad conclusion of the paper is that migration can be viewed as a rational economic phenomenon: that economic factors are determinant in the decision-making process of the prospective migrant. Policy prescriptions are proposed, including better economic information dissemination, lending "venture capital" for migration, and public subsidization of migration costs. These proposals are based on the author's belief that migration is not the cause of urban problems in Costa Rica.

Chambers, Robert  
(1974)

Managing Rural Development: Ideas and Experiences from East Africa. Uppsala, Sweden: Scandanavian Institute for African Studies.

The main thrust of the book is that management procedures are a key but neglected means for correcting imbalances in distribution of wealth and improving planning and implementation of rural development programmes and projects. Ideas and experience are drawn mainly from Kenya, Uganda, Tanzania, Zambia, and Botswana.

Chambers believes that there is a case for diverting resources and ingenuity to improving the management of government organizations in rural areas. He discusses systems of programming and implementation and field staff management, local participation, planning, project evaluation, and principles, modes of thought and precepts in procedural design.

Cliffe, Lionel  
(1978)

"Labour migration and peasant differentiation: Zambian experiences." Journal of Peasant Studies 5(3):326-346.

Peasants in Zambia, as elsewhere in Southern Africa, were drawn into the world economy as labour migrants, and even now, when urban employment is more permanent, the rural areas are given over more to the reproduction of labour than to the production of commodities. The resulting general impoverishment has not, however, precluded significant differentiation among the various regional peasantries. Moreover, in these peasantries, where many men are absent, resulting changes in property rights related to kinship and in the division of labour between sexes mean that the position of women within the pattern of class formation must be specially examined. Differentiation and the special position of women have to be taken into account in assessing the political potential in societies whose complexity gives special meaning to the 'worker-peasant alliance'. A.A.

Clignet, Remi and Joyce A. Sween  
(1978)

"Ethnicity and fertility: implications for population programs in Africa." Africa 48(1):47-65.

1964 Cameroonian Census data are used to test the hypotheses that: 1) Overall and current fertility will be higher when the culture originally has a high degree of social integration (rules and structure) and when involvement in modernization is low; 2) Individual differences in child-bearing will be minimal within ethnic groups with a high degree of social integration and low modernization at the

origin. The variability of childbearing will increase among groups more involved in modern features of society; 3) Ethnicity will account for differences in the variability of fertility to the extent that the culture directly determines fertility via rules and social structure; 4) In the groups with less cultural determination of fertility, there is a higher likelihood that participation in modern society will influence fertility.

The sample from the census is comprised of women who have borne at least one child and who have lived in the city of Douala for at least 5 years. All hypotheses are supported. Culture has a stronger effect than modernization, which is limited and more variable. A major variable determining the cultural influence is the method of matrimonial choice. Education is shown to have the strongest influence for the more modernizing groups. For these groups education is inversely related to fertility, whereas for the more traditional groups education is positively related to fertility.

Cohen, John  
(1975)

"Effects of green revolution strategies on tenants and small-scale landowners in Chilalo region of Ethiopia,"  
The Journal of Developing Areas 9(2):359-376.

This case study provides a good example of how well-planned development projects can have unintended and undesirable influences on the rural poor. Though the study does not directly address migration, it indicates that tenants and small holders were evicted or forced to sell out as a result of the project. Provision of low-cost credit, improved marketing systems, and extension resulted in increased yields; seeing the advantages of modern farming, large landowners modernized by buying tractors, using high yield seeds, fertilizer, and by evicting former sharecroppers. 5,000 tenants (about 25% of the population of the project area) were evicted; the figure could reach 12,000. Study is unclear whether those evicted stayed on as farm laborers, moved to other rural areas, or migrated to cities.

Suggested Hypotheses:

- (1) Provision of rural credit can support modernized farming and lead to out-migration of rural tenants.
- (2) Improved rural marketing systems can contribute to eviction of tenants and subsequent out-migration.

Connell, John, Biplab Dasgupta, Roy Laishley and Michael Lipton  
(1976) Migration from Rural Areas: The Evidence from the Village  
Studies. Delhi: Oxford University Press.

This study is one of the most comprehensive reviews of empirical literature on rural out-migration. The study indicates that those who are educated in rural areas are far more likely to move to cities than rural illiterates. Approximately 10% to 15% leave rural areas so they can obtain better schooling elsewhere. The study also reviews other research linking rural out-migration and commercialization of agriculture. These indicate a positive correlation in New Hebrides but negative correlation in Nigeria and New Guinea. Data from India suggest a positive correlation.

Suggested Hypotheses:

(1) Improved education in rural areas may slow rural-urban migration in a very short run, but will provide a very strong stimulus to rural-urban migration when youth graduate from school.

(2) Improved rural marketing systems which stimulate commercialization of agriculture will accelerate rural-urban migration.

Conning, Arthur M.  
(1972)

"Rural-urban destinations of migrants and community differentiation in a rural region of Chile." International Migration Review 6(2):148-157.

An index is defined for measuring the degree of ruralness or urbanness of a community. The hypothesis is that, for communities in a small rural region, the ratio of rural-urban to all migrants (including rural-rural, urban-urban) from a given community is directly related to the community's "level of differentiation" as indicated by the above index. The index is defined as "community differentiation" or as the degree to which a community is coupled with the national system via the educational, economic, and religious subsystems. Particular attention is placed on explaining positive correlations of migration to local economic opportunity and negative correlations of migration to local education. The hypothesis involving community differentiation is supported by the results of the study.

Davidson, Andrew R., James J. Jaccard, Harry C. Triandis, Maria Luisa Morales,  
and Rogelio Diaz-Guerrero.  
(1976)

"Cross-cultural model testing: toward a solution of the Etic-Emic Dilemma." International Journal of Psychology 11(1):1-13.

A model for the prediction of behavior from attitudinal components, developed by Triandis, was tested with samples of U.S. and Mexican women, and with fertility relevant behaviors. The elements of the model are etic, but the operationalizations of the various variables are done emically. Results support the model in both cultures. While the predictive utility of the model is equivalent in two cultures, there are social class differences dependent upon which component of the model is most emphasized. The U.S. upper-middle-class sample and the Mexican upper-middle-class sample emphasized the person's attitude toward the act, while the Mexican lower SES (socio-economic status) sample emphasized the person's normative beliefs (moral obligations). A.A.

Deere, Carmen Diana  
(1978)

"The differentiation of the peasantry and family structure: a Peruvian case study." *Journal of Family History* 3(4):422-438.

The purpose of this essay is to explore the relationship between peasant family structure and organization and the changing pattern of Latin America's incorporation into the world economy. The central thesis to be developed is that there is no direct, linear link between family structure, the particular social formation, and the world economy, but rather, that the relationship is indirect and interceptive.

This paper demonstrates the manner in which the study of the relations of production in agriculture provides the analytical link to relate changes in the macro-economy to changes in peasant family structure and organization. Findings indicate that patriarchal authority within the peasant family was closely related to access to the means of production which in turn was mediated by the class relations of domination and submission as well as of exploitation. The analysis suggests that the interests of the landlord class in sustaining external control over familial labor power were varied, and were influenced by economic as well as political and ideological factors.

Dennis, Philip A. and Douglas Uzzell  
(1978)

"Corporate and individual heter-village relations in the Valley of Oaxaca." *Ethnology* 17(3):313-324.

The purpose of the paper is to explain the apparent contradiction, in two villages in the Valley of Oaxaca between isolation and separation of villages, on the one hand, and fairly intense interaction among members of different villages, on the other hand. Isolation is

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manifest as land disputes, locally celebrated holidays, feuding, and ethnocentric stereotyping. Intense interaction occurs as villagers participate in the market activities of other villages.

The authors explain the contradiction as a result of the influence of the Crown, promoting village insularity, and the opportunities of the market structure, allowing impersonal free enterprise between villages. With the departure of the influence of the Crown, economic relationships between villages increased, to the extent that villagers travel to larger cities such as Oaxaca and Mexico City to work or do business. This increase in economic activity is not explained by population increases (since they have not significantly occurred in the villages in this study). It is explained by the demand in cities for an elastic pool of cheap labor greater than the demand for peasant production.

DeVany, Arthur and Nicolas Sanchez  
(1979)

"Land tenure structures and fertility in Mexico." Review of Economics and Statistics 61(1):67-72.

The authors examine the proposition that beneficiaries of land reform (ejidatorios) will have larger families because: 1) Children help parents secure rights to land through development of a network of allies that will support the individual's rights to access to production inputs; 2) Children are necessary to fulfill the requirements that land must not be fallow for more than a year and that it can't be leased; 3) Children provide for the parents' old age, the parental control of the land title ensures that children fulfill these parental demands; 4) Children can be used for the family farm, while the landless have no similar guaranteed vehicle with which to employ their children.

Data from a 1971 rural household survey in the state of Mexico are used to test the propositions. Ejidatorios have more children at every age than non-ejidatorio women. Authors note that the very rapid rate of population growth in Mexico has coincided with extensive reallocations of land to the ejido from the private sector.

Dixon, Ruth B.  
(1976)

"The roles of rural women, female seclusion, economic production and reproductive choice." in R. Ridker (ed.) Population and Development, The Search for Selective Interventions. Baltimore, Md: Johns Hopkins University Press.

Across North Africa through the Middle East into South Central Asia, a number of countries share certain economic

and cultural characteristics relevant to the issue of female roles and reproductive behavior. In most of these Moslem and Hindu countries rural women, on the average, marry while still in their teens. The practice of female seclusion, by depriving girls and women of direct access to material and social resources in the community at large, creates in them a condition of extreme economic and social dependence that not only compels their early marriage but also militates against the effective practice of birth control within the marital union. From a policy perspective the question is whether the cluster of social, economic, and cultural motives governing these marital and reproductive decisions could be substantially altered. The possibility of changing decision-making patterns within the family directly seems rather remote. A policy can, however, change the external variables that are likely to lead to internal change. As social and economic opportunities for girls and women in the community begin to undermine old bases of authority within the family, and as traditional patterns of early marriage and frequent child bearing become less easy to justify, a more desirable form of demographic behavior may emerge.

Dorner, Peter  
(1964)

"Land tenure, income distribution and productivity interactions." *Land Economics* 40(3):247-254.

Latin American land tenure and income distribution problems are well documented, while shortfalls in productivity are not. Every country has a different tenure and distributional system, each having evolved from separate histories. Even within the country there are variations to the general system. In solving distributional and productivity problems, one cannot pretend to be starting from a clean slate, rather, one must be aware of the practical aspects of moving towards one system from another less desirable one. Descriptive examples are given with respect to the Latin American situation.

Other points raised are: that the importance of an unexploited productivity potential lies in the fact that, with increased productivity, the distributional problem may become more simple; more alternatives will be available and less antagonism aroused since at least part of the redistribution can come from this unexploited margin. Land tenure, broadly defined, is actually the legal, contractual or simply "understood or customary arrangements" whereby people in agriculture try to arrange for an initial access route to the income flow and the ways by which these routes are secured. The key to developing new systems is to develop new institutional arrangements that promote secure access to income, increased productivity, and that are flexible to permit future change. In this strategy, it is impossible and irrelevant to foresee what type of system will eventually emerge.

Dow, Thomas E.  
(1971)

"Family planning patterns in Sierra Leone." *Studies in Family Planning* 2:211-222.

The purpose of the paper is to identify those elements in the social structure that are indicative of the courses that family planning developments in Sierra Leone may take.

The data are derived from a sample of 5,952 currently married women and single women with children 15-49 years of age. Single women without children, and ever-married women not currently married were excluded from the sample. The sample is representative of approximately 92 percent of the total urban female population and 97 percent of total urban female population aged 15-49.

To provide a picture of the place of family planning patterns in the social systems of Sierra Leone, family planning was related to specific demographic, social, and economic variables. Comparison of characteristics, attitudes, and behavior of younger and older women suggested social change in which younger women were becoming more receptive to family planning. However, significant indications of such a trend were only apparent at the village level; the trend did not include younger rural women and their metropolitan and urban counterparts.

Duncan, Otis Dudley  
(1965)

"Farm background and differential fertility." *Demography* 2:240-249.

This secondary analysis of the March, 1962 Current Population Survey of the U.S. included what is probably the first dummy variable regression analysis in fertility research. The study found that rural to urban migrants had fertility levels between rural nonmigrants, who had the highest, and urban nonmigrants.

Suggested Hypotheses: Migration reduces fertility.

Du Toit, Brian M.  
(1975)

"A decision making model for the study of migration." in Brian Du Toit and H. Safa (eds.), *Migration and Urbanization*. The Hague: Mouton.

The aim of this paper is to introduce the factor of migration, and urban migration, on a general scale and then to apply it more specifically to the southern African scene. In developing a social model for migration, a multicausal nexus must supersede the trait listing of factors so common in earlier studies. But such a nexus of causes is, in the last analysis, arrived at after the study of numerous factors and large numbers of individuals. The author stresses the multicausal approach.

Migrants are classified in four groups, those who: commute to the city during the week, stay for five or six months, stay for up to two years, or move to the city permanently. The author ascribes a multicausal, economic factor approach to the migration model. He incorporates five categories of factors into his model: taxes and the need for money ('Man does not live by bread alone'), domestic stresses and strains, social norms and networks, and 'bright lights and the great unknown.' The factors are further broken down to be conducive to research testing and formulation of a migration potential index.

The point of departure for the model is (a) the weighing of a hierarchically ordered set of advantages and disadvantages involved in moving; (b) the decision-making process which is followed by (c) the relatively permanent move which then results in (d) changes in the interactional system of the migrant.

Easterlin, Richard, Robert A. Pollack and Michael L. Wachter  
(1976)

"Toward a more general economic model of fertility determination: endogenous preference and natural fertility."  
Prepared for NBER Conference on Economic and Demographic Change in Less Developed Countries, Philadelphia, September 30-October 2.

This paper creates a model of fertility determination using three concepts of fertility: natural fertility, desired fertility, and optimal fertility and attempts to explain increases in fertility which are often observed prior to demographic transition.

Eicher, Carl, Thomas Zalla, James Kocher and Fred Winch  
(1970)

"Employment generation in African agriculture." Institute of International Agriculture Research Report No. 9. East Lansing, Michigan: Michigan State University.

The purpose of the paper is to examine employment generation in agriculture in Africa, in light of problems of rising unemployment and explosive rates of urbanization. Major points of the paper cover: family planning as a long run strategy, consensus on the common causes of unemployment, the role of risk in migration, inclusion of unemployment and distribution in project selection criteria, the land tenure system, poor and inconsistent governmental policies, role of public sector investments in agriculture, use of indirect measures, need for substantial high-level assistance in agricultural policy research and micro-level development research, and the need to avoid the trap of using inappropriate technologies.

Elizaga, Juan C.  
(1966)

"A study of migration to greater Santiago (Chile)."  
Demography 2(2):352-377.

Elizaga's study is based upon a 1962 survey of 10,836 people in Santiago. It found that migrant married women with husbands present had an average of 0.2 fewer sons than native Santiago women that were married and had husbands present. Most migrants were from other cities, only 12.7% were from rural areas.

Suggested Hypothesis: Migration is selective for persons predisposed toward lower fertility.

Elmendorf, Mary  
(1976)

"The dilemma of peasant women: a view from a village in Yucatan," in Irene Tinker and Bo Bramsen (eds.), Women and World Development. Washington, D.C.: American Association for the Advancement of Science.

The author examines the impact of a new road on the roles of Mayan Yucatan women. These women traditionally have high status as farmers-craftsmen-housewives. They exercise strong decision-making roles. With the construction of a road, many young girls have now changed to a new role: they commute to work as maids etc. in a nearby resort. They earn low wages and have low occupational status. Elmendorf questions the long-range impact of this new road-induced commutation-migration. Fertility consequences are not explicitly examined.

Essang, Sunday M. and Adewale F. Mabawonku  
(1974)

"Determination and impact of rural urban migration: a case study of selected communities in Western Nigeria." African Rural Employment Research Network Paper No. 10. East Lansing, Michigan: Michigan State University.

"This economic analysis of migration is designed to test a number of hypotheses about the causes of out-migration from agriculture and the effects of the out-migration on the rural economy in Western Nigeria. Data were collected from 180 families who were living in urban areas in Western Nigeria and in the capital city of Lagos during 1971-72.

Variables considered are age and education level of the migrant, distance, and rural-urban earnings differential. Several policy implications are discussed."

It was found that an increase in the average age of the rural household is associated with an increase in the rate of rural-urban migration. The consequence of this is to

leave the older population behind in rural areas which results in scarcity of workers and higher production costs. Therefore the problems created by migration cannot be solved by resorting to hired labor.

The significance of the level of education in explaining the rate of rural-urban migration implies that the economy should expect a far higher rate of rural-urban migration in the future as the various governments accelerate the expansion of primary and secondary education. Attempts will have to be made to pursue investment and industrial location policies within the context of the expected explosive increase in the urban labor force.

Statistical results appear to confirm the hypothesis regarding the association of rural-urban migration with the rural-urban income gap. Data shows that this relationship is positive and highly significant. Therefore it would be unrealistic to expect government exhortations to have any effect on reducing the rate of rural-urban migration so long as current development policies and minimum wage legislation maintain the rural-urban real income gap.

Ferraro, Gary P.  
(1974)

"Urban and rural identities in East Africa: a false dichotomy." Southern Anthropology Society Proceedings 8:92-105.

This paper seeks to determine the applicability of a rural-urban identity model to the Kikuyu of East Africa. The data were collected from 174 Kikuyu residents of the Riruta section of Nairobi and 124 Kikuyu from Lusigeti sublocation in rural Kiambu, Kenya. Extensive participant observation, biographical interviewing and formal questionnaires were the three primary data gathering techniques utilized to determine whether separate patterns of social interaction differentiate rural from urban Kikuyu or if one can speak legitimately of an urban, distinct from a rural or traditional, Kikuyu identity.

The data do not even remotely suggest the emergence of a distinctly urban set of sociocultural patterns or the existence of even an incipient separate urban cultural identity. However changes have occurred in traditional Kikuyu institutions. Many of the traditional institutions and the attitudes and values associated with them no longer exist. The center point is that there appears to be no marked difference between urban and rural residents on many measures of modernity.

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Fields, Gary S.  
(1975)

"Rural-urban migration, urban unemployment and under-employment, and job-search activity in LDCs." *Journal of Development Economics* 2:165-187.

This paper analyzes unemployment and underemployment in LDCs within a quantity adjustment framework. Four extensions of the Harris-Todaro model are made, including allowances for more generalized job-search behavior, an urban traditional sector, preferential hiring by educational level, and labor turnover considerations. The result of these modifications is a much lower predicted unemployment rate, which accords more closely with actual observations. Some additional policy implications deriving from the analysis are noted.

These implications derive from the finding of the importance of three variables: efficiency of labor exchange, the size of the educational system, and job hiring as contrasted with number of jobs.

(1979)

"Place to place migration: some new evidence." *Review of Economics and Statistics* 61(1):21-32.

The author hypothesizes that intermetropolitan migration may be more sensitive to labor market turnover than to general unemployment levels. Place-to-place migration is expected to be more from low to high income areas, to areas of high labor market turnover, to areas with higher income maintenance payments (unemployment insurance, welfare payments), and between areas where there are fewer neighboring (competing) metropolitan destinations.

The test uses 1965-70 intermetropolitan migrants as dependent variable and various economic indices for 1965 as the independent variables. The study shows that: 1) Place to place migration is more fully explained ( $R^2=.66$ ) by the labor turnover model than by the unemployment model; 2) The most superior model includes a correction for migration of persons outside the labor force (students and military); 3) Characteristics of the destination have stronger effects than characteristics associated with the origin; 4) Income maintenance payment levels have a varying but less powerful effect on migration; 5) There is less migration between origin and any given destination if there are fewer competing destinations within the same distance between origin and destination; 6) Labor turnover at the origin also increases migration propensities (out of the area).

Findley, Sally  
(1977)

Planning for Internal Migration. Bureau of the Census, Washington, D.C.: Government Printing Office.

This study is an important comprehensive review of empirical studies published before 1975-76. It indicates that migrants have higher levels of education than nonmigrants and that better educated migrants tend to go to big cities. Countries listed include: Colombia, Mexico, Costa Rica, Jamaica, Argentina, Ghana, Nigeria, Thailand, and Taiwan. The positive relationship between education and rural-urban migration has been reconfirmed. A list is also provided of studies indicating that the desire for better education has motivated migration in Brazil, Argentina, Peru, Ghana, Ivory Coast, Philippines, Indonesia, Malaysia, and Thailand. Studies are referenced showing productive gains associated with small farm credit in the following countries: Bolivia, Ecuador, Colombia, Mexico, Paraguay, Peru, Chile, Brazil, Venezuela, El Salvador, Uganda, Ethiopia, Kenya, Tanzania, Taiwan, Bangladesh, Sri Lanka, Philippines, Thailand, and India.

Suggested Hypotheses:

(1) Extension of education to rural areas may slow rural-urban migration in the very short run, but will provide a strong stimulus to rural-urban migration when youth graduate from school.

(2) Small farmer credit will reduce rural-urban migration, based on the assumption that productive gains in agriculture cause a reduction in rural urban migration.

Findley, Sally E. and Ann C. Orr  
(1978)

Patterns of Urban-Rural Fertility Differentials in Developing Countries: A Suggested Framework. Prepared for the Office of Urban Development, Development Support Bureau, U.S. Agency for International Development, Washington, D.C.

