OCCASIONAL PAPERS 5

Demographic and Health Surveys

Urban Women's Employment Trajectories in Ghana and Bolivia

MACRO INTERNATIONAL INC.

The Demographic and Health Surveys (DHS) is a 13-year project to assist government and private agencies in developing countries to conduct national sample surveys on population and maternal and child health. Funded primarily by the United States Agency for International Development (USAID), DHS is administered by Macro International Inc. in Calverton, Maryland.

The main objectives of the DHS program are to: (1) promote widespread dissemination and utilization of DHS data among policymakers, (2) expand the international population and health database, (3) advance survey methodology, and (4) develop in participating countries the skills and resources necessary to conduct high-quality demographic and health surveys.

For information about the Demographic and Health Surveys program, write to DHS, Macro International Inc., 11785 Beltsville Drive, Calverton, MD 20705-3119, U.S.A. (Telephone 301-572-0200; Fax 301-572-0999).

URBAN WOMEN'S EMPLOYMENT TRAJECTORIES IN GHANA AND BOLIVIA

Sunita Kishor

Macro International Inc.
Calverton, Maryland

April 1996

The recommended citation for this publication is:

Kishor, Sunita. 1996. *Urban Women's Employment Trajectories in Ghana and Bolivia.* Occasional Papers No. 5. Calverton, Maryland: Macro International Inc.

Contents

Page

Tables

Figures

Acknowledgments

This research was carried out primarily with funds provided to the Demographic and Health Surveys project by the Office of Women in Development (WID) of the United States Agency for International Development. I am grateful to Debra Schumann and Ann Blanc for their interest and helpful comments. I also thank Trina Yannicos and Aylene Kovensky (editing), Kaye Mitchell and Betty Thomas (typesetting), and Elisa Piñero (graphics) for their support.

Executive Summary

Demographers and development theorists alike underscore the importance of women's labor force participation for the autonomy and status of women, for fertility control, and for the achievement of developmental goals. However, research reveals that there is no necessary consistency across nations and cultures in the relationship between women's labor force participation and social objectives such as increased women's status, economic development, and lower fertility. Indeed, the very existence of a relationship at all depends on the type, continuity, and intensity of women's labor force activity.

More specifically, the translation of labor force participation into social and economic gains at the levels of both the individual woman and society, is likely to be a function of various factors, such as whether women earn cash or not for the work they do, the kind of work they do, and the extent of commitment and continuity in their work histories. Working for cash is more likely to translate into autonomy and empowerment for women than not working or not working for cash, whereas continuous labor force commitment is linked to higher wages and access to good jobs. Human capital theorists, especially, have argued that without continuous labor force participation, specialized human capital embodied in the individual in the form of training and education is eroded, and the gains from accumulation of an individual's work experience are lost. The negative impact of women's labor force participation on fertility is also most plausible where women tend to be continuously committed to the labor force and are employed in full-time jobs incompatible with childrearing. It is such labor force involvement that is likely to both create incompatibility between the roles of mother and worker, as well as increase the opportunity costs of bearing and rearing children.

Despite this implicit understanding that the labor force participation of women is likely to have its strongest impact on other socially desired outcomes when women are highly committed to the labor force, very little is known about the nature, the intensity, and the continuity in women's labor force participation in developing countries. This study attempts to fill this gap using data from the recode files of the 1988 Ghana (GDHS) and the 1989 Bolivia Demographic and Health Survey (BDHS) (GSS and IRD, 1989; INE and IRD, 1990). Specifically, the following questions are addressed:

- What is the nature of women's current employment in Ghana and Bolivia, and how does it differ across the two countries?
- How do women who have had at least one birth pattern their labor force participation across different birth intervals in the two countries?
- Within a multivariate analytical framework, what factors account for the variation in current employment and the different patterns of labor force interaction over time, within and across the two countries?

In both the GDHS and the BDHS, a woman is considered employed only if she is working for money and not on a farm or business run by her family. Information on women's employment is available at four possible points of time: 1) between marriage and the first birth, 2) between the ante-penultimate and the penultimate birth, 3) between the last birth and the penultimate birth, and 4) at the current time (which serves as a proxy for the interval after the last birth).

Thus, the number of observation points in the employment histories of women are not time dependent, but parity dependent—women with one birth yield two points of observation, women with two births yield three, and women with three or more births yield all four points of observation. At each observation point there is information on whether or not the woman was employed, and if so, whether she was working regularly or irregularly, and what her occupation was.