"The purpose of this project is to analyze urban and rural fertility patterns in order to identify how 'place' and 'person' factors influence fertility behavior. From this analysis, we may be able to suggest how urban and rural development projects affect fertility through their impact on the person or place variables."

The pattern of urban and rural fertility is analyzed across countries, specific for age, and degree and pattern of urbanization. Theories that attempt to explain the above patterns are examined and a comprehensive framework for analysis of fertility differentials is presented. The framework is applied to four case studies in Egypt, Peru, Tanzania and the Philippines. Additional research is suggested.

Frisancho, A. Roberto, Jane E. Klaymen and Jorge Matos

(1976)

"Symbiotic relationship of high fertility, high childhood mortality and socio-economic status in an urban Peruvian population." Human Biology 48(1):101-111.

The reproductive, biological and socioeconomic characteristics of a sample of 4,952 subjects derived from a Peruvian population of low and medium socioeconomic status were studied.

The study suggests that under conditions of poverty there exists a symbiotic relationship whereby low socioeconomic status is associated with a less efficient mechanism to control family size. This characteristic permits the mother of low socioeconomic status to attain a more complete childbearing period. As childhood mortality is inversely related to socioeconomic status, with an increase in childhood deaths there is an increase in live births in a compensatory fashion. High fertility is the net result of these interactions.

Garst, Ronald D.

(1978)

"Rural African perception of the city." Southeastern Geographer 18(1):1-18.

Most research on rural to urban migration in tropical Africa has focused upon the economic motivations of the migrants. In contrast this study examines nonmigration. It attempts to shed light upon why the Gusii of western Kenya remain in their home territory in spite of its high population pressure. In nine of Kenya's thirty-nine districts less than sixty percent of the population has emigrated. Thus Kisii may be considered representative of several low emigration districts.

To sample opinion about low migration, fifty spatially stratified sites were selected to provide uniform coverage throughout Kusii district. Questionnaires were administered to 606 heads-of-household. Rural heads-of-household were asked why they would migrate, not migrate or return to the rural area after living in a city and about conditions in rural Kusii District. Respondents were also asked their preference for selected rural and urban areas in Kenya for clues about future migration potential.

The most important reason given for emigrating to a large city was the acquisition of a job; higher pay and more interesting work were only slightly less important. At a somewhat lower level of importance were environmental factors such as better housing, more exciting life, better health facilities, better schools, etc. Opportunity to meet people of different ethnic groups would have little influence upon the decision to migrate.

The cost and complexity of urban living were the strongest reasons for not migrating to the city. Different people and languages were important disincentives for about fifty percent of the respondents. Least important among the reasons for staying away was overcrowded unsanitary housing.

When asked why one would return to Kisii District after living in the city, most respondents indicated a strong preference to return to their homelands and the agricultural way of life.

Several conclusions can be drawn from these data. These are (1) the overwhelming reason for moving to a city is economic opportunity; (2) most people prefer their homeland to the urban areas of Kenya, which are perceived as costly, complex and noisy; (3) urban housing is not perceived as unsanitary, overcrowded, or of poor quality and is therefore of minimal importance when making a migration decision; and (4) the prime targets of Kisii rural to urban migration will likely be to Nairobi, Kisii town and Nakuru, whereas the least likely destination will be Nyeri, Naivasha and Kismua.

Gendell, Murray, Maria Nydia Naraviglia and Phillip C. Kreither  
(1970). "Fertility and economic activity of women in Guatemala City." Demography 7(3):273-286.

Data from a five percent census sample reveal that in Guatemala City in 1964 economically active women, especially domestic servants, had lower cumulative fertility than inactive women, partly because larger proportions of them had never married and were childless. However, even among married mothers there was a substantial differential which was not due to differences in age at first birth. With respect to all women, cross tabulation and regression analysis show that age, marital status and educational attainment were more strongly associated with fertility than was activity status, but the latter also had a significant net association. Selection for sterility was not likely. Being contrary to expectations expressed in the literature, the very low fertility of the domestics received further attention. Live-in domestics had considerably lower fertility than those who lived out, which was also the case in the United States in 1960. These data and other evidence strongly suggest that this differential is due to a widespread employer preference for single or childless women. The concept of role incompatibility is therefore inapplicable to domestic servants. These findings add to the considerable evidence showing lower fertility among economically active women in large urban places in Latin America. A.A.

Ghali, Fouad and Fawza Gadalla

(1973)

"Fertility characteristics and family planning knowledge, attitudes and practices in Baghdad, Iraq." Studies in Family Planning, Population Council 4.

The impact of family planning in Iraq has only recently begun to be measured and evaluated. There is no official government policy and efforts directed toward educating and motivating the people to accept family planning have been few. This study was conducted by the authors under the auspices of the Iraq Family Planning Association and World Health Organization to define baseline fertility and family planning attitudes, knowledge and practice in Baghdad City, before establishment of a family planning project.

A random sample was taken of all mothers attending 14 maternal and child health centers and seven maternity hospitals and maternity sections of general hospitals in Baghdad City.

Thirteen percent of the women sampled were currently using birth control and more than half of these women were using a reliable method, the pill. However, only half of the sample approved of family planning.

Given these survey results and the finding that maternal and child health considerations predominated as reasons for approving and practicing birth control, it would seem preferable for the Baghdad Family Planning Project to concentrate its family planning education efforts in the maternal and child health centers and hospitals and to use medical personnel as channels of information concerning family planning methods.

Gillespie, Francis Patrick

(1977)

"Constancy amid change: a demographic-ecological study of Paraguay 1950-1977." Ph.D. Dissertation, University of Texas, Austin.

This study of Paraguay uses existing and field data from 1950 to 1977. The major cause of migration is job seeking. The effects on fertility are discussed only in terms of relocating persons of childbearing age. This increases fertility in areas of destination and reduces it in areas of origin.

Suggested Hypotheses: Migration has no effect on the over-all fertility but increases fertility in area of destination and reduces it in area of origin.

Goldberg, David  
(1976)

"Residential location and fertility." in R. Ridker (ed.),  
Population and Development. Baltimore: Johns Hopkins  
University Press.

The topic of the paper is population clustering and behavior, how it directly or indirectly affects fertility. The method is manipulation of data sets rather than a review of the literature. The particular component of population clustering that is examined in the paper is residential location within cities. The objective is to determine whether there are areal variations in fertility or fertility-related behavior. Six fertility-related variables are emphasized:

1. Husband's power index
2. Sex-segregation attitudes index
3. Containment: forbids index
4. Containment: restaurant, movies, parties index
5. Containment: nondome-centered leisure index
6. Size-of-world index

The net areal effect on these variables is attributed in this study to:

1. A selective migration process within cities. People who live in gecekondu or who live in areas having low potential to high education, high income and the like, are different from those persons with comparable background characteristics who leave these areas to migrate to other parts of the city. Those who leave have more modern family structures, more modern attitudes and values, and lower fertility. It is not place of residence that affects these items but the reverse process that takes place.

2. The aggregation of population into homogeneous clusters, which results in a reinforcement process that magnifies or extends the behaviors and attitudes associated with the background characteristics. Imitation may be the key social process involved. What is clear is that a structural effect takes place which results in differences in behavior that cannot be attributed to background.

Goldstein, Sidney  
(1971)

"Interrelations between migration and fertility in population redistribution in Thailand." Institute of Population Studies, Chulalongkorn University Research Report #5.

This study is based primarily on census data. Goldstein finds that migrants had fertility that was lower than persons of areas of origin and destination. He concluded that migration is selective for lower fertility persons.

Suggested Hypotheses: Migration has no direct effect on fertility.

(1973) "Interrelations between migration and fertility in Thailand." Demography 10(2):225-241.

"Based on special tabulations of 1960 census data on migration within Thailand, this analysis attempts to assess the role of migration in the urbanization process and the relation between migration and fertility." The importance of migration to urban growth is evidenced by the clearcut positive relationship between the percentage of persons classified as either lifetime or 5-year migrants and the urban character of their 1960 place of residence. Yet the evidence also points to an increasing proportion of urban growth in recent decades attributable to natural increase. The specific relations between fertility and migration varies depending on the measure of migration used. Compared to nonmigrants in their place of destination, the fertility levels of lifetime migrants are not very different; but those of 5-year migrants are considerably lower. Regardless of migration status, however, fertility level is markedly lower for those living in urban places compared to those in rural places. This suggests the important role of both migration and urbanization in affecting fertility levels in Thailand.

Green, Sarah C.  
(1978)

"Migrant adjustment in Seoul, Korea: employment and housing." International Migration Review 12(1).

Data from a 1,000-household sample survey in Seoul, Korea are used to test hypotheses concerning occupational mobility and improvements to level of living among migrants classified by duration of residence and occupation.

The data show that by virtue of their education, white collar background and prior urban residence recent migrants fare as well as Seoul natives. The migrants from rural areas and with low educational attainment are not able to attain occupations similar to those of the urban natives. Rural-Seoul migrants are, however, a minority among migrants to Seoul.

Greenwood, Michael J.  
(1971)

"An analysis of the determinants of internal labor mobility in India." Annals of Regional Science 5:137-161.

"The primary objective of this study is to estimate the magnitudes by which various factors have influenced internal labor mobility in a less developed economy, in this case, India." A model is developed of migration between 16 regions. Factors evaluated include distance, average annual income of workers, male population of state in urban areas, and male literacy.

Conclusions are that distance is a major deterrent to migration. Migration also tends to be away from low-income states and toward high-income states; "away from and to populous states;" away from places that are urbanizing slowly; and toward places which display relatively high levels of educational achievement. Mobility was found to increase with increased education.

Griffin, Keith  
(1973)

"Policy options for rural development." Oxford Bulletin of Economics and Statistics 34(4):239-274.

This study is a good, relatively concise review of the literature that examines the advantages and disadvantages of different rural development policies. Griffin does not specifically address migration but appears to imply that the rural poor might possibly be forced to migrate because they lack access to sufficient farm land, credit, or adequate marketing systems.

Suggested Hypotheses: Rural participation in land ownership, provision of credit and improved markets (terms of trade between rural and urban areas) will reduce rural-urban migration.

Grunig, James E.  
(1969)

"The minifundio problem in Colombia: development alternatives." Land Tenure Center Reprint No. 63, Inter-American Economic Affairs 23.

This study determines factors which make a small farm successful in Colombia and suggests which or what combinations of development alternatives have been or could be most useful in bringing about that success. The alternatives considered include: 1) commercialization of large farms to provide opportunities for peasants; 2) land reform to take land from latifundistas and distribute it to peasants to create medium-sized family farms; 3) intensification of existing small units through changes in crops and technology, provision of credit, promotion of marketing cooperatives, and construction of roads, schools and other infrastructure; 4) colonization; and 5) migration from rural to urban areas. The first and fifth alternatives are rejected out-of-hand.

The following factors are found to lead to small-farm success: 1) a minimum amount of 3-4 hectares of good quality land or larger quantities of poorer land; 2) an intensive crop such as coffee, grapes, tomatoes, laying hens, etc.; 3) a stable and remunerative market; 4) situationally

relevant technical information along with available modern inputs; 5) roads and modern transportation facilities; 6) adequate and flexible credit; 7) schools which will provide education and literacy training for the next generation of campesinos.

Gugler, Josef  
(1969)

"On the theory of rural-urban migration: the case of Sub-Saharan Africa." in J. A. Jackson (ed.), Migration. Cambridge, England: Cambridge University Press.

Rural-urban migration in Sub-Saharan Africa provides an interesting case for the study of migration both because the phenomenon became rapidly widespread throughout the subcontinent and because of the tenacity of urban-rural ties. Two issues given consideration are (1) the relationship between economic and noneconomic factors and (2) the distinction between collective and personal forces.

The incidence of rural-urban migration and out of urban-rural ties is determined by the differential impact of collective forces on different individuals. Where a pattern of rural-urban migration is established in a given society it often receives normative support and the frequency of deviance is thus reduced. In the case of rural-urban migration data are available to show that such norms disappear rapidly and economic conditions have changed.

Handwerker, W. Penn  
(1977)

"Family, fertility, and economics." Current Anthropology 18(2): 259-287.

The thrust of the article is twofold. First, the author shows why conventional theory developed with data from Western societies cannot adequately explain the patterns of African urban family structure and reproduction. Second, he suggests an alternative hypothesis to explain the African patterns, namely, that they constitute a sort of adaptation to economic constraints and options established by modern technoeconomic developments. The author's data from the Bassa of Monrovia, Liberia, tend to support his hypothesis, and he thinks that it may hold for other African groups.

Haney, Emil B. and Wava G. Haney  
(1978)

"Social and ecological contradictions of community development and rural modernization in a Colombian peasant community." Human Organization 37(3).

The authors examine the interactions between community levels of service, participation in community decision making,

production modes, and ecological change. Research uses participant-observation studies of a "well-endowed" service center in a highland peasant community in Colombia in 1965-67, 1970, 1974, and 1976. The study also utilized a census of village families, a sample survey, and other examinations of records, soils, etc.

The community is well served with schools, a hospital, a local community development corporation, banks, stores, market, stone road, and a daily bus to Bogota. In the last few years, families have turned to vegetable farming as a cash crop. This has resulted in a change in cultivation methods which has increased the intensive use of the soil and has led to soil depletion. The adoption of the vegetable cropping has not led to a change in the dualistic pattern of cultivation of smallholdings and tenancies.

Despite the presence of the schools, nearly 2/3 of the rural families with children of secondary school or older had not been able to send their children beyond 2-4 years of schooling. Costs of schooling are the major factor limiting access. Although the schools do have scholarships, the poorer rural peasants' children have not received the scholarships, which have instead gone to the commercial peasantry, rentier capitalists and petty merchant families.

Recent modification of the development approach with adoption of an integrated rural development strategy may change the participation of the peasants and, therefore, the decisions concerning the development beneficiaries. This is possible because the new development officials are not highly paternalistic and are emphasizing autonomous local decision making.

Migration is treated only peripherally, in the context of a drain on community resources in that the students of the secondary schools leave the area.

Hansen, Niles M.  
(1970)

Rural Poverty and the Urban Crisis: A strategy for Regional Development. Bloomington, Indiana: Indiana University Press.

The author "describes and evaluates government efforts to lessen rural poverty in the South, Appalachia, and a few other regions, as well as on Indian reservations and among Mexican-Americans." He scrutinizes the Appalachian Regional Commission and the five regional commissions modeled on it, as well as the relevant activities of the Economic Development Administration. Hansen advocates that government agencies put more emphasis on training the rural poor for urban work and living, encouraging their migration to the nearest medium-sized cities (250,000-750,000 population), and fostering the economic growth of these cities.

Hanson opposes attempts to bring industry willy-nilly to rural areas, and proliferation of projects (public works, for example) which, he believes, are not economically viable and can result only in waste and disappointment. He is unsentimental about attachment to soil, and pessimistic about prospects of industry in lagging rural areas . . . He suggests the development of public policies (not slum clearance, urban renewal, etc.) for preventing the further growth (of large cities) and for restructuring them. B.R.D.

ul-Haq, Anwar and Saif ur-Reliman  
(1975)

"Socioeconomic and psychological factors in rural-urban migration: a case study in migrant selectivity." Pakistan Economic and Social Review 13(1):12-27.

The authors examine the selectivity of migration to Lyallpur city in Pakistan. Six hypotheses are tested:  
1) Migration with a strong economic push is not selective with respect to socioeconomic status of the migrants; 2) Migration with a strong social push is not selective; 3) Migration with a strong psychological push is not selective; 4) Migration with a strong economic pull is not selective with regard to socioeconomic status of migrants; 5) Migration with a strong social pull is not selective; 6) Migration with a strong psychological pull is not selective.

The survey of 150 male migrants to Lyallpur shows that there is no selectivity with regard to economic push. Both high and low status migrants left due to unemployment, however low status migrants were more likely to cite unemployment as the cause while higher status migrants were more likely to cite the lack of good working conditions. There is also no selectivity with respect to the psychological push of alienation or inferiority. Migrants are selective with respect to the social push of separation from family, absence of health and educational facilities. High status migrants respond more to the lack of health and educational facilities while low status respond to the sense of social separation. Migrants are not selective with respect to the economic or social pull factors, although high status migrants are more likely to be attracted to the presence of kin. With respect to psychological factors, however, selectivity is present. High status migrants were more likely to be attracted to the possibilities for social integration in Lyallpur. The authors also compare results for migrants from different regions, and show that where traditional customs and the sense of communal ties are weak (i.e., the psychological bonds to the place of origin are weak) the area is more likely to have outmigrants.

Harkess, Shirley J.  
(1973)

"The pursuit of an ideal: migration, social class, and women's roles in Bogota, Colombia." in Ann Pescatello (ed.), Female and Male in Latin America. Pittsburgh: University of Pittsburgh Press.

Demographer-ecologist-sociologist Shirley Harkess analyzes and compares the expectations and values of migratory females in Bogota barrios (neighborhoods). Harkess studied two barrios, one a working-class neighborhood, the other a poor and destitute one, to test the hypothesis that women who moved to the capital from traditional, provincial areas adapted to urban life by changing some of their ideals and their actions to match more modern conceptions of behavior appropriate to the capital city. Her conclusions as to how residence in the capital city affected the roles of these Colombian women challenges previous theories and offers a model for comparison and contrast with other Latin American cultures.

On the measure of all role-relationship variables the very poor recent arrivals have the lowest proportion of modern responses. In comparison, the modernism of the long resident-lower middle class is more equivocal; in only family authority are they disproportionately modern.

The article also clarifies the likeness of the long resident-lower middle class and the very poor recent arrivals since the two do not register as extreme opposites. Harkess contends that whether the issue is politics, education, work or family, however, the two groups are more similar than dissimilar. In four of six key role-relationship areas the intermediate group is modern. Not only do the independent variables not vary together as hypothesized, but neither is independently more important than the other. That is, there is no distinguishable pattern according to social class within urban-residence categories or vice versa.

Harris, G. T.  
(1978)

"Responses to population pressure in the Papua New Guinea Highlands. Oceania 48(4):284-298.

Survey of rural communities in Papua New Guinea shows that low land-to-population ratio is not associated with high outmigration rates. Migrants leave where there are limited opportunities for cash cropping. Most migrants leave only temporarily.

The study also documents the migration consequences for rural areas. Because the young men have gone, women can't prepare new vegetable gardens, which has led to deterioration of the soil and reduced outputs. In the last 20 years there has been a 40% drop in calorie consumption. Harris suggests that the male exodus is associated with a recent drop in the birth rate.

Hay, Michael  
(1974)

"An economic analysis of rural-urban migration in Tunisia,"  
Unpublished Ph.D. dissertation, University of Minnesota,  
Minneapolis, Minnesota.

Survey of migrants in Tunisian cities and of their families at the origin is used to examine rural-urban migration patterns in the Testour region. Hypotheses are that migration is more likely for those with education, job skills, contacts in urban areas, the young, and those from higher income families. The study shows that migrants are selective for education, and that the younger migrants are better educated than older migrants. Those who have nonagricultural work experience, especially in skilled labor, are also more likely to move. Land owners with much land are not likely to move, but those who come from families with little or no land are likely to move to combine farm with off-farm work. The nonschooled rural residents are less likely to move if rural incomes go up, but schooled migrants are insensitive to rural income changes. Similarly, the uneducated landless are two times more likely to move than the uneducated with more than ten hectares of land. Hay concludes that the effect of rural income on migration is curvilinear, and varies by age and educational level. The survey results also show that potential migrants undertake a job search prior to moving. Actual migration is more likely for those who have urban contacts and the probabilities increase dramatically for those who have some job possibilities lined up before moving. Two thirds of the migrants went directly to Tunis, the remainder left the country or went to other cities. There is very little rural-rural migration.

Heer, David and Elsa S. Turner

(1965)

"Areal differences in Latin American fertility." Population Studies 18(3):279-292.

The rate of population growth in Latin America is currently one of the highest in the world. Whereas the world as a whole is increasing in population at the approximate rate of 1.7 percent annually, the rate of growth in Latin America is currently somewhere near 3 percent per year. For all Latin American countries excluding Brazil, Argentina, and Venezuela, the high rates of population growth observed during the last decade result almost entirely from the excess of births over deaths. For this reason, study of Latin American fertility is of utmost importance.

The nations included in the study were those 18 of the 20 independent Latin American nations for which census data were available. In general, the time period to which the

study refers is the year 1950. Multiple and partial correlation methods were applied to the relevant areal data. The study was based on the child/woman ratio.

Looking separately at the results for each independent variable the single variable showing the highest relation to the child/woman ratio is the proportion of females in the labour force. The relationship was negative. The local proportion urban has the second highest partial association with fertility among nations combined and again the relationship was negative. The third highest partial association involves the national proportion literate. This variable was inversely correlated with fertility. The national proportion in agriculture had the fourth highest partial association. This variable was surprisingly negatively associated with fertility. The local proportion in agriculture has the fifth highest partial association. For all 18 nations taken together this shows a positive association with fertility. Sixth in order of association is the national proportion urban. This variable was inversely related to fertility. Seventh is the local proportion literate. For all 18 nations combined this variable is positively associated with fertility.

Many of the results presented are congruent with past theory and research. However some of the data are quite surprising. When all arguments are reviewed there are good reasons for doubting the proposition that fertility should be related to indices of economic development. Moreover the review of the arguments suggests that additional variables have to be taken into account.

Hendershot, G. E.  
(1971)

"Cityward migration and urban fertility in the Philippines." Philippine Sociological Review 19(3-4):July-Oct.

This study is an analysis of survey data. It concludes that migration was so selective that those who came to Manila from other places had, on the average, lower fertility than those born in the metropolitan area. This study is followed by a more complete analysis in 1976.

Suggested Hypothesis: Migration is selective for persons inclined toward lower fertility.

(1976)

"Social class, migration, and fertility in the Philippines." The Dynamics of Migration: Internal Migration and Migration and Fertility. ICP Monographs 5(1). Washington, D.C.: Smithsonian Institution.

This study is a thorough examination of social class, migration and fertility. The primary theoretical view

is that selection, adaptation and fertility must be examined separately. However, selection is defined as being sensitive to the urban negative effect on fertility. This reviewer suggests that selectivity is probably for persons with an inclination toward lower fertility. The general conclusion is that as migration became more common, and presumably easier, migration became less selective, adaptation became slower, and fertility differentiation lessened.

Suggested Hypothesis: Only a certain portion of rural persons are sufficiently sensitive to the effects of the urban environment to reduce fertility. Therefore, there is a limited amount of reduced fertility that could be expected by rural to urban migration. Specifically, only the most selective migration will reduce fertility.

Herold, Joan  
(1979)

"Female migration in Chile: types of moves and socio-economic differentials." Presented at Meetings of the Population Association of America, April, 1978.<sup>1</sup>

The author examines interprovincial female migration in Chile for the 1965-70 period, using the 1970 Census results. The purpose of the study is to determine if differences and similarities in age, educational level, occupation and type of move influence female migration rates to Santiago versus other urban areas.

The findings demonstrate that nonreturn migrants to other urban areas are unlike those to Santiago. Nonreturn migrants to other cities are older, more highly educated, work in higher status occupations, and are more likely to be repeat or chronic movers. Recent migrants to other cities in Chile are also more likely to be upper than lower class women. Thus, there is evidence among these other urban migrants of an incipient female professional migration between cities.

Migrants going directly to Santiago are less educated than other urban migrants and they are less educated than non-migrants in Santiago. Santiago is clearly the preferred first destination for young movers seeking positions in unskilled occupations.

<sup>1</sup>Also in Demography 16(2).

Hiday, Virginia A.  
(1978)

"Migration, urbanization, and fertility in the Philippines."  
Presented at Meetings of the Population Association of  
America, Atlanta, Georgia.

The purpose of the study is to examine the fertility differences among rural nonmigrants, rural-rural migrants, and rural-urban migrants. Analysis is based on a 1970 household survey conducted by the Institute of Behavioral Science, University of Colorado in Mindanao, Davao Province and nearby areas of the Philippines.

The author expects rural-urban migrants to have the lowest fertility of the three comparison groups, because migrants are more innovative and their aspirations lead to lower fertility in urban areas. Education is used as a measure of aspirations to new goals.

The study shows that fertility is lowest for the rural-urban migrants and highest for the rural nonmigrants. The rural-urban migrants are the best educated of all the groups. After controlling for age, the expected fertility differentials emerge. (Age controls are important because many of the rural-urban migrants move to cities before age 20 in order to marry or accompany a spouse.) The migrant differentials in fertility result from differences in the later childbearing years. Rural-urban migrants concentrate their childbearing in the peak years of 20-29, while rural nonmigrants bear throughout the reproductive period and rural-rural migrants are in between. It is interesting that the rural-urban migrants who moved prior to age 20 commence childbearing sooner than their rural counterparts. The author suggests that this may be due to the inability of the young uneducated migrants to find jobs in town. They therefore have little incentive to delay childbearing.

Hinshaw, Robert, Patrick Pyeatt and Jean-Pierre Habicht  
(1972)

"Environmental effects of child-spacing and population increase in highland Guatemala." *Current Anthropology* 13(2):216-230.

The purpose of the study is to analyze population trends in terms of birth rates and spacing of children in three Guatemalan Indian communities. Comprehensive data spanning 35 years were obtained for the three communities. The declining birth rate in all three communities is explained largely in terms of a declining mortality rate and the physiological constraints of nursing-induced postpartum amenorrhea. Secular and community variations in spacing of children are analyzed in terms of differing levels of concern with reproduction. Rapid replacement of children who die within 12 months coupled with lengthy spacing of surviving children is seen as reflecting a high degree of concern with reproduction. Lack of control over spacing is seen as indicating less such concern. The precise

mechanisms for realizing control over spacing are undetermined. The authors propose, on the basis of scanty data, that lengthened spacing is the result of a reduction in coital frequency. Differences among the three communities in concern with reproduction appear to stem more from altered perceptions of man's control over his destiny than from insufficient resources and mobility to provide adequately for human needs. G.A.

Hollinsteiner, Mary R. and Maria Elena Lopez

(1974)

"People on the move: urban migrant adaption to Manila residence." Prepared for the Experts' Meeting on Philippine Population Research, Population Center Building, Makait (October 10-12).

This paper presents data gathered early in 1974 in Barrio Maligamgam, Sampaloc, Manila, a low income community of squatters, 80 percent of them migrants. Most of the migrants came from Luzon, particularly from central Luzon. The author looks into what happened to these probinsyanos who settled in Manila, so we may begin to understand some of the dynamics of movement to the city in terms of people rather than abstract trends. Although migrants could cope with the difficulties of living in an urban environment, the adjustments for the majority meant a bare existence rather than a satisfying life. The costs of adjustment were malnutrition and poor health, insufficient education for the children, insecurity of residence for squatters, sporadic employment, indebtedness to usurious moneylenders, and a general lack of basic amenities. Yet the residents preferred city life. This was dramatically demonstrated when the squatters were evicted in May 1974. Within a week, male household heads were back in Maligamgam to resume their livelihood, their families remaining in the Sapang Palay resettlement area. By September, about a third of the families had also returned to Manila; the remainder looked for buyers of their land rights in Sapang Palay or bargained with them in preparation for starting afresh in the city.

Holmstrom, Engin Inel

(1973)

"Changing sex roles in a developing country," Journal of Marriage and the Family 35(3):546-553.

Although the woman's place in Turkey has traditionally been confined to the family, the range of permissible behavior varies greatly depending on class status. This variance is accentuated by urban-rural differences. In a study of the behavior and self-images of two groups of rural-migrant wives, using an elite group of urban wives for a further point of comparison, the migrant wives emerged as more

autonomous than their village peers. However, this nascent female autonomy was achieved at some psychic expense for the group of migrant wives most exposed to urban life styles. A.A.

Ingersoll, Jasper, Nancy Walstron Jabbra and Barbara Lenkerd  
(1976) "Resettlement and settlement: an annotated bibliography."  
SEADAG Papers on problems of development in Southeast Asia.

A selected, annotated bibliography focusing on the impacts and implications of various programs of settlement and resettlement. The bibliography is broadly divided into: forced resettlement from reservoirs, other resettlement, and settlement and colonization. P.I.

International Labour Office  
(1960) Why Labour Leaves the Land: A Comparative Study of the  
Movement of Labour Out of Agriculture. Geneva: ILO.

This somewhat dated study provides a general historical summary of rural to urban migration in the U. S., Canada, Denmark, France, Germany, Italy, Netherlands, Norway, Sweden, U. K., India, Pakistan, Japan, Brazil, Venezuela, Iraq, Turkey, and Yugoslavia. The study attempts to identify ways of "taking people off the land" so that agricultural modernization can take place. The basic assumption is that agricultural development, whether in more developed or less developed countries, will free labor from the land and contribute to rural-urban migration.

Suggested Hypothesis: Projects which develop agriculture will stimulate rural-urban migration in the long run.

Iutaka, S., E. W. Bock and W. G. Varnes  
(1971) "Factors affecting fertility of natives and migrants in  
urban Brazil." Population Studies 25:55-62.

The participation of migrants in urbanization is important for understanding the changes in the population composition of Brazilian society, since migrants bring their fertility patterns with them into the urban environment. Migrants tend to absorb the fertility patterns of urbanites who are relatively less fertile. Such changes will modify the picture of family composition of Brazil, since urbanization depresses fertility. Changes in the fertility patterns of migrants are related to city of destination, social background and amount of time spent in the urban center. Cities vary in the ideal fertility patterns they present to migrants. Although the communities where migrants were born do not have any appreciable influence

on the number of children they have, the age at migration, their social class background and subsequent achievement do affect their fertility significantly. The significance of father-in-law's social position, compared with that of father's, indicated that wives are more likely to retain their parental values than are their husbands. A.A.

Jones, Richard C.  
(1978)

"Myth maps and migration in Venezuela." *Economic Geography* 54(1).

Interviews in five out-migration zones of Venezuela reveal that young potential migrants perceive economic opportunities and quality of life greater than they actually are in the Andes and east coast, and less than they are in the Llanos. The myth maps constructed on the basis of such misperceptions may be attributed to images portrayed in major Venezuelan newspapers. It is shown statistically that relative to objective urban characteristics, perceptions of those characteristics provide significant additional explanation of urban in-migration rates. A.A.

Kane, Francine  
(1978)

"Femmes proletaires du Senegal: à la ville et aux champs." *Cahiers d'Etudes Africaines* 18(1):77-94.

This is a study of women working on plantations in rural Senegal. The plantation was developed after pumps and irrigation systems were installed to alleviate the shortages and irregularities of water supply that restricted agricultural output in the Niayes region. It had been hoped that the irrigation and ensuing commercialization of agriculture would slow the outmigration from the region. Actual consequences are that children now leave school early to find jobs on the plantation and men still leave because their employment on the plantation is limited and insecure. Women who work have the lowest paying jobs, which require stooping. Poor women continue working after marriage and their income may be the sole income for the family. The women like the spending money and autonomy of the work, but overall there seems to have been a deterioration of their status. Most still want a large family because children can help with the small home plots. In addition, the women dream that their children will be able to become bureaucrats who live well and can support the mother.

The plantation workers are compared to women working in a canning factory in Dakar. It is shown that the city workers have more autonomy and fewer family claims on their income.

They too want large families, because children are viewed as the only certainty in their lives. Marriage is rejected because the men are often unemployed and marriage would only serve to further entrap the women.

Kar, Shehendu B.  
(1978)

"Consistency between fertility attitudes and behavior: a conceptual model." *Population Studies* 32(1):173-185.

The purpose of this study is to analyze the attitudinal factors affecting use of family planning methods. Data are derived from a survey of 2,400 urban Venezuelan women.

The model tested is a modification of the Fishbein attitudinal change model. It incorporates the following variables: age and socioeconomic status, personal aspirations for self and family, family size norms; social support for family planning methods. Marital status is introduced as a control for exposure to the risk of pregnancy, hence the need to consider using birth control methods at all.

Results show that those who have ever used family planning methods are less religious, have a higher socioeconomic status, and smaller family size norms. They also have higher aspirations for themselves and their children, discuss family size and family planning with their spouses and peers, and know more about family planning. Despite these differences in characteristics there is no difference between ever- and never-users with respect to number of pregnancies, number of living children, ideal family size or employment status. The author notes that 33% of the users use contraception only for spacing and not all (only 33%) of those who want no more births used a family planning method in the last coitus.

Controlling for socioeconomic status, it is shown that attitudinal and cognitive variables have a greater influence on usage than the background variables. When both social support and attitudes favor use, 47% use and if there is only good access, only 30% use. Path analysis shows that the strongest effect of social support is direct to use, not via Fishbein's attitudinal component.

Kasarda, John D.  
(1971)

"Economic strategy and fertility: a comparative analysis." *Demography* 8(3).

This study empirically investigates the relationship between the economic structure of populations and their level of fertility, using data from censuses recently conducted in some 50 nations. Findings show that high rates of female

labor force participation outside the home and low rates of economic activity of children depress a society's fertility level as measured by the crude birth rate or the child/woman ratio. It is also hypothesized, but not confirmed, that the percent of unpaid family workers in a society is positively related to its fertility level. A model is presented that treats these three components of economic structure as intervening variables through which the exogenous variables, urbanization, industrialization, and education operate in influencing the fertility level of a society. A.A.

Kau, James B. and C. F. Sirmans  
(1977)

"The influence of information cost and uncertainty on migration: a comparison of migrant types." *Journal of Regional Science* 17(1):89-96.

"In this paper, the migration for the period 1965-1970 from each of the nine census divisions in the United States to each of the states is divided into three types of migrants: 1) migrants returning to their state of birth (return migrants); 2) migrants moving out of the place of birth for the first time (new migrants); and 3) high-propensity-to-migrate types who are making at least their second move (repeat migrants). . . An estimation of the influence which various explanatory variables have on the migration decision-making process will be tested through the disaggregation of migrant types." P.I.

Kennedy, Robert E., Jr., Paul-Bello Marsiela and Marianella Rejas-de Lara  
(1974)

"Linkages between female educational status and fertility in Venezuela." Presented at Meetings of the Population Association of America, New York (April).

The purpose of this paper is to examine the effect improving the status of women has on their traditional roles in society. An individual's level of formal education beyond basic literacy is one of the best indicators of general social status. It is also one of the most powerful determinants of fertility in the United States. Yet in spite of the strong influence of female education on fertility, the exact linkages between the two are still obscure. In an attempt to clarify these linkages, this paper tested certain hypotheses by specifying the conditions under which female education is associated with lower fertility in Venezuela, a nation with rapidly rising levels of female education.

The data source used in this paper is a special two percent sample of the noninstitutionalized population enumerated in the 1971 Venezuelan census.

Findings indicate that educational opportunities for females have improved markedly in the last few decades in Venezuela, hence younger mothers generally are much better educated than those beyond childbearing. Because of the direct connections between age, education, and fertility, the association between education and fertility was greater for the mothers in the later childbearing years than for either younger or older mothers.

Keyser, James M. B.

(1975)

"Differences in urban adaptations: a Turkish case,"  
Urban Anthropology 4(2).

A comparative study of patterns of urban migration from five villages in Turkey showed that two had contrasting patterns of social organization (representing extremes of social cohesion and dispersion) while the other three could be considered variations of these two. The differential success in finding urban employment which migrants from different villages revealed is explained by the nature of the groups villagers form in cities. Differences in social organization of urban migrant groups makes entry into some kinds of work possible and, conversely, excludes other kinds. This finding calls attention to the facts that (1) the undifferentiated origins of urban migrants can no longer be taken for granted, (2) formal training in a trade or skill may be a relatively insignificant variable in accounting for the quality of work migrants do, and (3) "push-pull" factors may also recede in importance before these sociological requirements. Finally, a tentative hypothesis is offered which seeks to tie the differences in structure of urban migrant groups to microecological differences of villages of origin and, consequently, to distinctive village modes of production. A.A.

King, Jonathon

(1978)

"Interstate migration in Mexico," Economic Development and Cultural Change 27(1):83-101.

"This study attempts to determine some of the forces that affect interstate migration in Mexico, using the 1970 Census of Population . . . as the basic data source." In addition to the influence of more traditional variables, the influence of the land-tenure pattern on migration is examined. A regression model, based on individual "optimal-behavior" theory, is estimated for men, for women, and for men and women combined. P.I.

Knight, J. B.  
(1972)

"Rural-urban income comparisons and migration in Ghana,"  
Bulletin of the Oxford University Institute of Economics  
and Statistics 34(2):199-228.

This paper tests, in one African country, Ghana, the following hypotheses: that there exist wide, and widening, disparities in incomes between rural and urban areas in Africa; that rural-urban migration has occurred, and is occurring, on a considerable scale in many African countries; and that this migration may be explained either in terms of a rural-urban income disparity or as the result of the rapid expansion of education and the effect of education on young peoples' attitudes or prospects.

The following conclusions result from the author's review of the economic, demographic and sociological evidence on rural-urban migration in Ghana: 1) Inter-regional migration is responsive to inter-regional income differentials; 2) The high degree of hospitality offered migrants suggests the potential for 'chain migration'; 3) The incidence of migration is higher for richer rural households. This could be the effect either of economic or educational factors; 4) The incidence of migration increases with level of education. The evidence, although inconclusive, suggests that education has this effect not so much by alienating its recipients from the land as by increasing the economic benefit from migration.

Kuroda, Toshio  
(1977)

"The role of migration and population distribution in Japan's demographic transition." Paper No. 46 of the East-West Population Institute.

This study is a secondary analysis of existing data for Japan's prefectures from 1920 to 1975. Based on aggregate analysis the conclusion is that migration has not affected fertility behavior in the late stages of the demographic transition.

Suggested Hypothesis: Rural to urban migration has no effect on a society's fertility.

Lee, Everett S.  
(1966)

"A theory of migration," Demography 3(1):47-57.

This theoretical model of migration is well known.

Suggested Hypotheses:

(1) Rural development projects which make rural areas more attractive (off-farm employment, credit, markets, area development) will reduce rural-urban migration.

(2) Projects which reduce obstacles to rural-urban migration (literacy training, education, roads, information on urban opportunities, modernization of rural areas) will increase rural-urban migration.

(3) Projects which tend to "urbanize" personal characteristics of rural people (education, nonfarm skill training, increased awareness of consumer goods and opportunities) will stimulate rural to urban migration.

(4) As societies become more developed, rural-urban migration increases.

(5) With increased rural-urban integration, rural to urban migration will become less selective.

(1969) "A theory of migration." in J. A. Jackson (ed.), Migration. Cambridge, England: Cambridge University Press.

A simple scheme for migration has been elaborated and from it certain hypotheses have been formulated in regard to volume of migration, the establishment of stream and counterstream, and the characteristics of migrants. The aim has been the construction of a related set of hypotheses within a general framework, and work is proceeding toward further development in regard to the assimilation of migrants and in regard to the effect upon gaining and losing areas.

Where possible, the hypotheses have been put in such form that they are immediately testable with current data. For others the necessary data are not available and others require restatement in terms of available data. From what is now known about migration encouraging agreement is found with the theory outlined in this paper.

The hypotheses proposed by Lee are: 1) the volume of migration within a given territory varies with the degree of diversity of areas included in that territory; 2) the volume of migration varies with the diversity of people (the diversity of people also affects migration); 3) the volume of migration is related to the difficulty of surmounting the intervening obstacles; 4) the volume of migration varies with fluctuations in the economy; 5) unless severe checks are imposed both volume and rate of migration tend to increase with time; 6) the volume and rate of migration vary with the state or progress in a country or area; 7) migration tends to take place largely within well defined streams; 8) for every major stream, a counterstream develops; 9) the efficiency of the stream (ratio of stream to counterstream or the net redistribution of population affected by the opposite flows) is high if the major factors in the development of a migration stream were minus factors at origin; 10) the efficiency of stream and counterstream tends to be low if origin and destination are similar; the efficiency of migration streams will be

high if the intervening obstacles are great; 11) the efficiency of a migration stream varies as economic conditions are high in prosperous times; 12) migration is selective; 13) migrants responding primarily to plus factors at destination tend to be positively selected; 14) migrants responding primarily to minus factors at origin tend to be negatively selected, or where the minus factors are overwhelming to entire population groups, they might not be selected at all; 15) taking all migrants together selection tends to be bimodal; 16) the degree of positive selections increases with the difficulty of the intervening obstacles; 17) the heightened propensity to migrate at certain stages of life-cycle is important in the selection of migrants; 18) the characteristics of migrants tend to be intermediate between the characteristics of the population at origin and the population at destination.

Leonetti, Donna Lockwood

(1978)

"The biocultural pattern of Japanese-American fertility." *Social Biology* 25(1):38-51.

The author tests the proposition that culture determines fertility regardless of residence. Analysis is based on a survey of second generation Japanese-American women in Seattle, published data on modern and premodern Japanese fertility levels, and data for U. S. white women.

The analysis demonstrates the persistence of a typically Japanese pattern of childbearing from premodern times through modern times. Despite their residence in another country, the second generation Japanese-American women have childbearing patterns more typical of Japanese women than of American women. The main difference between premodern Japanese and Japanese-American fertility is an intensification of the Japanese pattern. The first child is born slightly later and childbearing is terminated sooner, but the peak and configuration of the childbearing pattern are the same.

Lewis, John P.

(1978)

"Designing the public works mode of anti-poverty policy." in Frank and Webb, (eds.), *Income Distribution and Growth in the Less Developed Countries*. Washington, D.C.: The Brookings Institute.

This study is a good evaluation of public works programs that draws upon the public works literature. It does not consider the migration implications of public works projects. However, he is pessimistic about the ability of public works projects to alleviate poverty. He indicates that public

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works can train workers in urban occupations, provide rural employment, change consumer preferences, and create infrastructure. All of these except rural employment tend to stimulate rural-urban migration.

Suggested Hypotheses:

(1) Rural public works programs train workers with urban skills and therefore tend to increase rural-urban migration.

(2) Rural public works can generate rural modernization (of attitudes, preferences, aspirations, etc.) and therefore accelerate migration to urban areas.

(3) Rural public works provide infrastructure which can slow down or increase rural to urban migration. Roads and schools could increase migration while irrigation and electricity might decrease migration.

(4) Rural public works provide employment in the short run which will slow rural-urban migration.

Lewis, W. Cris  
(1977)

"The role of age in the decision to migrate." *Annals of Regional Science* 11(39):51-60.