If women's labor force interaction is modelled in terms of strategies women use to combine labor force participation and life course demands, then we can think of women's work trajectories in at least three ways: as combinations of periods of work and no work; periods of regular work, irregular work and no work; or in terms of movement between occupations. The distribution of women across all three strategies in Ghana and Bolivia are examined in this study. Since comparable data are available only for urban ever-married women with at least one birth, the study is restricted to this subsample.

The analysis reveals that Ghana and Bolivia appear more dissimilar in terms of the rate of current employment of women and the work in which they are involved than in terms of their lifetime strategies regarding labor force behavior. Currently employed women in Ghana account for 58 percent of all urban women between 15 and 49 years of age; the comparable figure in Bolivia is 35 percent. Sales is the major occupation in Ghana, but in Bolivia, working women are dispersed among several occupations, especially service, professional, and sales. Women in Ghana are more likely to be working most of the time, but appear to keep more flexible hours than women in Bolivia. Despite these differences in the amount, type and intensity of current employment, 50 percent of the women in Ghana and 40 percent of the women in Bolivia combine work and childrearing by having the child with them while they work.

On examining the labor force trajectories of urban women who have ever worked after marriage, there are remarkable similarities between the two countries. In the first set of trajectories examined, women are classified in terms of whether or not they worked during each birth interval. For example, a woman with two children could have worked in the interval before her first birth (W), worked again between her first and second births (W), but is not currently working (N). The labor force trajectory for this woman is WWN. Clearly, the number of possible trajectories a woman can have depends on the number of children she has had. In both countries, the most common work trajectory, which accounts for about 40 percent of women who have ever worked after marriage, involves work in all possible intervals. In addition, the proportional share of all but 3 of the 15 possible work trajectories that women with three or more children who have ever worked after marriage have does not differ by more than 2 percentage points between the two countries. This implies that despite the greater current labor force participation rate of women in Ghana than Bolivia, women who ever work after marriage in Bolivia and Ghana combine childbearing, rearing, and labor force participation in very similar ways. However, there is one notable difference between labor force strategies: once a child is born, women in Ghana enter the labor force and remain employed much more often than in Bolivia. Conversely, the pattern of working between marriage and first birth, but not after the first birth occurs much more frequently in Bolivia than in Ghana.

In the second set of trajectories examined, women's labor force interaction is defined in terms of a woman's particular combination of regular work, irregular work, or no work in each possible interval. In both Bolivia and Ghana, about seven out of ten women who worked in at least one interval after marriage change status at least once. In both countries, this change in status most often involves movement between regular work and no work. Trajectories involving only regular work or moves between regular work and no work account for about three-fourths of Ghanaian women and two-thirds of Bolivian women. Trajectories involving irregular work are more common in Bolivia than in Ghana.

When labor force interaction strategies in terms of movement between occupations are examined, the findings indicate that in both countries work trajectories for three out of four women who worked in at least two birth intervals did not involve a change in occupation. In Bolivia, the more intervals worked by women, the less likely they were to change occupations; whereas in Ghana, there is no clear link between number of intervals worked and occupation change. Further, in both countries, the more intervals worked at each parity by women who did not change occupations, the higher the share of the high human capital occupations of the professional, managerial and technical group.

Thus, even in the very diverse economic conditions of Ghana and Bolivia, women who work at all for cash appear to use similar strategies when combining labor force participation and childbearing. Nonetheless, different factors are found to be relevant for explaining labor force participation behavior in the two countries. Also, several factors that explain women's current employment are either not relevant to explaining women's work trajectories over time, or do not bear the same relationship with them.

For Ghana, the overwhelming conclusion revealed by the multivariate analysis is that few of the modernization or life course factors are relevant in explaining women's labor force behavior. The majority of women work at some point in their reproductive life. Surprisingly, those who do not work at all are not distinguished consistently by any specific factors from those who are currently working or who work but follow different work trajectories. Nevertheless, there is some evidence that continuous attachment to the labor force is encouraged by better opportunities, as represented by a higher socioeconomic status of the household, early exposure to work with control over earnings, and a longer first-birth interval. There is also some correlation of continuity in the labor force with early use of contraception in the reproductive cycle. This relationship suggests that even in a regime where the birth of a child appears to encourage labor force participation, having a work trajectory that involves working in all intervals does require some measure of control over timing of births. Unexpectedly, regular radio listening seems to be most typical, not for women who never worked or those who worked continuously, but for women who cycled in and out of the labor force.

In Bolivia, women's labor force participation is more in conformity with a theory that explains women's interaction with the labor force in terms of modernization, economic and lifecourse factors. Thus, women who are older, are more educated, are household heads, have had early work experience and financial autonomy, and are from households with a higher socioeconomic index, are more likely to be currently working than not working.