The consistent negative relationship between migration frequency and age is consistently verified by empirical data, but theoretical explanations have been lacking. The purpose of this paper is to articulate a formal theoretical model that predicts this relationship. The model is not intended to completely describe the migration process but focuses only on the fundamentals of the decision. The argument can be summarized as follows: because work-life expectancy is a declining function of age and family head, the older individual has a shorter time period to capture a positive utility differential at an alternative location. This implies that the present value of the utility differential stream will also fall with age. As it is probable that moving costs are either constant or an increasing function of age, the probability that the present value of the utility stream will exceed moving costs will also decline. Thus, the migration rate, implicitly defined as the probability of migrating multiplied by the number of people in a given age cohort, will vary inversely with age.  
A.A.

Lipton, Michael  
(1977)

*Why Poor People Stay Poor: Urban Bias in World Development*  
Cambridge, Mass.: Harvard University Press.

This work does not focus on migration but it does provide a most comprehensive discussion on the distribution between rural and urban areas of the benefits of development. It is suggested that urban bias in development creates rural-urban migration. This can be reduced through political participation of the rural poor, improved labor conditions, improved rural credit, rural employment, and improved terms of trade between rural and urban areas.

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Suggested Hypotheses: Increased participation of the rural poor, generation of off-farm employment, improved rural financial markets, and improved marketing systems which increase the prices of farm commodities and reduce the prices of farm inputs and consumer goods, all act to slow rural to urban migration.

(1978) "Migration from rural areas in poor countries: the impact on rural productivity and income distribution." in R. H. Sabot (ed.), Essays on Migration and the Labor Market in Developing Countries. Proceedings from a Conference held by the World Bank, Washington, D. C.

This summary argues that rural-urban migration is caused by and promotes inequality in developing areas. Although the study focuses upon the effect of migration on income distribution, its review of the empirical literature is rather complete and it does suggest some predictors of migration of the rural poor. Rural poor are influenced to migrate by lack of land, lack of urban skills(education), lack of access to farm inputs, credit, markets and modern farm practices. Rural poor migrants are more likely to be rural-rural migrants. Rural middle class migrants are more likely to move to cities where they can better utilize their higher levels of education and urban skills.

Suggested Hypotheses:

(1) Off-farm employment for the rural poor will reduce rural-rural migration from project area and stimulate in-migration from other rural areas; however, such projects may have limited impact on rural-urban migration.

(2) Provision of improved credit and marketing for the rural poor will reduce rural to rural migration from project area and may have a limited impact on rural-urban migration.

(3) Increased provision of education in rural areas will stimulate rural-urban migration.

(4) Any development project which tends to modernize the rural poor can stimulate additional rural-urban migration in the long run (as the rural poor begin to adopt the migration patterns of the rural middle and better-off income groups).

(5) Development projects which increase the participation of the rural poor and reduce rural inequality can reduce rural-urban migration (loosely based on the correlation between high rates of out-migration and high levels of rural inequality).

Macisco, John J. Jr.

(1975)

Migrants to Metropolitan Lima, A Case Study. Centro Latino Americano De Demografica, Series A, No. 133.

This study is an analysis of 4,290 surveys originally

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conducted in 1956. In 1965, 1,113 were reinterviewed. 52.6% of the male migrants gave economic reasons for moving and 1/6 gave family reasons. Females had different reasons, 47% gave family reasons and 30.2% gave economic reasons. Education was the third reason for both males and females. It was found that older migrants had fewer children than younger migrants and that all migrants had higher fertility than metropolitan nonmigrants. Concluded that older migrants had lower fertility before migration.

Suggested Hypothesis: People with fewer children are more likely to migrate.

Macisco, John J., Jr., Leon F. Vouvier and Martha Jane Renzi  
(1969) "Migration status, education and fertility in Puerto Rico, 1960." Melbank Memorial Fund Quarterly 47(2): 167-187.

The purpose of this research has been to investigate the relation between migration and fertility. Limiting the analysis to Puerto Rico, the cumulative fertility of the wives of migrants to San Juan from nonmetropolitan areas was compared to the cumulative fertility of the wives of nonmigrant residents of the San Juan metropolitan area. Although the indications were that migrants tended to have somewhat lower fertility than nonmigrants when controls were introduced this was not entirely without exception.

Patterns of educational selectivity were found to exist when migrants were compared to nonmigrants. This indicated a need to introduce education as well as age controls. This inverse relation between education and fertility observed in many previous studies was consistent at all age groups for both migrants and nonmigrants.

Although education does explain a small portion of the differences in the fertility of migrants and nonmigrants, the basic findings remain valid that migrants have lower fertility than nonmigrants in the ages when the female is still in the most fertile part of the reproductive period. These findings seem to indicate that younger better educated migrants may represent an innovative group that could possibly contribute to the diffusion of lower fertility norms among the urban population. A.A.

Mandeville, Elizabeth  
(1979) "Poverty, work and the financing of single women in Kampala." Africa 49(1):42-52.

The purpose of this study is to determine if the practice of soliciting money from lovers is viewed as an alternative to employment or as a necessary supplement to low employment income.

Data were collected in 1968-70 from a survey of rural-born female household heads living in Kampala. Only recent migrants were considered in the study. The survey population was predominantly little educated, with almost 3/4 having less than 8 years of schooling. The main strategy for these migrants is to buy a house and rent out rooms, thereby having enough rental income to survive.

Most of the 84 household heads interviewed work outside the home. Few get any significant help from kin, who are too poor to offer more than assistance with childcare or hospitality. The households are distributed in a roughly bimodal pattern with respect to standard of living (diet type). Very few female-headed households are well-off, and the standard of living declines with more children in the household. Women are restricted by their limited educations and job search possibilities, thus most only find very poorly paid positions, primarily as domestics for persons known to neighbors.

Their incomes are inadequate to support a family, hence if they can obtain money from lovers, the family is able to live a little better. Women also gamble that a man will claim paternal responsibility and support her and her child(ren). Thus, there are incentives to have lovers and to have children.

Martine, George  
(1973)

"Migrant fertility adjustment and urban growth in Latin America." *International Migration Review* 7(2):179-191.

This is the first of two published studies by Martine using the 1963-1964 data collected by the U.N. Latin American Demographic Center. This study concludes:

(1) the more rural a person's origin, the higher their fertility;

(2) the more time rural to urban migrants spend in the urban area the more their fertility levels approximate urban nonmigrants;

(3) the earlier the age at arrival, the greater the similarity between rural to urban migrants and urban nonmigrants.

Suggested Hypothesis: Rural to urban migration reduces fertility because the migrants assimilate urban values for smaller families.

(1975)

"Migrant fertility adjustment and urban growth in Latin America." *International Migration Review* 9(2):179-191.

This study is a secondary analysis of data collected by the United Nations Latin American Demographic Center in 1963 and 1964. This is Martine's second study

published from the same data and it has different results. He finds that female rural to urban migrants reported lower fertility than urban non-migrants and urban to urban migrants. He also found that rural to urban migrant women that migrated at ages 15-24 had lower fertility than women that migrated when they were younger or older. This is contrary to the earlier finding of a linear relationship.

Suggested Hypothesis: Migration of young adults is selective of those prone to lower fertility.

Mason, Karen Oppenheim, Abraham S. David, Eva K. Gerstel, Quentin W. Lindsey  
and Michael V. E. Rulison  
(1971)

Social and Economic Correlates of Family Fertility:  
A Survey of the Evidence. RTI Project for NESAP/POP.  
Washington, D.C.: U.S. Agency for International  
Development.

This comprehensive survey of factors affecting fertility includes one of several reviews of the literature on migration and fertility. The study concludes that geographic mobility has at best a weak negative effect on fertility. What negative effects exist may be due to changes in occupations which in turn reduce fertility.

Suggested Hypothesis: Migration has a weak negative effect upon fertility that can be explained by occupational changes.

Mellor, John W.  
(1976)

The New Economics of Growth: A Survey for India and the Developing World. Ithaca, New York: Cornell University Press.

This book focuses on the role of agricultural development in economic growth. The effect of agricultural development on migration is not directly addressed but it is implied that agricultural development can stimulate rural-urban migration. Mellor contends that the demand for agricultural goods is income inelastic while the demand for urban goods and services is income elastic. A relatively large proportion of income gains from agricultural development are spent on urban goods and services. The resulting increased demand for urban goods and services leads to employment generation in urban centers and therefore stimulates rural-urban migration.

Suggested Hypotheses: Improved credit and rural marketing systems which contribute to agricultural income growth stimulate rural-urban migration (through final demand linkages to urban goods and services).

Merrick, Thomas W.  
(1974)

"Interregional differences in fertility in Brazil, 1950-1970." Demography 11(3).

Trends and interregional differences in the birth rate in Brazil between 1950 and 1970 are examined. Estimates are based on data from the 1950 and 1970 censuses. Regional differences in birth measures (crude and general rates) were found to widen between 1950 and 1970 despite a decline in fertility at the national level and a narrowing of regional differences in important socioeconomic variables like income and urbanization. The substantial interregional migration flows which occurred in Brazil between 1950 and 1970 are examined for their possible impact on differentials. The effects are mixed, but the conclusion is that migration contributed to widening differences. A.A.

Micklin, Michael and Marnane, and J. H. Patrick  
(1975)

"The differential evaluation of 'large' and 'small' families in rural Colombia: implications for family planning." Social Biology 22(1):44-59.

It is generally agreed that a major obstacle inhibiting social and economic improvement in the less developed nations of the world is the persistence of high fertility. Also clearly recognized is the importance of fertility norms and ideals for explaining variations in reproductive performances and family size. One such idea that has received relatively little attention is that of the quantitative and qualitative dimensions of the limits and range of normatively evaluated reproductive performance, their relationship to processes of socio-demographic change and their effect on family-size preference. In this article these concerns are explored using interview data collected in a rural Colombian community.

The authors use data on 91 recently-delivered and currently pregnant women who were interviewed during the summer of 1970 to examine quantitative and qualitative definitions of large and small families.

From this data a clear pattern emerges reflecting the rank order of mean value of family type categories. The number of children in a "large" family is highest, followed by number of children considered "too many," number of children in a "small" family and number of children considered "too few" in that order.

These results imply a positive evaluation of socially defined "small" families among these rural women. While slightly less than one-half of the respondents see "large" families as desirable they tend to think more consistently that small families are generally a good idea.

Miller, Karen A. and Alex Inkeles  
(1974)

"Modernity and acceptance of family limitation in four developing countries." *Journal of Social Issues* 30(4): 167-188.

The relationship of societal modernization and birth rates is analyzed in terms of the relationships among individual level variables: modernizing experiences, overall psychological modernity, and acceptance of the rightness of family limitation. Theoretical considerations and previous research in this area are discussed. The results of an empirical analysis of the effects of modernizing experiences and overall psychological modernity on acceptance of birth control are presented, using data from East Pakistan, India, Israel, and Nigeria. Although the variables used in our analysis explain only a moderate proportion of the variance in acceptance of birth control, the conclusion emerges that experiences with modern institutions are not associated with generally modern attitudes, particularly belief in the value of science, technology, and medicine.

The data indicates that structural changes in institutions without intervening psychic change in individuals seem to have little or no effect on acceptance of birth limitation. There is a good case to be made for the reasonableness of policies designed to shape birth control practice by influencing relevant attitudes and values. There may be some special implications arising from the finding that valuation of science, technology, and medicine is the component of attitudinal modernity which has the greatest impact in all four diverse cultures sampled -- East Pakistan, India, Israel and Nigeria. The results lead to the conclusion that the attitudinal area should be given particular attention in programs aimed at increasing availability to the idea of family limitation. Further, even without any explicit reference to birth limitation, programs involving the application of science to human problems might operate directly to increase acceptance of family limitation as well as increasing human health and well being.

Miro, Carmen and Walter Mertens  
(1968)

"Influences affecting fertility in urban and rural Latin America." *Milbank Memorial Fund Quarterly* 46(3):89-117.

To gain a deeper insight into the dimensions of human fertility in its Latin American setting, the Latin American Demographic Center (CELADE) is carrying out a series of studies in which the modern tools of social survey research are being applied. Besides giving a brief overview of those efforts, the aim of this paper is to compare some preliminary results of recent surveys on fertility in rural and small urban areas with those of previous surveys which concentrated

on the fertility of large urban centers.

Seven cities were included in the survey, providing diverse conditions and a rigorous test of the survey tools.

Some of the influences found to affect fertility were age at marriage and especially education and family planning practices. Others were not found to affect fertility, including age distribution, biomass occupation, and husbands occupation. These influences may simply not have been adequately measured to warrant conclusions about their effects. Further study along those lines is suggested.

Mitchell, Robert E.  
(1971)

"Changes in fertility rates and family size in response to changes in age at marriage, the trend away from arranged marriages and increasing urbanization." *Population Studies* 25(3):481-489.

Urbanization affects fertility rates and family sizes in a number of different ways, two of which were investigated in this paper. First, urbanization is associated with a decline in the proportion of early marriages and, therefore, society experiences a decline in the number of years at the risk of reproduction. At any age of the wife, it was seen that women who have been married longer tend to have larger families. This suggests that this trend in the age at marriage will contribute to lower birth rates in the future. Secondly, attention was given to the changing role of male superiority and especially to changes in arranged marriages whereby a wife married a stranger and moved into a household of strangers. There has been a decline in these marriages. This decline was seen to reflect the decreasing number of rural migrants and marriages, an increase in educational levels, and other unexplained influences associated with urban life. This paper has shown that these two trends provide only a partial explanation of population trends in a community. A.A.

Moock, Joyce Lewinger  
(1973)

"Pragmatism and the primary school: the case of a non-rural village." *Africa* 43(4):302-316.

"The aim of this paper is to analyse the educational needs of one small community in Kenya in terms of its changing socioeconomic patterns, and to show how attitudes towards the school system have their roots within this setting. The data are drawn from a nineteen-month study in South Maragoli location of Kakanega District, Western Province. . .

The community's economic life-blood is composed of a flow of labour migrants to town centres. Maragoli males exploit

urban employment niches out of the necessity maintained by population density and limited land resources at home. In addition, Maragoli parents have historically looked to the school as the channel through which employment could be obtained. . .

Population pressure on the land, sociological changes in family organization, and the felt lack of social security in old age are among the major factors which have shaped parental attitudes towards the role of the school. Vocational training in the past was not nullified by parental preference for elitist occupations but rather failed because it had not been tailored to fit the needs of the community and to overcome the entrepreneurial constraints facing youngsters. . .

The community has realistic perceptions of the labour market and of opportunities for entrance into an aided secondary school. Furthermore, there appears to be alienation from the urban environment and a desire, on the part of school leavers, to work and invest in the local area. Although the community seems ready for vocational training programmes as alternatives to secondary school entry, such programmes are difficult to find and offer no guarantee of employment."

Moots, Baron T  
(1976)

"Migration, community of origin, and status attainment: a comparison of two metropolitan communities in developing societies." Social Forces June:816-832.

Comparisons of the married male populations of two rapidly growing metropolitan communities in developing societies reveal patterns of status attainment of migrants similar to those found in United States communities. Rural origin penalizes migrants through its effects on educational attainment, as has been suggested in research on developed societies. Otherwise there is little support for the idea that over-urbanization will have a deleterious effect on the economic adjustment of migrants to large cities in developing societies. Migrants from cities were found to achieve higher than expected levels of attainment, net of their background characteristics. A.A.

Morgan, Robert W.  
(1976)

"Yoruba modernization and fertility in Lagos." in New Perspectives on the Demographic Transition. Interdisciplinary Communications Program Monograph No. 4. Washington, D.C.: Smithsonian Institution.

An analysis of data on urbanization, occupation, education, social status, and medical behavior obtained from studies carried out in Lagos, Nigeria, during 1966-70 reveals that

modernization is associated with high fertility. The report was completed in 1975, when the Federal Military Government of Nigeria was revising portions of the country's Third National Development Plan, 1975-80. Some of the policy recommendations made in this report are included or closely approximated in the new plan.

The points of the study are summarized as follows: 1) Fertility among traditional families is high; fertility among transitional families is higher still; only among the small and economically secure upper class groups are fertility rates declining (groups comprising only 1-2 percent of the urban population at present); 2) The best policy recommendation one can make is that government must try to extend a feeling of security, prestige, and access to opportunity more widely throughout the population. In other words, government must seek to create a new political and social morality; 3) In education, this means a restructuring of the present Western-based system to prepare intermediate-level manpower for specific and prestigious jobs in industry and agriculture, as well as in the traditional and modern arts and crafts; 4) In agriculture itself, this means a variety of reforms to restore the attraction of rural life, to bring people back to underworked lands, to relieve the pressure on overworked land, to offset the trend toward sharecropping and tenant farming, and to provide basic services in the rural areas; 5) The experience of other countries, for example, China, Japan, and Taiwan, is that lower fertility rates have accompanied social, labor and land reforms; and 6) The prospect of trying to bring about this wide range of reforms may appear too burdensome for government to contemplate; the alternative, however, would seem to be the perpetuation of a small elite, of a large and increasing number of underutilized and discontented graduates, of continuing urban migration, and of uncontrolled population growth.

Munro, John M.  
(1974)

"Migration in Turkey." Economic Development and Cultural Change 22(4):634-653.

This paper contains a review of examples of different generic types of studies in migration: surveys of migrants; evaluation of the impact of social and economic conditions; evaluation of differences in rates between regions, using the human capital model; and evaluation of differences in rates, using the 'push' model. Munro proceeds to do a push model, regional evaluation of migration in Turkey. He concludes that push models should be preferred to models based on human-capital theory because push models have sounder conceptual foundations, and are less demanding in their data needs.

Nag, Moni, Benjamin N. F. White, and R. Creighton Peet

(1978)

"An anthropological approach to the study of the economic value of children in Java and Nepal." *Current Anthropology* 19(2):293-307.

"This paper seeks to test the assumption of the micro-economic theory of fertility that the economic value of children is a factor influencing fertility behavior of parents in peasant societies. On the basis of anthropological investigation in one village in Java and one in Nepal, the average amount of time spent by children in different types of activities -- both household-maintenance and directly productive -- is estimated directly. The support provided by the children to their elderly parents is assessed primarily by examining the pattern of residential arrangements. Anthropological techniques of repeated interviews and direct observation were used to collect the data." P.I.

Navratil, Frank J. and James J. Doyle

(1977)

"The socioeconomic determinants of migration and the level of aggregation." *Southern Economic Journal* 43(4):1547-59.

". . . the purpose of this paper is threefold. First, it is an attempt to combine personal and area characteristics which influence the propensity to migrate and thereby overcome the specification bias present in previous studies. Second, it is an attempt to fill the present void in the literature by focusing on the socioeconomic determinants of an individual's propensity to migrate. Third, it is an attempt to explore the sensitivity of these determinants to different levels of aggregation. To accomplish this, two models are constructed and tested empirically." Data are taken from the 1970 U.S. Census. P.I.

Nelson, Joan M.

(1976)

"Sojourner versus new urbanites: causes and consequences of temporary versus permanent cityward migration in developing countries." *Economic Development and Cultural Change* 24(4):721-757.

This paper is a comprehensive discussion of the causes and implications of temporary versus permanent rural/urban migration. Male-to-female population ratios are used as a proxy for estimating the degree of permanence in the migrating population. Implications of temporary versus permanent migration are considered in the context of economic, social, and political systems. Intercountry and intercontinent differences in causes and implications are discussed at length. The long-run trend toward permanence in migration is noted.

(1978)

"Population redistribution policies and migrants' choices." Paper prepared for the Seminar on New Conceptual Approaches to Migration, Organized by the International Union for the Scientific Study of Population's Committee on Urbanization and Population Redistribution. Bellagio, Italy.

This paper attempts to explore some of the implications of the diverse patterns of migration for population redistribution policies in developing nations. The paper contains an overview of urban dispersal policies and of migrant preferences and propensities. It is shown that the assumptions underlying the policies to hold population in rural areas are not entirely consistent with the migrants' expressed motives, in that these migration or non-migration alternatives may not fulfill the migrants' needs or aspirations. The author concludes that while interregional disparities in income and employment and excessive growth of their largest cities may merit long-term solutions, it may not be possible to go directly from the current disparities to the desired balance. In the medium run, policies designed to alleviate these long-term problems of income inequality may only accelerate migration out of an area and exacerbate the metropolitan size problems.

(1979)

Access to Power: Politics and the Urban Poor in Developing Nations. Princeton, N.J.: Princeton University Press.

This promises to be a very excellent review of the current "state of the art" regarding our assumption about the nature of urban poverty, the rural exodus, the experiences of migrants in the city, and political behavior among the urban poor.

The sections dealing explicitly with migration document the now well-known economic motives underlying rural out-migration, but the author incorporates recent studies underscoring the importance of kin, prior urban experience, and prospects for adopting a successful urban lifestyle. Repeat, return, and cyclical migration are all discussed, as are motives for moving to metropolitan versus other urban areas. Those going to cities are the young, the better educated, and the more skilled, relative to other migrants or rural nonmigrants. They are not fleeing the poverty and hopelessness of rural life. Rather, migration to a city may be a well planned decision to send someone to the city. The person sent is likely to be the one with the best prospects for urban advancement.

The author summarizes statistics showing that migrants are employed readily. Most migrants claim to be better off for having moved. But not all migrants in the city make the same sorts of adjustments or commitments. Those who come only temporarily adopt a different lifestyle than those who come permanently. Further, migrants to the

biggest cities increasingly are urban-urban migrants. Depending on these origin and duration differences, migrants may more or less resemble the urban-born population.

(The sections pertaining to participation in politics were not reviewed.)

Nietschmann, Bernard  
(1979)

"Ecological change, inflation and migration in the Far West Caribbean." *The Geographical Review* 69(1):1-24.

This article presents a view of the historical changes in economic opportunities, subsistence patterns and migration among the Miskito of Nicaragua. Historically, the Miskito have practiced a subsistence culture which centered on turtles and other fishing as basic food stuff, as well as the basis for the social system of reciprocal exchanges with kin. Migration was frequently undertaken by males, who would accompany exploring or fishing expeditions. Starting in the early 1960s males began seeking temporary employment on nearby plantations or shrimp packing plants. Very few went to Managua, which was considered alien.

Late in the 1960s outside interests established turtle processing plants, and the role of turtles in the economy shifted from subsistence to a cash crop. With the intensification of turtle hunting for cash, the turtle population has declined. This has forced fishermen to fish longer and at greater distances; it has also meant that turtle for local consumption has become scarce. This has had two implications: declining diets with the necessity to purchase more food, and no access to turtle meat with which to fulfill traditional exchanges with kin. Where once the economy was stable and relatively impervious to outside economic crises, the economy is now highly susceptible to world price fluctuations.

As the turtles have become depleted as a source of cash income, Miskito men increasingly are forced to migrate to plantations for cash. Also, many more now go to the cities, even to Managua. The migrant remittance income allows the family to purchase labor to substitute for those who have gone, and then still have a little left over for consumption. But because migrants have created an additional need for hired labor, more villages are turning to agricultural labor for cash and giving up subsistence farming. Thus, while migration is a response to the limited earnings opportunities in the commercial sector, it indirectly precipitates additional movement out of the subsistence to the commercial sector, ultimately making migration more likely in the long run.

Oherai, A. S.  
(1977)

"Migration, unemployment and the urban labour market: a case study of the Sudan." International Labour Review 115(2):211-23.

This study is an analysis of 15,339 persons in Greater Khartoum that, like many others, links migration to urban employment. It suggests that rural-urban migration can be slowed by: promoting agricultural development, generating employment in rural industries, improving rural social services, increasing rural public works, and generally stimulating rural development.

Suggested Hypotheses: Off-farm employment, improved rural marketing systems, improved financial markets, extension of social services, and area development will all slow rural-urban migration.

Owens, Edgar and Robert Shaw  
(1972)

Development Reconsidered: Bridging the Gap Between Government and People. Lexington, Massachusetts: Lexington Books.

The book "sets forth a new strategy of development -- a strategy in which participation by all people is both the means and the end to development itself. The analysis is based more on recent historical evidence than on theory. The strategy is distilled from the relatively successful development experience of prewar Japan, Taiwan, Korea, Egypt, Yugoslavia and, although they are commonly considered special cases, Puerto Rico and Israel. It sets forth a policy under which the great mass of small producers -- farmers, artisans, 'tiny' entrepreneurs -- can be involved in development, in contrast to the current policy of concentrating investment in a small number of capital-intensive endeavors, mainly modern factories in the big cities and on large farms."

Aspects of the proposed strategy include: government by benevolence, principles of a problem-solving system, organizing a national economy, efficient use of the exploding labor force, a policy for developing farmers, industrialization, significance of nonformal education, population and exports, and the role of the United States

Peattie, Lisa R.  
(1975)

"Tertiorization and urban poverty in Latin America." in Wayne Cornelius and Felicity Trueblood (eds.), Urbanization and Inequality: The Political Economy of Urban and Rural Development in Latin America. Latin American Urban Research, Beverly Hills: Sage Publications.

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As a consequence of rapid population growth and of industrialization along relatively capital-intensive lines of technology borrowed from the already industrialized nations, growth in industrial production has brought with it little expansion of opportunities for employment in industry. However, the low levels of earnings in rural areas and the possibility of having substantially higher incomes in the city generate a very rapid rate of rural-urban migration. This leads to the crowding of job-seeking migrants into an essentially unproductive service and commercial sector in which earnings are naturally low. These tertiary sector activities were looked at in two general ways: first, by finding out something about all enterprises, of whatever sort, located in one low-income barrio in the southern part of the city; and second, by exploring what would appear to be classic examples of "tertiorization" -- e.g., street vending, lottery ticket sales -- in the central city. Social and political institutions affect earnings up and down the social structure, though they may do so in different ways. The growth of the tertiary sector in Latin America is seen as characterized by a number of events: 1) easy entry and consequent "crowding;" 2) very low earnings; 3) a high proportion of recent migrants to the city; and 4) such low earnings and low security that the tertiary sector job is seen by participants as substantially less desirable than a "regular job."

Pool, Janet E.  
(1972)

"A cross-comparative study of aspects of conjugal behavior among women of three West African countries." *Canadian Journal of African Studies* 6(2):233-359.

"This paper is an examination . . . of certain aspects of conjugal behavior to determine whether 'modernization' in this area, particularly the adoption of nontraditional marriage customs, could result either in the continued erosion of the position of women or in an increase in freedom and an improvement in social status and self image." Data were drawn from surveys carried out between 1965 and 1971 in Ghana, Upper Volta, and Niger, in which 8,640 rural and urban women aged 15-49 were interviewed. Among the factors studied were socioeconomic background, education, residence, age at marriage, choice of spouse, type of marriage ceremony, divorce and widowhood, polygamy, and attitude toward motherhood and family size.

The findings of the study indicated that traditional marriage customs were still widely followed in Ghana, Upper Volta and Niger. There was evidence to suggest, however, that exposure to "modern" concepts of marriage through residence in urban areas, education, and the changing needs of the societies are bringing about new patterns of conju-

gal behavior. Education is perhaps the most crucial factor, however it will not have much effect outside of the new urban elite unless social and economic factors change as well, making new marriage customs more acceptable, practically and fundamentally, to the nonelite women.

Portes, Alejandro  
(1978)

"Migration and underdevelopment." *Politics and Society* 8(1):1-48.

This paper presents a conceptual model of migration which focuses on migration as the interface between regional and national level inequalities. The author establishes four criteria for a workable migration theory: the theory must explain the following: 1) Why labor is induced to move; 2) How migrants are actually released and transported to the destination; 3) How migrants can be profitably used after migration; and 4) How migration is to the advantage of the migrant.

Using examples of internal migration in Mexico and Peru and international migration from Mexico to the U.S., Portes develops a conceptual model which incorporates these four criteria. He shows how the dominant capitalist structure in cities needs cheap, therefore plentiful and "docile" labor that will have no power to press labor demands. And in rural areas, the capitalist agriculturalists wish to rid the area of some excess labor, in order to diffuse pressures for land reform or a more equitable distribution of development benefits. But neither the urban or rural capitalists want too much migration, in that maintenance of a pre-capitalist subsistence economy allows capitalists to avoid the full costs of business, in that the "excess" labor may be sent back home during slack times. In addition, if the women and children remain at home, the capitalists also do not bear the full cost for reproduction and training of their labor. Thus the migration systems are only semi-regulated so that not all can migrate, but the income and opportunities in the sending area are maintained at such low levels that many are induced to migrate. Ironically, migrants perceive migration as the way to achieve an optimal distribution of their resources given the unequal distribution of opportunities, yet in this response they are the unknowing "accomplices" to the system of inequalities which originally stimulated migration.

Pryor, Robin J.  
(1978)

"Internal migrants in peninsular Malaysia." *Journal of Tropical Geography* 46:61-75.

The purpose of this paper is to summarize the major patterns of population redistribution in Malaysia and to identify the main demographic characteristics of internal migrants.

The 1970 census shows that the fastest growing cities contain 20,000 persons or more. By 1970 42% of the population lived in settlements with more than 1,000 persons. The areas which evidenced the lowest outmigration rates were the highly developed states of Johor and Selangor and the isolated states of Terengganu and Kelantan. Most interstate migrants are shown to go to the industrializing state of Selangor, but also to Pahang where the government has land development schemes.

Migrants to Kuala Lumpur are selective for their youth and the probability of being employed as professional or white collar workers. In addition, the more recent migrants are more highly selective, not less selective. Migrants to Peninsular Malaysia are less selective: older, working in semi- or unskilled jobs.

Migrants marry early. Overall movers and nonmovers tend to conform to the same distribution by family size, but more recent migrants are likely to have a larger production of small families while older migrants have more large families.

Rehberg, Rex D.

(1977)

"Agricultural price policy and rural-to-urban migration: the recent South Korean experience." The Journal of Developing Areas 11(4):509-518.

This empirical analysis consists of regression analysis of aggregate data and is one of the few studies which directly links agricultural price policy to rural-urban migration. The analysis for data on migration from 1960 to 1970 indicate that when agricultural prices were low, rural people responded by migrating to the cities.

Suggested Hypotheses:

- (1) Rural marketing systems that affect agricultural prices have an influence on rural-urban migration.
- (2) Higher agricultural prices will slow rural-urban migration.

Reining, Priscilla, Fernando Cámara, Beverly Chiffas, Rosalie Fanale,

(1977)

Sonia Gojman de Millán, Barbara Lenkerd, Iris Shinohara, and Irene Tinker

"Village women: their changing lives and fertility." Washington, D.C.: American Association for the Advancement of Science.

This study describes an attempt to apply the techniques of ethnography to the study of human reproduction. The lives of individual women are studied in the three countries to see how changes brought about by modernization might influence

family size. The World Fertility Survey Core Questionnaire was used in collecting household and family census information and data on women's reproductive histories. The methodology is described in an appendix. P.I.

Rempel, Henry  
(forthcoming)

Rural-Urban Labor Migration and Urban Unemployment in Kenya. Laxenburg, Austria: International Institute for Applied Systems Analysis.

This book provides the most ambitious specification of the migration decisionmaking process yet encountered by this reviewer. While only portions of the manuscript were available, these demonstrated a breadth and sensitivity to detail not found elsewhere. The book includes a review of the literature, a discussion of the historical processes that shaped the migration streams of the late 1960s in Kenya, description of the rural-urban migration flows used for the model testing in subsequent sections of the book, a detailed exposition of a rural-urban migration model with no less than 28 hypotheses, tests of the migration model using 1969 Census and 1968 survey data, a note on urban-urban migration, and a discussion of the policy implications of the findings.

The author's migration model posits a two-step decision process. The first decision is the decision to leave a rural area for an urban destination. The second decision is selection of one from several possible urban destinations. Different factors are seen to influence these decisions; some factors are related to the characteristics of the communities while others reflect differences among potential migrants. Another major departure from standard migration theory is that the migration decision is couched in terms of a household decision whose goal is the spatial allocation of labor in order to maximize household income levels and security. Finally, Rempel's model allows for variation along the time dimensions of migration. Certain variables make permanent migration more likely, and others affect the actual length of stay.

The decision to undertake rural-urban migration is hypothesized to be directly related to the following: the household's aspired income level, the attempts of the household to accumulate human capital through schooling, the perception of economic opportunities and returns elsewhere, the ability of the household to bear the cost of migration and related job-search activity, and the type of kinship structure. Rural-urban migration will vary inversely with the household's ability to generate the income to meet its aspiration-level income. In addition, male and female migrants are expected to experience different constraints. Male migration is expected to depend on his access to the household's assets, and female migration depends on their

degree of involvement in agricultural production. The household's aspired income level and the perception of economic opportunities and returns elsewhere are separately determined by other variables. In the case of the aspiration income, the community's level of social and commercial interaction with external areas and the degree of skewness in the distribution of income. The perceptions of economic opportunities are said to be influenced by employment opportunities, the wages paid in these alternatives, the extent of commercial interaction with locations with attractive opportunities, the extent of previous migration from the community to alternative locations, and the extent to which household members have schooling, for which there are returns elsewhere but not locally.

The decision to choose one of several competing migration destinations varies with the destinations' perceived income level, employment probabilities, presence of kin, the information a household has about the destination, the ability of the household to bear the costs of selecting that destination (separation costs), the amount of schooling possessed by household members, cultural and social similarity to the source area. Selection of a particular destination will vary inversely with the household's access to other rural land or production resources, the level of income from alternative rural income producing sources, discounted by their expected duration or instability, the nature and extent of rural amenities, the passiveness of the migration decision, and the age of adults in a household. In addition, if the expected urban income is low and a rural subsistence plot must be maintained, migration to cities will be limited by the number of adult members of the household. Finally, women are less likely to go to cities if there is job discrimination in the cities or if urban informal sector opportunities are limited.

The permanence of a migration decision is expected to vary directly with the perceived urban income level and the perceived security of the urban employment, but if rural households are dependent on remittances then permanent relocation is less likely because this will diminish remittances. The duration of stay will vary inversely with the extent of alternative rural opportunities, whether other family members can care for the family farm, the sex differentiation of agricultural production responsibilities, and the degree of social or political acceptance of the migrant in his chosen destination.

Rempel is unable to fully test his models, due to insufficient data, but the analyses presented in the portions reviewed generally supported the model, although there were a few discrepancies in both sign and magnitude of effect.

Rempel, Henry and Richard Lobdell  
(1976)

"The rural impact of rural-urban migration." Draft report prepared for the International Labour Office, Department of Economics, University of Manitoba.

The authors provide an extensive review of the literature concerning the effects of migration on rural areas. Particular attention is paid to the function of remittances. A lengthy annotated bibliography accompanies the document.

The review's major finding is that the constraint on rural development is demand for output, not supply of inputs, as is usually assumed. Given this finding, outmigration is likely to continue despite efforts to provide necessary rural development inputs, because there is insufficient demand for the outputs. Rural outmigration can increase the productivity of the remaining labor by reducing the amount of redundant labor, by intensifying the household's work and indirectly by inducing technological change through forcing less labor to achieve the same level of production. The dilemma is that these who go are the very ones who could innovatively adopt a new technology. The effect of remittances is considered insignificant as far as rural development is concerned.

Renas, Stephen M. and Rishi Kumar  
(1978)

"The cost of living, labor market opportunities, and the migration decision: a case of misspecification?" *Annals of Regional Science* 12(2):95-104.

A large literature has emerged dealing with the economic and non-economic determinants of migration. Among the economic determinants of migration are income levels and rates of change in income in different areas. These variables are designed to measure labor market opportunities both currently and in the future. Invariably, studies which attempt to explain migration utilize nominal measures of income and change in income, not real measures. Yet assuming that individuals are not subject to money illusion, they would be interested in cost of living information as well as in information regarding nominal income and change in income. This paper examines this issue empirically. We demonstrate that some cost of living variables, when included in a migration equation, enter with the expected sign and are statistically significant. We also demonstrate that the failure to include such variables in a regression results in misspecification and bias involving some of the variables in the regression.  
A.A.

Renaud, Bertrand  
(1977)

"Economic fluctuations and speed of urbanization: a case study of Korea 1955-1975." World Bank Staff Working Paper No. 270. Washington, D.C.

This empirical regression analysis of aggregate data (for 1960-1975) is one of the very few studies which statistically links rural-urban migration to terms of trade between rural and urban areas. A negative correlation is found between rural-urban migration and the ratio of prices received by farmers to prices paid by farmers.

Suggested Hypotheses:

- (1) Improvement of the relative position of rural areas in trade with urban areas will reduce rural-urban migration.
- (2) Increases in the prices of agricultural commodities will tend to slow rural-urban migration, other things equal.

Rengert, Arlene C. and George F. Rengert  
(1973)

"Who moves to cities? A multivariate examination of migrants from rural Mexico." Prepared for the Annual Meetings of the Population Association of America: New Orleans.

Mexican data are used to develop a model of migration from rural areas to other rural areas, small cities, and big cities.

Those who move to cities over 50,000 are migrants from families with few economic or social constraints, i.e., smaller natal families, more land cultivated or owned, unmarried and without children. In addition migrants who have previously visited cities or have family members who have visited cities are more likely to go to big cities.

For illiterate migrants, marital status does not deter the choice of a big city; for this class of migrants only prior visits to cities determine selection of a big city destination. The illiterate migrants, regardless of marital status, are more likely to choose a small nearby town.

Rhoda, Richard  
(1979)

"Development activities and rural-urban migration: is it possible to keep them down on the farm?" Prepared for the Office of Urban Development, Development Support Bureau, U.S. Agency for International Development, Order # AID/otr-147-79-25.

This study investigates the proposition that development

activities in rural areas can slow rural-urban migration. The study analyzes relevant migration theories, empirical studies of migration, and numerous types of development activities.

The findings of this investigation indicate that different types of development activities in rural areas have different implications for migration. In general land reform and resettlement schemes tend to slow migration. Rural-urban movement may also be slowed by irrigation projects. On the other hand, the adoption of high yield seeds and fertilizer tends to accelerate rural-urban migration. Other activities which have tended to stimulate migration include rural and rent ceilings and the provisions of agricultural credit and extension.

Two definite conclusions are offered from this study. First, the impacts on rural-urban migration are complex and elude broad generalization. Second, in general, development activities in rural areas cannot be justified on the grounds that they slow rural-urban migration.

The findings of this investigation provide a number of implications for development activities, project assessment and analyses, and future research. The results of the present investigation suggest that development activities in rural areas have not resulted in any appreciable reduction in rural-urban migration. It appears that making changes in urban areas is the most promising approach to influencing rural-urban migration. However, these changes are very unpopular politically and stand very little chance of being implemented. The difficulty in project assessment and analysis exists because of a lack of knowledge of the social impacts of development activities. The real need is to establish improved evaluation of social impacts as a standard practice in every development project. The task of future research is to determine which impacts on migration are dominant for the different types of people affected by the project. The impact of income growth on rural-urban migration is expected to vary from rural society to rural society. That issue is therefore definitely in need of additional empirical research. The importance of rural-rural and urban-urban migration is also in need of additional research.

Riddell, J. Barry  
(1976)

"The migration to the cities of West Africa: some policy conclusions." The Journal of Modern African Studies 16(2):241-260.

This study is a good overview of policies that influence rural-urban migration. The study concludes that rural-urban migration is influenced by: generation of urban

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employment, the terms of trade (factor prices) between rural and urban areas, employment opportunities in rural areas, rural area development schemes, and rural education.

Suggested Hypotheses:

- (1) Off-farm employment projects will slow rural-urban migration.
- (2) Rural marketing projects which raise prices of agricultural commodities and lower farm input prices will act to slow rural-urban migration.
- (3) Increased provision of education in rural areas will stimulate migration.
- (4) Area development projects which improve the social and economic well-being of rural areas will slow rural-urban migration.

Rindfuss, Ronald R.

(1976)

"Fertility and migration: the case of Puerto Rico." International Migration Review 10(2):191-203.

This secondary analysis of 1970 1/100 public use samples of Puerto Rico and U.S. resident Puerto Ricans examines both current and cumulative fertility. Rindfuss found no difference in current fertility but found migrants had substantially lower cumulative fertility. These relationships held after controlling for education and female activities.

Suggested Hypothesis" Migration reduces cumulative fertility.

Ro, Kong-Kyun

(1976)

"Migration and fertility in Korea." The Dynamics of Migration: Internal Migration and Migration and Fertility. ICP Monographs 5(1):259-296. Washington, D.C.: Smithsonian Institution.

A 1 percent sample of the Korean Census of 1970 was analyzed to determine if the fertility of persons migrating during the period 1965-1970 was lower than that of persons in sending areas when socioeconomic status variables were held constant. The investigator concludes that the fertility of migrants was substantially lower for all age groups, regardless of place of residence.

Policy implications were listed to supply institutional and legislative reinforcement to make the influence of investment in human capital on fertility behavior more effective: 1) Policies should be enacted to establish a government social security system and private pension plans. These would discourage people from considering children as an investment necessary to support them in

old age. This measure would also affect the traditional preference for sons; 2) Attempts should be made to promote employment opportunities for women. This would increase the cost of a woman's time and thereby increase the cost of raising children; 3) The tax structure should be designed to penalize families with more than two children and also to penalize young married people. Specifically, no tax exemption should be given for the third child, and no tax relief should be given for joint tax returns of married couples; 4) Policies should be established to scale tuition and other fees according to the number of children a family has. For example, progressively increased tuition and fees should be assigned after the second child to increase the cost of education for families with more than two children; 6) Men from families of one or two children should have a shorter military obligation; 7) Health programs should be launched to lower the infant mortality rate. For example, maternity and child health care should be provided in conjunction with family planning services. This will reduce the need for extra babies to ensure the number of surviving children.

Romero, Linda and William L. Flinn  
(1976)

"The effects of structural and change variables on the selectivity of migration: the case of a Colombian peasant community." *Inter-American Affairs* 29(4):35-58.

This study is an empirical analysis of 92 randomly selected families. A number of migration regression models are investigated. This is one of many investigations of rural out-migration, but it is one of the few studies which focuses on the relationship between out-migration and commercialization of agriculture. Romero and Flinn find that commercialization has the effect of forcing out-migration of those families that do not modernize, specifically the small farmer.

Suggested Hypothesis: Improved rural marketing systems which stimulate commercialization of agriculture will accelerate out-migration of small farmers who do not modernize.

Rosen, Bernard C. and Anita L. La Rain  
(1972)

"Modernity in women: an index of social change in Brazil." *Journal of Marriage and the Family* 34(2):353-360.