Continuity of labor force participation is also more likely among the more educated women and among women who have ever worked before marriage. Specifically, work before marriage increases the probability of women ever working after marriage particularly in the first interval, and if such work is combined with earnings control, it also encourages continuity. The income effect of having a highly educated husband and that of having a husband who is a professional are both significant but opposite in sign. The more highly educated a woman's husband, the less likely she is to work continuously, but if a woman has a husband who is a professional, the more likely she is to work continuously. Having a highly educated husband is also negatively correlated with being currently employed.

In Bolivia, nonusers of contraception are more likely to have never worked than to have had trajectories that involved cycling. Contrary to expectations, never use of contraception does not distinguish women who have never worked after marriage from those who worked continuously. Thus, in Bolivia, in contrast to Ghana, women who have never used contraception are most likely to be either those who never entered the labor force after marriage or those who worked in all four intervals.

Finally, the findings indicate that in both Bolivia and Ghana, a far higher proportion of women have worked some time in their lifecourse than are currently working. Nonetheless, in both countries there is some suggestion that the probability of being currently employed most closely resembles the probability of being continuously employed over time. Thus, while current employment tells little about the work strategies of women related to the lifecourse, it tells most about women who work in all four intervals. This conclusion is not surprising since women who are committed to the labor force are the ones most likely to be working at any given point of time, and the current employment measure is a point measure. Nevertheless, the current employment measure is limited in its usefulness because it cannot distinguish when current employment is reflecting continuous commitment and when it is not.

Chapter 1

Introduction

The labor force participation rate of women is a widely used indicator of women's autonomy and status (Mason, 1986; Youssef, 1974), and numerous studies have found it to be negatively associated with fertility. The need for the full integration of women into the economic sphere is also seen as necessary for the achievement of developmental goals (United Nations, 1993). However, the strength and the direction of causality between women's labor force participation and social objectives such as increased women's status, economic development, and lower fertility depends in part on the type, continuity, and intensity of the labor force activity in which women are involved (Oppong, 1991). Indeed, the translation of labor force participation into social and economic gains for the individual woman and for society is likely to be a function of whether women earn cash or not for the work they do, the kind of work they do, and the extent of continuity in their work histories.

Working for cash is more likely to translate into autonomy and empowerment for women than not working, or working but not for cash, because of the implied access to financial resources. Also, continuous labor force commitment is linked to higher status and better paying jobs (Polachek, 1975, 1979). Human capital theory suggests that without continuity in labor force participation, specialized human capital embodied in the individual in the form of training and education is eroded, and the gains from accumulation of an individual's work experience are lost.

The link between women's labor force participation and lowered fertility is founded on ideas of incompatibility between the roles of mother and worker, and of increased opportunity costs of the bearing and rearing of children for women who are employed. These arguments seem most applicable when women have a continuous commitment to the labor force and are employed in full-time jobs incompatible with childrearing.

Despite the implicit understanding that labor force participation of women is likely to have its strongest impact on other socially desired outcomes when women are highly committed to the labor force, very little is known about the nature, the intensity, and the continuity in women's labor force participation in developing countries. Instead, the current employment rate continues to be used as a proxy for a detailed understanding of the employment profiles of women even though it is not known what these profiles are, or what their relationship is with the current employment rates of women.

Research on the trends of women's labor force participation over the lifecourse in the United States (Elder, 1981; Felmlee, 1984) reveals that women's interaction with the labor force is closely interwoven with their other productive and reproductive roles (Masnick and Bane, 1980; Moen, 1985), and that current employment rates do not necessarily reflect rates of continuous employment (Maret-Havens, 1977). More importantly, the conclusions from a static analysis of women's employment may not apply to one based on women's dynamic interaction with the labor force (Felmlee, 1984).

The labor force cycling behaviors of women or the continuities and discontinuities in women's labor force participation should ideally be studied using event history data. To be useful, the event histories need to provide, in addition to the work history of each woman, the timing of all lifecourse events that are likely to affect, or be affected, by her employment. Such data are rarely available for developing countries. However, the unavailability of reliable and accurate data and the widely recognized problems in the definition of labor force activity (Anker, 1983) are not the only reasons for a lack of understanding about women's employment profiles in developing countries. The extent and nature of labor force involvement of women

in any country is the result of the interaction of a complex set of factors specific to the country and the woman in question. For example, research shows that women's labor force participation levels differ according to the level of economic development of the country (Pampel and Tanaka, 1986), with alternative paths of development impacting differently on the demand for women's economic contributions (Boserup, 1970). In addition, women's participation in the economic work force is a function of the culture-specific gender relations that define the sexual division of labor (Mason, 1986). This makes it difficult to generalize across developing countries and within countries, across culturally-distinct ethnic groups, or across regions with different developmental patterns. The large variation in women's employment and the complexity of the relationship of women's work and fertility across developing countries, even when similar definitions of work are used, is evident from the comparative analyses of World Fertility Survey data (United Nations, 1985; Lloyd, 1991).