The relationship of industrialization to some family-linked attitudes and behavior of women were examined in five markedly different Brazilian communities. Each community was selected to represent a point on a rural-urban-industrial continuum. Data were collected through interviews with 816 married, fertile women about their

attitudes and behavior as regards their roles as women, wives and mothers. Interview items were factor analyzed and two indices of modernity derived. Women in industrial communities were found, on the average, to have a greater sense of personal efficacy, enjoy more egalitarian relationships with their husbands, place a greater emphasis on independence and achievement in the socialization of their children and perceived the world in a more activist perspective than women in nonindustrial milieu. Modernity in women tends to increase with level of education, skill of occupation, social status and membership in voluntary associations; it is inversely related to family size, both preferred and actual. A.A.

Rosen, Bernard C. and Allan B. Simmons  
(1971)

"Industrialization, family and fertility: a structural-psychological analysis of the Brazilian case." *Demography* 8(1):49-69.

This paper addresses itself to some linkages between macro-social structure (industrialization, social class), social psychological variables (attitudes) and fertility. A total of 726 currently mated women with proven fertility in five Brazilian communities were interviewed to determine various attitudes, work experience, participation in family decisions, fertility ideals, and actual fertility. The five communities were selected along a rural-urban-industrialization continuum to include a village, two nonindustrial cities, and two industrial cities (one of which was Sao Paulo). Family size in the industrial cities was small in all social strata, while in the non-industrial cities family size was large in the lower strata and declined in the upper strata. Further analysis revealed that smaller family size is associated with generally higher levels of status among women -- higher educational levels, greater social contacts and more skilled employment, and equality in family decision making. The analysis supports the hypothesis that industrialization influences fertility through shifts in the social status of women, both in their work and at home. New education and work opportunities facilitate the emergence of modern conceptions of the role of women in society and egalitarian decision making in the family. These attitudes and patterns of husband-wife interaction are related to smaller family size ideals and lower fertility. A.A.

Ryder, Norman B.  
(1974)

"Realistic pathways to fertility reduction in developing countries: the perspective of the sociologist." Presented at Meetings of the Population Association of America, New York.

The author suggests that fertility reduction is a necessary

but not sufficient condition for modernization in that both low and high fertility are intelligible outcomes of a decision process, albeit with two different sets of rules. Modernization can modify the conditions in which the game operates, but most important is modification to the actual rules. The key to a shift from high to low fertility is intergenerational equity. Fertility decline occurs when the parents shift their concern from the kin group to child, when the interests of the mother become important, and when there is no longer a net transfer of resources from child to parents.

Sahota, Gian S.  
(1968)

"An economic analysis of internal migration in Brazil."  
Journal of Political Economy 76(2):218-245.

Three hypotheses for the causes of migration are tested simultaneously: the human capital model; human beings as members of groups of varying inherent propensity to migrate and the push-pull model. Migration is measured between the different Brazilian states. Other variables include wage rate, education, urbanization, density, geographic distance, and the level, rate of growth and dispersion of per capita income. Both single-equation and simultaneous-equation models are used.

Major findings are high positive response of migrants to earnings differentials, negative response to distance, and slight positive response to education in both origin and destination. The human capital model was strongly supported, the propensity model was significantly supported, the push-pull effect was "not denied."

Policy proposals to manage migration included first-rate schooling in rural areas, decentralization of industry and employment centers, incentives for decentralization in the form of subsidies or tax concessions, better roads and more economical long-distance bus/train services.

Salaff, Janet K. and Aline K. Wong  
(1977)

"Chinese women at work: work commitment and fertility in the Asian setting." in Stanley S. Kupinsky (ed.), The Fertility of Working Women. New York: Praeger.

Surveys of married and unmarried women in Hong Kong and Singapore show that their work participation is determined not by individual decision but by the family. In both societies, the contribution of young unmarried women is highly valued by the family, which allows families to raise their level of consumption. Young women also like to work because their work is seen as a sufficient contribution, thereby freeing them from chores to spend time

with friends. Thus, despite low wage, low status jobs, the young girls keep working. Meanwhile the work delays the woman's marriage and thereby lowers fertility, despite the fact that most stop working upon marriage. Those who continue to work after marriage do so for economic reasons, but also because they have a high commitment to work, which results from their desire for mobility. The high work commitment is correlated with having a mother who has worked, job continuity, higher earnings, saving for own future, and strong achievement motives for children. Continued work after marriage is facilitated by kin helping out through household extension. High work commitment is correlated with a desire for a smaller family, as well as with lower actual fertility.

Schnaiberg, Allan  
(1970)

"Rural-urban residence and modernism: a study of Ankara Province, Turkey." *Demography* 7(1):71-85.

"Data from the Ankara family study, in which 1,138 married women living in Ankara City and four selected villages in Ankara Province were interviewed in 1965-66, are used to study the impact of the amount and timing of urban residential experience on six dimensions of modernism in attitudes and behavior." The place of residence prior to marriage, the period when decisions about schooling are made and socialization into adult roles appeared to be of special importance.

It was found that women who migrated from villages to the city at any stage of the life cycle reported attitudes and behavior more modern than those of women with no urban residential experience. Such micro-social analyses may help to illuminate the relation between urbanization and modernization in developing nations and to account for the coexistence of modern and traditional patterns in transitional societies.

Schnaiberg, Allan and Michael Armer  
(1974)

"Urbanism, modernism and fertility: a comparative evaluation." Presented at Meetings of the Population Association of America.

The purpose of the study is to test the hypothesis that the impact of modern attitudes is greater on fertility means (practices) than on goals. The authors also expect that a modernism measure with a strong element of planning orientation will show stronger correlations with fertility behavior, especially means. After controlling for socioeconomic status, modernism accounts for a small amount of variation in fertility behavior of a group of second generation migrants to Chicago. Analysis

shows that there is a stronger relation between modernism and fertility means than goals, but the relation is not consistent. The results suggest that the effects of modernism, socioeconomic status, and rural or urban background may be interactive, not additive.

Schnaiberg, Allan and Sheldon Goldenberg  
(1975)

"Closing the circle: the impact of children on parental status." Journal of Marriage and the Family November: 937-953.

Traditional theories of social stratification conceptualize only the contribution of parents to the (initial) status of their children. This paper attempts to integrate scattered empirical research results pertaining to the types of benefits (and their absolute and relative values) parents may derive from their children in enhancing or maintaining their social status. A dynamic model of a two-way flow of such help throughout the family cycle is offered and special attention is given to the difference between upper-, middle-, and lower-class families with regard to the importance of children's achievements for parental status.

Schnaiberg, Allan and David Reed  
(1974)

"Risk, uncertainty and family formation: the social context of poverty groups." Population Studies 28(3):513-533.

The authors introduce ". . . risk and uncertainty as factors likely to induce poverty and lead (workers) to opt for the 'high fertility, low quality' pattern of . . . family formation. Drawing upon the work of Wharton in subsistence agriculture practices, several alternative decision-making models are proposed to account for both the persistence of high fertility, and the declines that have been registered in selected areas, such as Taiwan and perhaps China . . . . Some implications for uncertainty and risk-reduction strategies in family planning and other social welfare programmes are drawn."

One of the dangers inherent in any specialized programme such as family planning, is to shift from treating the organizational objective as a means to a larger end to treating it as an end unto itself. Such shifts may be expected within the agencies themselves, but in the case of family planning programmes, there is additional reinforcement from social scientists, lacking precisely this contextual view of family formation. Even countries with a low rate of increase of national income and hence few increases in statistical averages per head may exhibit significant reductions in fertility, if their policies are social-welfare oriented. It is the authors' belief that

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the most important short-term contribution of such policies may not be sharp increases in income, but rather increases in the predictability and sensitivity of social institutions to the masses. For these are the elements of risk and uncertainty reduction.

Schultz, T. Paul  
(1969)

Population Growth and Internal Migration in Colombia.  
Santa Monica, California: The Rand Corporation.

This multivariate analysis of Colombian survey data finds that rural to urban migrants have slightly higher fertility than urban natives. It also finds that rural-urban differences in fertility are accounted for by education and female activity variables. The author theorizes that rural to urban migrants might have higher fertility because of optimism generated by rising income but that in the long run (in about 30 years) migration might lower fertility because it reduces infant mortality.

Suggested Hypotheses:

(1) Rural-urban migration increases fertility by increasing the migrant's income and optimism about the future.

(2) Rural-urban migration reduces infant mortality, therefore, the next generation's fertility can be expected to be lower.

(1970)

Rural-Urban Migration in Colombia. Santa Monica, California:  
The Rand Corporation, Report No. P-4488.

The study attempts to explore the causes of internal migration. Migration rates are estimated for various groups in the population to clarify who migrates and to where. A model of interregional migration is set forth and estimated for a sample of Colombian municipalities, from which we can infer the responsiveness of migration to some economic, demographic and political developments in the rural and urban sectors of society.

Evidence confirms that interregional migration in Colombia responds to market forces drawing to the cities rural labor from regions where the returns to labor are relatively low and the supply of labor is growing relatively rapidly. Aside from the economic costs and benefits of internal migration, many of which are admittedly difficult to appraise, there are possible political repercussions of rapid urbanization in the less developed world, sustained by heavy rural-urban migration. It would appear that internal migration contributes to the conservative character of the cities, and, for better or worse, strengthens the status quo.

Secretariat of Public Works of the Government in Mexico

(1977)

"Socio-economic impact of rural roads in Mexico."  
Development Digest 15(1):66-75.

This study examines survey data from 79 Mexican communities which were involved in rural roads projects. The study does not specifically discuss migration, but it provides information about the impacts of rural roads projects which may influence migration. Rural roads projects absorbed labor from rural communities. About 40% of wages from projects were spent in near-by large towns (this suggests increased demand for urban goods and services, employment generation in large towns, and induced rural-large town migration). Roads facilitated commercialization of agriculture in some cases.

Suggested Hypothesis: Off-farm employment projects will stimulate migration to larger towns and small cities. (Migrants will flow to place where jobs are created and the spending of their income will generate employment in small urban centers through multiplier effects).

Sell, Ralph R. and Gordon F. De Jong

(1978)

"Toward a motivational theory of migration decision making." Journal of Population 1(4):313-335.

Within the contest of the hypothesized transition to a post-industrial society, this paper reviews several current approaches to migration decision making. Several problematic areas are identified with the most important being the lack of a consistent theory of decision making. Borrowing from the motivational theory of decision making articulated by John Atkinson and his associates, a motivational approach to the migration decision process is presented which consists of the multiplicative interaction of four variables: 1) Availability of a migration option; 2) Motive for migrating; 3) Expectation to move; 4) Incentive to actually undertake the costs and risks of migration. Previous migration research is evaluated from the perspective of motivational decision theory. The authors conclude that concepts used in previous migration decision making research are similar and that this model provides a valuable theoretical integration. A major problem attending use of the proposed theory is the reconciliation of the household unit of analysis often used in migration research with the individual unit of analysis implied by the motivational decision theory.

Shah, S. M.

(1974)

"Growth centers as a strategy for rural development."  
Economic Development and Cultural Change 22(2).

The study is done in the context of India's strategy to

develop integrated area development plans for 20 centers of growth, delineated spatially as "development blocks." The study aims at collecting selected socioeconomic data on the human and material resources of a given ecological area. It then attempts to define the social, economic, and political service areas of different sectors of human activity by gathering both inflow and outflow data to determine how all settlements relate to each other and, consequently, deduce how these systems and the social institutions which they include can best be structured and spatially located to affect maximal savings in infrastructural investments, traffic, and transport costs and to plan for a more efficient management of the resources for human life.

Primary data from the village, household, shop, and firm were used--mostly collected by questionnaire. The study is not as comprehensive in terms of textual analysis as the above paragraph may imply, but the data information is formidable. Conclusions in terms of policy proposals are to invest in service institutions having necessary infrastructures, to develop intermediary centers, market centers, or large-size villages, and to make these intermediate centers more easily accessible to their dependent villages by construction of link roads.

Shaw, R. Paul  
(1974)

"Land tenure and the rural exodus in Latin America."  
Economic Development and Cultural Change 23(1).

"This paper summarizes results of an empirical test of a model which seeks to identify causes of high rates of rural emigration in Latin America. Briefly, the model applies to Latin American economies with high rates of rural natural increase, a large proportion of the rural-agricultural population in the minifundio and/or landless employee class, and a large share of the agricultural land held by latifundistas. A basic premise is that the nature of productive organization on latifundios had "conditioned" the cost, use, availability, and development of land to the extent that social and economic opportunities for the majority of the rural-agricultural population have been stifled. Accordingly, it is argued that a large proportion of rural-agricultural labor is likely to be subjected to limited employment opportunities owing to the institutional system of land tenure, and, in combination with rapid population growth, conditions of economic stress are likely to evolve followed by high rates of rural emigration."  
A.A.

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(1976)

Land Tenure and the Rural Exodus in Chile, Colombia, Costa Rica, and Peru. Gainesville, Florida: University of Florida Press.

This most comprehensive study of the relationship between land tenure and rural out-migration consists of a review of the literature and econometric data analysis for each country cited in the title. The analysis indicates that rural out-migration is positively correlated with inequality of land distribution and level of literacy (areal units, such as districts, are used as units of analysis). The author suggests that the rate of out-migration is related to lack of credit for the rural poor, lack of markets, and low rural wages.

Suggested Hypotheses:

(1) Participation of rural poor in land ownership, extension of credit to rural poor, improvement of rural markets for small farmers, and off-farm and on-farm employment at competitive wages for the rural poor will reduce rural to urban migration.

(2) Increased rural education will increase rural-urban migration.

Shedlin, Michele Goldzieher and Paula E. Hollerbach

(1976)

"Modern and traditional fertility regulation in a Mexican community: factors in the process of decision making." Center for Policy Studies Working Paper. New York: The Population Council.

The purpose of this research is to test the model that fertility regulation decisions may occur at the following stages: preconception, pregnancy, and after births. This research examines the cultural obstacles that influence the pattern of fertility regulation decisions.

Data from an intensive set of surveys in a small rural Mexican community show that many women do not understand the process of conception or birth. Therefore, they do not perceive that they are susceptible to pregnancy or that decisions can be made to avoid conception. This means that any decisions to restrict family size must occur once the woman realizes that she is pregnant. The women have traditionally used teas and other mechanisms by which to "stop" a pregnancy. If all else fails, after birth of the child a woman may resort to infanticide (infant neglect) but more commonly "lend out" children. Even among women who understand the conception process and who perceive themselves susceptible to conception, there are social constraints against openly practicing fertility regulation methods. Childbearing is a strong source of male and female social status and esteem. In addition, the women have limited information about

modern methods and fears about the adverse health consequences of birth control. Even if they would like to limit births, women perceive that mothers-in-law and husbands will disapprove of fertility regulation, hence no preconception methods are adopted.

Simmons, Allen, Sergio Diaz Briquets, and Aprodicio A. Laquian  
(1977) Social Change and Internal Migration: A Review of Research Findings from Africa, Asia, and Latin America. Ottawa: International Development Research Centre.

This is perhaps one of the most comprehensive reviews of the social consequences of rural development affecting migration. In Africa, the literature suggests that return migration might diffuse "modernized" values that may lower fertility in rural areas. In Asia, it is concluded that "...little is known about the effects of migration on fertility levels in the rural source areas: have they increased as more "modern" residents move out or have they been lowered as a result of contact with more progressive practices of the urban places?" In Latin America they suggest "...declines in the rate of natural population growth in areas of out-migration can be postulated, as lower proportions of adults in prime reproductive ages contribute to the fertility of the region." In addition, increased contacts with the more "modernized" sectors through contracts with return-migrants may influence the value system of the rural communities, and rural inhabitants may internalize lower fertility norms.

Suggested Hypothesis: R-U migration reduces fertility by providing contact with new ideas.

Sjaastad, Larry J.  
(1962) "The costs and returns of human migration." Journal of Political Economy 70(5):80-93.

This is a very important theoretical model of migration decision-making. Sjaastad's model contends that people will move when the net present benefits of migration are greater than the net costs. Both monetary and nonmonetary benefits and costs are considered.

Suggested Hypotheses: Development projects which, ceterus paribus, increase the benefits of urban migration (raise education or urban skill levels, generate desire for urban life, increase aspiration levels) or decrease the costs (improved roads and communication, familiarize rural people with urban life and therefore reduce "psychic cost" of moving into a strange environment) will accelerate migration. Development projects which reduce the net benefit of migration (by diminishing rural-urban income

differentials, for example) will slow rural-urban migration.

Skeldon, Ronald  
(1964)

"Regional associations and population migration in Peru: an interpretation." *Urban Anthropology* 5(3):233-353.

Two conflicting interpretations of the role of clubs of migrants in cities in Peru have recently been proposed. This paper presents evidence supporting the different points of view, and a schema is developed which systematically accounts for these differences, relating the changing functions of the clubs to the stage of evolution of population migration from the particular communities of origin. The role of the clubs changes from that of informal buffer from the urban environment during the early stages of migration to the capital, through an institutionalized phase when the club is at its maximum importance, to a later phase when its function is purely recreational and efforts are made to integrate one or more community clubs into broader-based regional associations. These changes are concomitant with the transformation of the community of origin through the exodus of migrants and the influx of information and through the dispersal of the migrant groups throughout the city, resulting in the breakdown of the original migrant nucleus. The club is neither a rural enclave in the city nor a truly urban institution but a temporary phase in the process of urbanization. The relevance of the model developed for Peru is discussed with reference to data from Africa. G.A.

Southall, Aidan  
(1976)

"Forms of ethnic linkage between town and country." in William Arens (ed.), *A Century of Change in Eastern Africa*. World Anthropology Series. The Hague: Mouton Publishers.

The purpose of the paper is to show that in this field of urban and ethnic social relationships and organization, the apparent diversity of different African cities and countries can be shown to vary according to quite intelligible, orderly and consistent principles. It is demonstrated that apparently different situations arise from different combinations and influences of the same sets of factors. These factors include centralized political structure, laissez-faire policy towards the growth of a modern city, ethnicity and tribalism.

Findings indicate that ethnicity remains the paramount problem of Africa. Intense feelings and contentions about its presence or absence feed into all situations, especially those of national scene, where, with a few notable exceptions, more and more autocratic leaders are drifting in the direction of military dictatorships.

Speare, Alden, Jr.

(1973)

"Urbanization, non-familial work, education, and fertility in Taiwan." *Population Studies* 27(2):323-334.

"This paper explores the effects of labour force participation, urbanization, and education on the fertility attitudes and behavior of young women. The analysis is based on interviews with 3,590 women in Taiwan, aged 18-39, in the autumn of 1971. The survey differs from previous KAP type surveys in Taiwan in including both married and unmarried women."

It was found that of the three variables studied, education emerged as the most important factor affecting fertility attitudes and behavior. Education had a strong inverse relationship to desired number of children, age at marriage and contraceptive usage. Urbanization appeared to have only a small independent effect on desired fertility once education was controlled, and had little or no effect on the proportion married, contraceptive usage, and children born.

Work experience had very little effect on fertility attitudes and acted mainly to delay marriage and to delay childbearing within marriage.

Standing, Guy and Fred Sukedo

(1977)

"Labour migration and development in Guyana." *International Labour Review* 116(3):303-313.

"Drawing largely on population census returns and other official statistics, the present article provides some basic information on the salient characteristics of migration in Guyana, highlighting the likely implications and briefly describing some of the government programmes likely to affect or designed to reverse the current pattern of migration." The focus is on migration from the agricultural interior to the urbanized coastal plain. P.I.

Steinnes, Donald N.

(1978)

"Causality and migration: a statistical resolution of the 'chicken or egg fowl-up'." *Southern Economic Journal* 45(1):218-225.

This is an important article because it concisely analyzes two conflicting hypotheses concerning migration:

- (1) people follow jobs
- (2) jobs follow people

Statistical analysis indicates that for migration between SMSA's in the U.S. (e.g. metropolitan areas) jobs tend to follow people (population growth) and not vice versa. Similar results are presented by Muth ("Migration: Chicken or Egg." *Southern Economic Journal* 37(3):295-306.) The

idea that jobs follow people was first presented by Borts and Stein (Economic Growth in a Free Market. New York: Columbia University Press.)

Suggested Hypotheses: If these analyses of migration in the U.S. apply also in developing areas, then projects seeking to alter migration flows by changing the spatial distribution of employment are likely to meet with limited success.

Strauss, Murray A.

(1972)

"Family organization and problem solving ability in relation to societal modernization." Journal of Comparative Family Studies 3(1):70-83.

In this paper modernity is assumed to be a variable which is characteristic of individuals and families as well as whole societies. It is further assumed that the modernization of one or more elements of the macro-social structure will influence both individual personality and family structure. The converse is also assumed to be true. If these assumptions are true, then a critical issue is to determine how the process of modernization can be guided so that it is minimally destructive of other human values, including familistic values.

The emphasis in this paper is on "instrumental roles," as indicated by the use of 'problem solving ability,' as one of the variables defining the taxonomy of families. Socialization, social control, and economic resources of the family can aid the modernization process. However, this aid is valuable but not necessary. Modernization can and does take place with any family system, though perhaps more rapidly with some than others. Rather, the main benefit is to avoid, insofar as possible, the conflicts between nation and family and between individual and family which, in the past, have so often characterized the modernization process.

Streeter, Carroll P.

(1973)

"Reaching the developing world's small farmers." New York: Special report for Rockefeller Foundation.

This study concludes that a fertilizer loan program may have slowed rural out-migration in Brazil.

Suggested Hypothesis: Provision of agricultural credit will slow rural out-migration.

Stycos, J. Mayone  
(1978)

"Recent trends in Latin American studies." Population Studies 32(3).

Clear and decisive declines in fertility in several Latin American and Caribbean countries may be signalling changes in long-standing fertility patterns in the region. The role of social and economic development in this decline is not clear and is further complicated by the emergence of organized family-planning programmes. Though in most of the countries in which declines began earliest (Barbados, Chile, Costa Rica, Puerto Rico and Trinidad) birth control programmes were initiated only after the declines had started. A case study of Costa Rica leads to the conclusion that fertility decline there was preceded by marked increases in the proportion of young people completing primary school; that the change was initiated by young married couples living in cantons in which literacy was high and agriculture was declining; and that after the national family-planning programme had been introduced, fertility also tended to fall in regions of comparatively low literacy and little agricultural change. Thus, the national programmes may have accelerated the decline by bringing it to geographical areas and individuals on the fringes of development. The entire process was probably facilitated by certain cultural factors: Costa Rica's more liberal legislation with respect to the commercial distribution of contraceptives, and the greater freedom of Costa Rican women to communicate with their husbands about contraception. The most recent fertility declines, in Colombia, and probably in Mexico, underscore the important role of organized family-planning programmes. A.A.

Sutlive, Vinson H., Jr.  
(1977)

"A comparison of urban migration in Sarawak and the Philippines." Urban Anthropology 6(4):855-869.

"This story analyzes the movements of Iban in Sibuyan, Sarawak, and Cebuanos into Cagayan de Oro, Misamis Oriental, the Philippines, in order to discover common factors influencing urban migration and their significance for a region-wide understanding of urbanization. Data were gathered in Sibuyan from 1969 to 1972, in Cagayan de Oro in 1975." P.I.

Swartz, Marc J.  
(1969)

"Some cultural influences on family size in the three East African societies." Anthropological Quarterly 42(2):73-88.

A few of the aspects of culture affecting desired family size and actual family size in three societies, Bena, Hehe, and Luo are examined together with the interplay

between these and related aspects of social and psychological phenomena. The purposes of the paper are to show how beliefs and values concerning sexuality, the nature of offspring, and the sanctions affecting offspring influence actual and desired family size, and to attempt to account for some differences among the three groups examined according to differences in these beliefs and values. All three societies are seen to understand offspring as "wealth," but differences in the number of children they wish to have are related to beliefs concerning supernatural sanctions affecting the performance of filial duties. Differences in the desire for male as opposed to female offspring are shown to be connected to the meanings attached to marriage and the obligations of daughters and sons toward their parents, as opposed to their spouses and spouses' parents.

Teller, Charles H., William P. Butz, Jorge del Pinal, Hornan Delgado and Robert Klein  
(1977)

"Urbanization, breastfeeding and birth spacing in Guatemala: implications for nutrition policy." Presented at Meetings of the Population Association of America, St. Louis.

The paper explores some of the demographic and nutritional consequences of urbanization and accompanying declining duration of breastfeeding. The data comes from a combined prospective-retrospective study of 1,117 ever-united women, aged 14-49, in four villages and one marginal metropolitan area of Guatemala in late 1974 and early 1975. These results reveal opposite trends in short birth spacing in the village and urban areas: a decrease in the rural and an increase in the urban area. A dramatic decline in the length of breastfeeding in the marginal metropolitan area was evident, while postneonatal mortality did not decline significantly. Regression relationships point to mother's age, education, place of job and economic status as variables associated with variations in breastfeeding.

The findings are consistent with the hypothesis that the sharp trends toward earlier weaning may be instrumental both in creating a larger group of mothers with closely spaced children and also in preventing significant declines in postneonatal mortality in the marginal metropolitan area. Finally, the usefulness of demographic analysis in integrated nutrition planning is discussed.

Thompson, Richard W.  
(1974)

"Rural-urban differences in individual modernization in Buganda." *Urban Anthropology* 3(1):64-78.

Associations between urban residence, formal western education and mass media exposure, and three measures of indi-

vidual modernity are examined using data from three communities which form a rural-intermediate-urban continuum in Buganda. Quantitative results suggest that: 1) rural dwellers express modern values more frequently than urbanites; 2) education and mass media exposure are most effective in inducing the assimilation of modern values in the rural community. An explanation of these results is offered in terms of greater perceived socioeconomic insecurity, feelings of external control, and increased temptations and frustrations experienced by urban dwellers. G.A.

Tirasawat, Penporn  
(1978)

"Economic and housing adjustment of migrants in Greater Bangkok." *International Migration Review* 12(1).

This report is an attempt to investigate the process of adjustment of migrants to the urban way of life, as measured in terms of occupational status and housing conditions. The focus of this study is to determine the extent to which migrants differ from natives with respect to these characteristics.

Data used in the study are from the National Longitudinal Survey conducted by the Institute of Population Studies at Chulalongkorn University in 1969, 1970, 1972 and 1973.

The study shows that migrants generally have higher occupation achievement than natives at the origin. But migrants do not necessarily experience improvements in occupation or housing quality with duration of residence in Bangkok. Their improvements depend on their education and background characteristics, which in turn derive from their place of origin. Even when education is held constant, migrants from urban origins do better than migrants from rural areas. Also, migrants from urban origins are more likely to be in high status occupations than urban natives. These findings suggest that urban origin migrants may be more innovative and may possess high aspirations for upward mobility. The author also suggests that their previous residence may make them more sensitive to the destination's opportunities.

Todaro, Michael  
(1969)

"A model of labor migration and urban unemployment in less developed countries." *American Economic Review* 59(1): 138-48.

This important work presents a theoretical and quantitative model that is a key contribution to economic interpretation of rural-urban migration. The Todaro model suggests that rural-urban migration will continue as long as rural income levels are less than "expected" urban income levels. "Expected" urban income is a function of arbitrarily high

urban sector wages and urban unemployment rates.

**Suggested Hypotheses:** Rural development activities, such as off-farm employment, improved rural marketing, and provision of better rural credit which increases rural incomes will tend to slow rural-urban migration.

(1971)

"Income expectations, rural-urban migration and employment in Africa." *International Labour Review* 104(5):387-413.

The author examines the relationship between migration, expected income differentials, and urban employment in tropical Africa. He begins by briefly presenting a theoretical model of rural-urban migration which places primary emphasis on the economic motivations for migration. This analytical framework, where appropriate, is then used in the main body of the article, which is devoted to an examination and evaluation of alternative short- and long-run policies designed to curtail the massive influx of rural migrants and to alleviate the concomitant growing unemployment problem in urban Africa.

The author's examination had as its common focus and theme the gradual elimination of the wide disparities between "expected" urban and rural real incomes. What is needed if any real impact is to be made on the unemployment problem is not a single policy but a "package" of policies including those whose effects are more immediate, as well as those whose impact will be felt in the longer run. Finally, some programme for controlling excessive population growth is necessary even though this is unlikely to be welcomed by all African governments at the present time. Without such a package of policies, the ubiquitous problem of growing urban unemployment in Africa promises to become economically more severe and politically more explosive in the coming years.

(1976)

*Internal Migration in Developing Countries: A Review of Theory, Evidence, Methodology and Research Priorities.* Geneva: ILO.

This work concentrates on economic theories and empirical studies of migration. It is a good overview of the economic interpretation of migration. The author suggests that rural-urban migration is positively correlated with: level of education, achievement orientation, propensity for risk taking, possession of urban occupational skills, availability of funds to finance migration, desire for economic gain, between rural and urban areas, and distance.

**Suggested Hypotheses:**

- (1) Provision of additional rural education will

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stimulate rural-urban migration.

(2) Off-farm employment will reduce rural-urban migration in the short run; however, acquisition of urban occupational skills can accelerate rural-urban migration in the long run.

(3) Rural participation projects which foster achievement orientation and risk taking by the rural poor will accelerate migration in the long run.

(4) Rural credit, marketing, and area development projects which result in increased rural incomes will slow rural-urban migration.

(5) Activities which strengthen rural-urban economic and social linkages will accelerate migration in the long run.

Uzzell, Douglas  
(1977)

"The myth of bipolar migration." *Ekistics* 263:216-219.

Based on his research in San Andres Zautla in the Oaxaca Valley of Mexico, Uzzell highlights the constant flux among migrants between the village and other places. He suggests that the expectation that migrants permanently move from the country to the city is very inappropriate to most migration contexts. Rather, migration is to be viewed as the movement of individuals in a spatially dispersed societal structure. The entire range of family contacts and residences beyond the village is counted as part of the village options for employment.

Van Es, J. C., Eugene A. Wilkening, Joa Pinto and Bosco Guedes  
(1968)

"Rural migrants in Central Brazil, a study of Itumbiara, Goias." Land Tenure Center Research Paper, No. 29.

The study was undertaken to investigate the migration into and the settlement of rural areas in Central Brazil. The study deals with a) the process of migration; b) characteristics of the emigrants, and c) the process of integration of the migrants at the new locale. The paper includes a description of the migration patterns and characteristics of the migrants, the effect of length of residence at the destination upon various social and economic characteristics of the migrants, and how integration into the social structure is affected by the tenure status of the respondents.

The two most important factors for understanding the migration and settlement process in Itumbiara are the existing system of land tenure and the level of agricultural technology used in the area. Early migrants more often came from nearby areas while the recent migrants are from more distant areas, brought less with them and are of lower social and economic status. The main reasons given by most migrants for leaving their previous places

of residence were declining crop yields or difficulties in obtaining good land. Providing information about new opportunities will help to direct migrants to the best areas and the amount of movement. Moves are made primarily for economic reasons but the state of medical, educational, religious, and other facilities is an important additional reason for remaining in a location or moving to another one. Migration is disruptive to social contact and participation in the political process. In Itumbiara, the family and the church helped to provide the personal contact and support for the migrants.

Weisner, Thomas S.

(1976) "The structure of sociability: urban migration and urban-rural ties in Kenya." *Urban Anthropology* 5(2):199-223.

Rural-urban migration in Kenya often involves men who participate in both city and country economies during their life cycle. These ties are facilitated by patrilineal, patrilocal horticultural economies which continue to offer rural alternatives to both urban migrants and rural returnees from the city. Such a periodic migration cycle is likely to lead to strong rural-urban social ties rather than isolated urban enclaves or very different urban and rural interaction patterns. Data from a sociometric analyses of a matched rural-urban network sample indicate (in order of importance): 1) such rural-urban networks are highly interconnected, and 2) three dimensions structure the social ties within the network: clan affiliations, social status indicators, and urban or rural residence. A.A.

Weist, Raymond E.

(1973) "Wage labor migration and the household in a Mexican town." *Journal of Anthropological Research* 29(3):180-209.

This study of wage-labor migration and its relation to household composition and economics is based on a sample of 70 households in a central Mexican town. Specific types of migration are linked to job locations within Mexico or the United States and to the amount and reliability of remittances. The latter two factors are critical in determining the impact of labor migration on the household. New facets of the association of female household headship and out-migration are presented. A predictive model in the form of a flow diagram illustrates the interrelationship of variables. G.A.

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Weitz, Raanan  
(1971)

From Peasant to Farmer: A Revolutionary Strategy for Development. Twentieth Century Fund Study, New York: Columbia University Press.

The author "stresses the human factor in rural development: the . . . successful strategy for hastening development must be one based on the preservation of the attitudes and values of tribes and villages. . . Weitz offers practical guidelines for turning this principle into practice. He examines farm structure and operations, agro-technical innovations, cooperation, and other dimensions of rural institution-building, and emphasizes . . . practical methods for stimulating interest, encouraging local leadership, obtaining cooperation, and designing and executing plans." B.R.D.

Whiteford, Scott and Richard N. Adams  
(1975)

"Migration, ethnicity, and adaptation: Bolivian migrant workers in Northwest Argentina." in DuToit and Safa (eds.), Migration and Urbanization. The Hague: Mouton.

The authors argue that human beings seek to improve their control over their environment, that higher level organization provides better control than lower level organization, and that consequently, individuals seek participation in a more complex organization. The analysis consists of comparing a typology of Bolivian migrant labor elaborated by Whiteford with a model of organization types (operating units) devised by Adams.

The significance of the tendency to move into societal situations permitting greater degrees of organization is interpreted as having more to do with the evolutionary process than with questions of motivation.

Wilkie, Richard W.  
(1971)

"Toward a behavioral model of peasant migration: an Argentine case study of spatial behavior by social class level." in R. N. Thomas (ed.), Population Dynamics of Latin America: A Review and Bibliography. University of Massachusetts Press for the Conference of Latin American Geographers.

The purpose of this study is to demonstrate class related differences in migration behavior. The author hypothesizes that the lower class has a more limited spatial awareness, thus their migration decisions are limited to only known places.

Analysis of survey data for a rural Argentine community shows that clear-cut class differences exist within the

rural community. The highest proportions of migrants derive from the lower class, but the largest absolute numbers come from the middle class. Typical lower class migrants are older, go to larger cities of 30-70,000 persons, and are less likely to be repeat movers. Lower class migrants base their decision on economic needs and can only afford to go to the known destination. Lower class migrants have fewer destinations from which to choose because their awareness space is limited by fewer urban contacts or visits. This limited information may also account for a higher rate of return among the lower class migrants, in that the migration decision may have been based on faulty information. Lower class females move short distances while the males move longer distances.

Middle class migrants are unlike the lower or upper class migrants in that they are greater risk takers, are interested in controlling their lives, and have a perception of being able to actively influence their environment. The middle class migrants have the highest degree of spatial awareness and the combination of spatial awareness and risk taking leads the middle class migrants to choose lesser known destinations. Middle class males choose both small urban and metropolitan destinations.

Williams, Anne  
(1976)

"Determinants of fertility in developing countries: review and evaluation of the literature." in Michael Keeley (ed.), Population, Public Policy, and Economic Development. New York: Praeger.

This review of the literature concluded that at best there is a weak negative relationship between migration and fertility. Other factors, especially education, are overwhelmingly more significant in reducing fertility.

Suggested Hypothesis: Rural to urban migration has a slight, but unimportant negative effect on fertility.

Wolpert, Julian  
(1965)

"Behavioral aspects of the decision to migrate." Papers of the Regional Science Association 15:159-169.

This paper is a critique of various model building attempts aimed at solving the problems that migration can cause. The author describes sufficient changes from previous patterns of migration streams in the United States to warrant some reexamination and reevaluation of model building attempts in migration analysis. When flows of migration are disaggregated, the necessity to determine unique weights for areas and unique distance functions for subgroups of in-and-out migrants increased. It appears,

therefore, that understanding and prediction of migration streams requires that one determine the constants in migration behavior. These constants should be distinguished from the variables with respect to population composition and place characteristics which evolve differentially over time. Similarly, the utility to the population subgroups of specific origins and destinations shifts over the long term but remains relatively constant in the short run. For long term forecasting, exogenous measures of economic trends in specific places would be necessary inputs. This comparison was clear indication that poverty evolved as the result of ecological and population forces. In each case particular socioeconomic factors such as land tenure arrangements, tenancy rules and rates, marketing organization, and social structure condition the specific manifestation of poverty.

(1966) "Migration as an adjustment to environmental stress."  
Journal of Sociological Issues 22(4):92-162.

"This analysis returns to primitive notions in examining the evaluative process which precedes the decision to move or stay. The model which is suggested reflects an attempt to structure the ecological relationship between individuals and their social and physical environment on a 'continuum of harmony' in the matching of individuals to sites. Emphasis in the model is given to the urban environment and most especially to situations of urban threat and stress."

The author suggests possible environmental conditions relevant to large metropolitan areas. These are: 1) noisy-tranquil; 2) danger-security; 3) green-gray; 4) exciting-dull; 5) open-congested; and 6) information overload-underload. The model is not tested empirically in this study.

Yap, Lorene  
(1975)

"The attraction of cities: a review of the migration literature." Journal of Development Economics 4:239-264.

Reviews the empirical literature on migration within developing countries. Points out that migrants are often a substantial fraction of the urban population, which suggests that jobs are being created somehow for the migrants. Specifies that migration is generally considered to be positively related to education level, economic opportunities, and availability of information concerning potential destinations.

Suggested Hypotheses:

(1) Provision of additional education in rural areas will accelerate rural-urban migration.

(2) Provision of employment information in rural areas can guide migrants to appropriate urban destinations and therefore facilitate their adaptation to the urban environment.

(3) Generation of off-farm employment will slow rural-urban migration.

(4) Programs which increase agricultural productivity and income (such as provision of credit and improved marketing systems) will slow rural-urban migration.

Yengoyen, Aram A.  
(1974)

"Demographic and economic aspects of poverty in the rural Philippines." *Comparative Studies in Society and History* 16(1):58-72.

The aim of this paper is to discuss how regional, economic, and population factors such as types of cultivation and labor requirements influence the variety and intensity of rural poverty in the rural Philippines. In particular the hypothesis under investigation is that where a landscape is economically committed to a single cropping activity which is highly labor intensive, the worst aspects of rural poverty commonly emerge. Furthermore, where a regional landscape is characterized by a diversity of agricultural patterns, the scale and character of rural poverty is different or at least different in magnitude.

To analyze how demographic, economic and ecological factors affect poverty, a comparison is made of two contrasting cases in which differential processes should indicate how poverty evolves and grows. The comparison is between Capiz and Negros Occidental. In each case the economic structure, populations and the partial effect of economic options on the character of the rural social environment are examined.

Zarate, Alvan  
(1967)

"Some factors associated with urban-rural fertility differentials in Mexico." *Population Studies* 21(3):283-293.

A correlation analysis assessed the effects of variations in five factors upon variations in urban-rural fertility differentials between 23 Mexican urban and rural areas. City growth and literacy differentials are significantly related to the size of the fertility differential. However, their effect appears to be indirect; brought about by the association between city growth and differentials in sex ratios, age at marriage and the percentage married.

These findings suggest that variations in urban-rural fertility differentials are related to differentials in age at marriage, the percentage married, and the physical availability of marriage partners. Moreover, all three are

associated with the rate of urban growth. This analysis also suggests that the significance of urban-rural fertility must be assessed with caution. Urbanization may indeed result in a larger proportion of the population participating in an urban culture which is conducive to lower fertility. It may also result in demographic imbalances being modified by shifts in population distribution and composition and variations in the social structure of urban areas.

Zarate, A. and A. Unger de Zarate

(1975)

"On the reconciliation of research findings of migrant-nonmigrant fertility differentials in urban areas."  
International Migration Review 9(2):115-156.

This review of studies comparing migrant with nonmigrant fertility attempts to resolve the inconsistent findings in the empirical literature. Concludes that many of the inconsistent findings are due to differences in methods and especially the measurement of fertility. Studies of younger migrants tend to measure current fertility which is lower than nonmigrants. Studies using completed fertility are of older migrants which tend to have higher fertility than nonmigrants.

Suggested Hypothesis: Current fertility of young migrants is lower but completed fertility of older migrants ends up higher than nonmigrants. Migration delays reproductive behavior.

**ADDITIONAL REFERENCES**

- Abu-Lughod, Janet  
"The emergence of differential fertility in urban Egypt." *Milbank Memorial Fund Quarterly* 63(2), 1965:235-249.
- Adepoju, Aderanti  
"Migration and socioeconomic links between urban migrants and their home communities in Nigeria." *Africa* 44(4), 1974:383-396.
- Ahmed, Iftikhar  
"The green revolution and tractorization: their mutual relations and socioeconomic effects." *International Labour Review* 114(1), 1976:83-94.
- Aiaegbu, H. I.  
"Population growth and economic development in Nigeria." in S. Ominde and N. Euogu (eds.), *Population Growth and Economic Development in Africa*. London, England: Heinemann Books.
- Akinbode, Isaac  
"Changes in Nigerian rural communities and their impact on population." *Seminar of Population Problems and Policy in Nigeria*, March, 1971.
- Baker, Tanya and Mary Bird  
"Urbanization and the position of women." *The Sociological Review* 7, 1969:99-102.
- Balakrishnan, T. R.  
"Determinants of female age at marriage in rural and semi-urban areas of four Latin American countries." *Journal of Comparative Family Studies* 7(2), 1976.
- Bamberger, Michael, Mara del Negro and George Gamble  
"Employment and contraceptive practice in selected barrios of Caracas." Washington, D.C.: Smithsonian Institution, 1976.
- Benjamin, Noel  
"The role of land settlement in the economic development of West Malipia, 1957-70." *Development and Change* 9(4), 1978:581-598.
- Boserup, Ester  
*Woman's Role in Economic Development*. London: George Allen and Unwin, Ltd., 1976.
- Boswell, Thomas J.  
"Municipio characteristics as factors affecting internal migration in Puerto Rico: 1935-40." unpublished paper, Department of Geography, University of Florida.
- Bouvier, Leon F., John J. Macisco, Jr., and Alvan Zarate  
"Toward a framework for the analysis of differential migration: the case of education." in A. H. Richmond and D. Kubat (eds.), *Internal Migration: The New World and The Third World*. Beverly Hills: Sage Publications.

- Bouvier, Leon and Shirley S. Rosenberg, (eds.)  
The Dynamics of Migration: Internal Migration and Migration and Fertility. ICP Monographs 5(1). Washington, D.C.: Smithsonian Institution, 1976.
- Boyd, Monica  
"Occupational mobility and fertility in metropolitan America." Demography 10(1), 1973:1-18.
- Brigg, Pamela  
"Some economic interpretations of case studies of urban migration in developing countries." World Bank Staff Working Paper No. 151, Washington, D.C., 1973.
- Brown, Lawrence A., Edward J. Malecki and Susan Gustavus Philliber  
"Awareness of space characteristics in a migration context." Environment and Behavior 9(3), 1977:335-348.
- Browning, Harley L.  
"Migrant selectivity and the growth of the large cities in developing societies." Rapid Population Growth: Consequences and Policy Implications: II. Baltimore: National Academy of Sciences by Johns Hopkins University Press.
- Caldwell, John C.  
"A theory of fertility: from high plateau to destabilization." Population and Development Review 4(4), 1978.
- Caldwell, John C.  
"Fertility and the household economy in Nigeria." Journal of Comparative Family Studies 7(2), 1976.
- Carleton, Robert O.  
"Labor force participation: a stimulus to fertility in Puerto Rico?" Demography 2(3), 1965:233-239.
- Carroll, Thomas F.  
"Group credit for small farms." Small Farmer Credit: Analytical Papers, 19(June), 1973.
- Carvajal, Manuel J.  
Economic Aspects of Fertility and Alternative Approaches: Costa Rica, A Case In Point. College of Business Administration, University of Florida.
- Chaney, Elsa M.  
"Agrepina: domestic service and its implications for development." Paper presented at the First Mexican-Central American Symposium on Research on Women, Mexico City, November, 1977.
- Chen, Pi-Chao  
"China's population program at the grass roots level." Studies in Family Planning 4(8), 1973.

- Clignet, Remi and Joyce Sween  
"Urbanization, plural marriage, and family size in African cities."  
American Ethnologist 1(2), 1974:221-242.
- Cline, William R.  
"Policy instruments for rural income redistribution." in Frank  
and Webb (eds.), Income Distribution and Growth in Less Developed  
Countries. Washington, D.C.: Brookings Institute.
- Cochrane, Susan  
Fertility and Education: What Do We Really Know? Baltimore,  
Maryland: Johns Hopkins University Press with the World Bank.
- Collier, P. and J. M. Green  
"Migration from rural areas of developing countries: a socioeconomic  
approach." Oxford Bulletin of Economics and Statistics 40(1),  
1978:23-26.
- Collver, Andrew and Eleanor Langlois  
"The female labor force in metropolitan areas: an international  
comparison." Economic Development and Cultural Change 10(4),  
1962:367-385.
- Connell, John  
"Economic change in an Iranian village." Middle East Journal 28(3),  
1974.
- Cornelius, Wayne A.  
Politics and the Migrant Poor in Mexico City. Stanford, California:  
Stanford University Press.
- Da Vanzo, Julie  
"Does unemployment affect migration? Evidence from micro-data."  
Review of Economics and Statistics 60(4), 1978:504-514.
- Da Vanzo, Julie  
The Determinants of Family Formation in Chile, 1960: An Econo-  
metric Study of Female Labor Force Participation, Marriage and  
Fertility Decisions. Santa Monica, California: Rand Corporation,  
R-830-AID, August 1972.
- Davis, Kingsley and Judith Blake  
"Social structure and fertility: an analytical framework."  
Economic Development and Cultural Change 4, 1956:211-235.
- DeJonge, Klaas, Jos van der Klei, Henk Meilink and Jan Roeland Storm  
Les Migrations en Basse Casamance, Senegal. Leyden, Netherlands:  
Provisional Report, Centre for African Studies.
- Dorjahn, Vernon R.  
"Temne household size and composition: rural changes over time  
and rural-urban differences." Ethnology 16(2), 1977.

- Dorner, Peter  
Land Reform and Economic Development. New York: Penguin Books.
- Dow, Thomas E., Jr. and Eugene Benjamin  
"Demographic trends and implications of population growth in Sierra Leone." in John C. Caldwell (ed.), Population Growth and Socioeconomic Change in West Africa. New York: Columbia University Press.
- Dozier, Craig C.  
Land Development and Colonization in Latin America: Case Studies of Peru, Bolivia, Mexico. New York: Praeger Publishers.
- DuGuerny, J. and C. Horgan  
Factors Affecting Migration and Implications for Population Redistribution Policies and Programmes. FAO/UNFPA/ASEAN Technical Workshop of Migration in Relation to Rural Development in Asian Countries, Bangkok, Thailand, November 1977.
- Eckstein, Susan  
"The political economy of lower class areas in Mexico City: societal constraints on local business prospects." in Wayne Cornelius and Felicity Trueblood (eds.), Urbanization and Inequality: The Political Economy of Urban and Rural Development in Latin America. Beverly Hills, California: Sage Publications (Latin American Urban Research).
- Ewbank, Douglas  
Indicators of Fertility Levels in Tanzania: Differentials and Trends in Reported Parity and Childlessness. presented at the Population Association of America Meetings, April 1977.
- Falaris, Evangelos M.  
"The determinants of internal migration in Peru: an economic analysis." Economic Development and Cultural Change 27(2), 1979.
- Figueroa, A.  
"Income distribution, demand structure and employment: the case of Peru." Journal of Development Studies January, 1975:20-31
- Fischer, Claude S.  
The Urban Experience. New York: Harcourt, Brace and Jovanovich.
- Fortman, Louise  
"Women and Tanzanian agricultural development." Economic Research Bureau, University of Dar es Salaam E.R.B. paper 77.4, 1978.
- Foster, Phillip J.  
Education and Social Change in Ghana. Chicago, Illinois: University of Chicago Press.

- Freedman, Deborah S.  
"Mass media and modern consumer goods: their suitability for policy interventions to decrease fertility." in Ronald G. Ridker (ed.), Population and Development: The Search for Selective Interventions. Baltimore, Maryland: Johns Hopkins University Press.
- Gadgil, Dhananyaya  
"Women in the working forces of India." Kunda Data Memorial Lecture Series, Delhi University. Bombay, India: Asia Publishing House.
- Goldstein, Sidney, Visid Prachuabmoh and Alice Goldstein  
"Urban-rural migration differentials in Thailand." (Research Report No. 12), Institute of Population Studies, Chulalongkorn University, Chulalongkorn, Thailand.
- Greenwood, Michael J.  
"Simultaneity bias in migration models: an empirical examination." Demography 12(3), 1975.
- Gronau, Rueben  
"The effects of children on the housewife's value of time." Journal of Political Economy 81(2), Part II, 1973:168-199.
- Gwan, Emmanuel Achu  
"Types, processes, and policy implications of various migrations in Western Cameroon." ICP Monograph 5(1). Washington, D.C.: Smithsonian Institution, 1976.
- Hackenberg, Robert A.  
"The poverty explosion: population increase and income decline in Davao City." Mimeograph, 1974.
- Harris, John R. and Michael P. Todaro  
"Migration, unemployment and development: a two-sector analysis." The American Economic Review 60(1), 1979:126-142.
- Herrick, B.  
Urban Migration and Economic Development in Chile. Cambridge, Massachusetts: Massachusetts Institute of Technology Press.
- Holsinger, Donald B. and John D. Kasarda  
"Education and human fertility: sociological perspectives." in Ronald G. Ridker (ed.), Population and Development: The Search for Selective Interventions. Baltimore, Maryland: Johns Hopkins University Press.
- INTERMET and IDRC  
Towndrift: Social and Policy Implications of Rural-Urban Migration in Eight Developing Countries. Toronto, Canada: International Association for Metropolitan Research and Development.

- Jacobson, David  
"Mobility, continuity, and urban social organization." *Man* 6(4), 1971:630-645. Reprinted in John Friedly and Noel J. Chrisman (eds.), *City Ways: A Selective Reader in Urban Anthropology*. New York: Thomas Y. Crowell Company.
- Jelin, Elizabeth  
"Migration and labour force participation of Latin American women: the domestic servants in the cities." in Wellesley Editorial Committee (eds.), *Women and National Development*. Chicago: University of Chicago Press.
- Johnson, E. A. J.  
*The Organization of Space in Developing Countries*. Cambridge, Massachusetts: Harvard University Press.
- Johnson, William S., Ahmad Sanusi and Joseph B. Tamney  
*Transmigration Potential in Indonesia*. ICP Monograph 5(1). Washington, D.C.: Smithsonian Institution, 1976.
- Jones, Richard C. and Georgia Zannaras  
"Perceived versus objective urban opportunities and the migration of Venezuelan youths." *Annals of Regional Science* 10(1), 1976:83-97.
- Kapferer, Bruce  
"Social network and conjugal role in urban Zambia: towards a reformulation of the Bott hypothesis." in Jeremy Boissevain and J. Clyde Mitchell (eds.), *Network Analysis: Studies in Human Intervention*. The Hague: Mouton.
- Kelley, Jonathon, Herbert S. Klein and R. V. Robinson  
"Social mobility in peasant society: rural Bolivia." presented at the American Sociological Association Meetings, Chicago, Illinois, 1977.
- Kimmerling, Baruch  
"Subsistence crops, cash crops, and urbanization: some materials from Ghana, Uganda and Ivory Coast." *Rural Sociology* 36, 1971:471-487.
- Kocher, James E.  
"Rural development and demographic change in northeastern Tanzania." *New Perspectives on the Demographic Transition*. ICP Monograph No. 4. Washington, D.C.: Smithsonian Institution, 1976.
- Kocher, James E.  
*Rural Development, Income Distribution and Fertility Decline*. New York: The Population Council.
- Koo, Hagen  
"Small entrepreneurship in a developing society: patterns of labor absorption and social mobility." paper prepared for presentation at the American Sociological Association Meetings in San Francisco, August, 1975.

- Lefferts, H. Leedom, Jr.  
"Migration in Isan: information diffusion and structure response in Northeast Thailand." presented at the Society for Applied Anthropology, 32nd Annual Meeting, April 1973.
- Lele, Uma  
The Design of Rural Development; Lessons from Africa. Baltimore, Maryland: Johns Hopkins University Press for the World Bank.
- Levy, Mildred B. and Walter J. Wadycki  
"What is the opportunity cost of moving? Reconsideration of the effects of distance on migration." Economic Development and Cultural Change 22(2), 1974.
- Levy, Mildred B. and Walter J. Wadycki  
"The influence of family and friends on geographic labor mobility: an international comparison." The Review of Economics and Statistics 55(May), 1973:198-203.
- Li, Wen L.  
"Temporal and spatial analysis of fertility decline in Taiwan." Population Studies 27(1), 1973.
- Lin, Nan and Ronald S. Burt  
"Roles of differential information channels in the process of innovation diffusion." paper presented at the 68th Annual Meeting of the American Sociological Association, August 1973.
- Little, Kenneth  
African Women in Towns. An Aspect of Africa's Social Revolution. Cambridge, England: Cambridge University Press.
- Lomnitz, Larissa Adler and Marisol Perez Lizaur  
"The history of a Mexican urban family." The Journal of Family History 3(4), 1978:392-409.
- Lopez, Maria Elena and Mary R. Hollensteiner  
"People on the move: urban migrant adaptation to Manila residence." paper prepared for the Experts' Meeting on Philippine Population Research, October 1974.
- Mabogunje, Akin L.  
"Systems approach to a theory of rural-urban migration." Geographical Analysis 2(1), 1970:1-18.
- Mattessich, Paul and Reuben Hill  
"Family enterprise and societal development: a theoretical assessment." Journal of Comparative Family Studies 7(2), 1976.
- McGee, T. G.  
The Place of Street Vendors in the Social and Economic Structure of Asian Cities. Department of Geography, University of Hong Kong.
- McLuhan, Marshall  
The Medium is the Message. New York: Bantam Books, Inc.

- Mellor, John W.  
The New Economics of Growth: A survey for India and the Developing World. Ithaca, New York: Cornell University Press.
- Merrick, Thomas W.  
"Fertility and land availability in rural Brazil." Demography 15(3), August 1978.
- Midgley, David F. and Grahame R. Dowling  
"Innovativeness: the concept and its measurement." Journal of Consumer Research 4(March), 1978:229-242.
- Morawetz, D.  
"Employment implications of industrialization in developing countries: a survey." The Economic Journal 84(335), 1974.
- Mueller, Eva  
"The economic value of children in peasant agriculture." in Ronald G. Ridker (ed.), Population and Development: The Search for Selective Interventions. Baltimore: Johns Hopkins University Press.
- Nance, James and R. N. Thomas  
"Place factors as a fertility differential: an Honduran example." in R. N. Thomas (ed.), Dynamics in Latin America. Conference of Latin American Geographers, 1971.
- Nerlove, Marc  
Economic Growth and Population: Perspectives of the 'New Home Economics'." New York: A/D/C Reprint, November 1974.
- Nerlove, Sara B.  
"Women's workload and infant feeding practices: a relationship with demographic implications." Ethnology 13(2), 1974.
- Oppong, Christine  
"An exploratory note on financial constraints and desired family size." Canadian Journal of African Studies 10(3), 1976.
- Owens, Gene M. and Wayne Weiss  
"Institutionalizing local participation for agrarian development: the ASIP Model and new Latin American experiences." revised version of a paper prepared for the annual conference of the American Society for Public Administration, Chicago, Illinois, April 1975.
- Papanek, Gus  
"The poor of Jakarta." Economic Development and Cultural Change 24(1), 1975:1-27.
- Plotnicov, Leonard  
"Nigerians: the dream is unfulfilled." in William Mangin (ed.), Peasants in Cities. Boston, Massachusetts: Houghton Mifflin.
- Pryor, Robin J.  
"Population redistribution and development planning in Southeast Asia." International Geographical Union New Zealand Regional Conference, Massey University, Palmerston North, December 1974.

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- Reed, David and Allan Schnaiberg  
"Poverty, uncertainty, and childbearing: a contextual analysis."  
paper prepared for the Annual Meeting of the American Sociological  
Association, New York, August 1973.
- Rhoda, Richard  
"Migration of educated youth in rural areas in Ghana." Ph.D.  
Dissertation, University of Iowa, Iowa City, 1978.
- Rich, William  
Smaller Families Through Social and Economic Progress. Overseas  
Development Council, Monograph No. 7. 1973.
- Riddell, J. Barry  
"On structuring a migration model." Geographical Analysis 2(4), 1970.
- Roberts, Bryan R.  
"Center and periphery in the development process: the case of  
Peru." in Wayne Cornelius and Felicity Trueblood (eds.), Urbanization  
and Inequality: The Political Economy of Urban and Rural Development  
in Latin America. Beverly Hills, California: Sage Publications  
(Latin America Urban Research).
- Roberts, Bryan R.  
Organizing Strangers: Poor Families in Guatemala City. Austin:  
University of Texas Press.
- Rutherford, Robert D.  
"Population aspects of social development." Asian Population Studies,  
Series No. 11 United Nations ECAFE. E/CN. 11/1049. October 1972.
- Safilios-Rothschild, Constantina  
"The relationship between work commitment and fertility."  
International Journal of Sociology of the Family. Lucknow, India:  
Lucknow Publishing House.
- Salisbury, Richard F. and Mary E. Salisbury  
"The rural oriented strategy of urban adaptation: some migrants in  
Port Moresby." Society for Applied Anthropology Monograph Series,  
11, 1972:59-68.
- Sawyer, Donald R.  
"Penetration roads and population growth: patterns of migration and  
settlement on the Belem-Brasilia Highway." unpublished B.A.  
thesis submitted to Harvard University, March 1967.
- Schultz, T. Paul  
"Interrelationships between mortality and fertility." in Ronald  
G. Ridker (ed.), Population and Development: The Search for  
Selective Interventions. Baltimore, Maryland: Johns Hopkins  
University Press.
- Schultz, T. Paul  
"A preliminary survey of economic analysis of fertility." American  
Economic Review 63(2), 1973:71-90.

Schultz, T. Paul

"Rural-urban migration in Colombia." Review of Economics and Statistics 53(May), 1971.

Segal, Edwin S.

"Ethnic variables in East African urban migration." Urban Anthropology 2(2), 1973:194-204.

Shaw, R. Paul

"On modifying metropolitan migration." Economic Development and Cultural Change, 26(July), 1978:677-692.

Simmons, Allen B.

"Slowing metropolitan city growth in Asia: a review of policies, programs, and results." paper presented at the ECLA/CELADE Seminar on Population Redistribution, United Nations Economic Commission for Latin America, Santiago, Chile, August 1978.

Simmons, Allen B.

"Opportunity space, migration and economics: a critical assessment of research on migrant characteristics and their impact on rural and urban communities." in Alan Gilbert (ed.), Spatial Analysis of Development and Change. Sussex, England: John Wiley and Sons.

Simmons, Allen B.

"Ambivalence toward small families in rural Latin America." Social Biology 21(2), 1974.

Simmons, Allen B.

"Social mobility in Bogota, Colombia." International Journal of Comparative Sociology 16(3-4):228-245.

Simmons, Allen, Sergio Diaz Briquets and Aprodicio A. Laquian

Social Change and Internal Migration: A Review of Research Findings from Africa, Asia, and Latin America. Ottawa: International Development Research Centre.

Skeldon, Ronald

"The evolution of migration patterns during urbanization in Peru." Geographical Review 67(October), 1977:394-411.

Slesinger, Doris

"The relationship of fertility to measures of metropolitan dominance: a new look." Rural Sociology 39(3), 1974.

Smith, Margo L.

"Domestic service as a channel of upward mobility for the lower class woman: the Lima case." in Ann Pescatello (ed.), Female and Male in Latin America. Pittsburgh: University of Pittsburgh Press.

Southall, Aidan

"Forms of ethnic linkage between town and country." in Brian du Toit and Helen Safa (eds.), Migration and Urbanization. The Hague: Mouton.

- Southall, Aidan  
"Urban migration and the residence of children in Kampala." in William Mangin (ed.), Peasants in Cities. Boston, Massachusetts: Houghton Mifflin.
- Speare, Alden, Jr.  
"Urbanization and migration in Taiwan." Economic Development and Cultural Change 22(2), 1974.
- Standing, Guy  
"Aspiration wages, migration and urban unemployment." Journal of Development Studies, 14(January), 1978:232-248.
- Stinner, William F.  
"Modernization and family extension in the Philippines: a social demographic analysis." preliminary draft, presented at the American Society Association Meetings, Chicago, September 1977.
- Strassman, W. Paul  
"Measuring the employment effects of housing policies in developing countries." Economic Development and Cultural Change 24(3), 1976.
- Stycos, J. Mayone and Robert H. Weller  
"Female working roles and fertility." Demography 4(1), 1967:210-217.
- Sutton, Keith  
"Population resettlement: the Algerian experience." Ekistics 45(267), February 1978:59-65.
- Taylor, R. C.  
"Migration and motivation." in J. A. Jackson (ed.), Migration. Cambridge, England: Cambridge University Press.
- Ternent, J. A. S.  
"Urban concentration and dispersal: urban policies in Latin America." in Alan Gilbert (ed.), Development Planning and Spatial Structure. London: John Wiley and Sons.
- Thompson, Richard W.  
"Fertility aspirations and modernization in urban Uganda: a case of resilient values." Urban Anthropology 7(2), August 1978.
- Tienda, Marta  
"Familism and structural assimilation of Mexican immigrants in the United States." (Center for Demography and Ecology, Working Paper 79-11), presented at the Population Association of America Meetings, Philadelphia, Pennsylvania, 1979.
- Tienda, Marta  
"The economic activity of children in rural and urban Peru: labor force behavior in a familial context." presented at the Rural Sociological Society Meetings, Madison, Wisconsin, September 1977.

Uchenda, Victor C.

"Inter-rural migration and East African rural development." paper prepared for presentation at Seminar on Town and Country in Central and Eastern Africa, University of Zambia, Lusaka, September, 1972.

United Nations

"Population policies and programmes." E/CONF/.60/CBP 21(June), 1974.

Uzell, Douglas

"A strategic analysis of social structure in Lima, Peru using the concept of plays." Urban Anthropology 13(1), 1974:34-46.

Van Arsdol, Maurice D., Jr., Nadia Youssef, Michel Antochiw, Dennis Berg and John Brennen, Jr.

Migration and Population Redistribution in the State of Mexico. ICP Monographs 5(1). Washington, D.C.: Smithsonian Institution, 1976.

Van Dusseldorp, D. B. W. M.

"Planning of service centers in rural areas of developing countries." International Institute for Land Reclamation and Improvement, Publication No. 15, 1971.

Vinokur-Kaplan, Diane

"To have or not to have another child: family planning attitudes, intentions, and behavior." Journal of Applied Social Psychology 8(1), 1978.

Visaria, Pravin M.

"Urbanization, migration and fertility in India." in The Family in Transition. Proceedings No. 3, Roundtable Conference, John E. Fogarty International Center for Advanced Study in the Health Sciences, National Institute of Health, Bethesda, Maryland: Government Printing Office, November 3-6, 1969.

Whyte, William Foote

"Potatoes, peasants and professors: a development strategy for Peru." Ekistics 45(267), 1978:52-59.

Wilkening, Eugene A.

"Comparison of migrants in two rural and an urban area of Central Brazil." Land Tenure Research Paper No. 35. University of Wisconsin, November 1968.

Wilkie, Richard W.

"Urban growth and the transformation of the settlement landscape of Mexico, 1910-1970." paper presented at the Fourth International Congress of Mexican Studies, October 1973.

Zarate, Alvan

"Differential fertility in Monterrey, Mexico: prelude or transition?" Milbank Memorial Fund Quarterly, 45, 1967:93-108.

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