Data from Bolivia and Ghana are used in this study of current and past employment of women for cash in a non-kin setting to extend our understanding of the nature of employment and the factors that influence it in developing countries. Nature of employment refers to whether women are employed or not, whether they are employed part-time or full-time, and, if employed, what their occupation is. Specifically, this report addresses the following questions:

- What is the nature of current employment in Ghana and Bolivia and how does it differ across the two countries?

- How do women pattern their labor force participation across different birth intervals in the two countries? Women may choose to pattern their labor force involvement by moving between being employed and not being employed or between being employed part-time, full-time and not being employed, or by moving between occupations.

- What factors account for the variation in labor force cycling behaviors and in current employment, within and across the two countries? And finally,

- Do the factors that influence labor force participation cycling by women differ from those that influence women's current employment within each country and across the two countries?

To provide a context within which these questions can be answered, the background characteristics and childcare circumstances of women who are currently working in the two countries are also compared.

Details of the available data and their limitations are discussed in Chapter 2. In Chapter 3, the nature of current employment in Ghana and Bolivia is compared along with the background characteristics and childcare arrangements of those who work. This chapter provides not only a static picture of women's employment in the two countries, but an opportunity to see the differences in the social and demographic characteristics of working women in the two countries. The patterning of employment by Ghanaian and Bolivian women across birth intervals is compared in Chapter 4. The rest of this report is devoted to identifying and comparing factors that help explain the variation in current employment and the labor force cycling behavior of women within each country and across the two countries. Specifically, in Chapter 5, hypotheses related to women's labor force participation are discussed; in Chapter 6, variables and methods used for the multivariate analysis are defined; and in Chapter 7, logistic regression techniques are used to evaluate the probabilities of being currently employed and having alternative work trajectories within a multivariate context. Finally, in Chapter 8, the summary and conclusion are presented.

Although the choice of Ghana and Bolivia for this analysis is dictated by the availability of comparable labor force histories in the Demographic and Health Survey data, it is nonetheless, quite fortuitous. The two countries are relatively similar in their stage of demographic transition, but they differ

vastly in their rates of current employment of women and in their cultural settings. This enables variations in employment over the reproductive life cycle of women in different cultural and developmental contexts but similar fertility regimes to be examined.

In 1988, the Republic of Ghana on the West Coast of Africa had a population of 14 million; during that decade it had been growing at a rate of 3.4 percent per annum. With a per capita income of $400 per annum, and an energy consumption level of 125 kilograms of oil equivalent, Ghana ranked among the "low" income countries in the world as defined by the World Bank (World Bank, 1990). The Ghanaian economic development was fueled primarily by exports of minerals and agricultural products. About half of the gross domestic product (GDP) in Ghana is accounted for by the agricultural sector, and two-thirds of the population live in rural areas. The capital-intensive industrial sector accounts for only about 16 percent of GDP. Severe economic recession, stemming from the worldwide slump in primary product exports, led to economic hardship and a negative average growth rate of per capita income in Ghana between 1965 and 1988.

Bolivia, a landlocked nation in South America with only half the population of Ghana in 1988 and growing at under 3 percent per annum, had a per capita income of $570, an energy consumption level twice that of Ghana, almost five times as much land, and appeared more economically developed than Ghana. Indeed, Bolivia ranks among the "middle" income countries of the world (World Bank, 1990). Further, half of its population live in urban areas, and industry contributes more to the GDP than does agriculture, although the service sector accounts for almost half of the GDP. Literacy is also higher in Bolivia than in Ghana; total literacy and female literacy in Bolivia were 74 percent and 65 percent, respectively, compared with 53 percent and 43 percent in Ghana. Nonetheless, Bolivia is one of the poorest of the Latin American countries and, like Ghana, is highly dependent on primary exports. Three geographically distinct regions—valleys, highlands and tropical plains—with their own topographical features, keep the Bolivian economy fragmented. With the world economic crisis and a slump in the prices of primary sector exports, Bolivia, like Ghana, experienced a declining rate of economic growth and unprecedented rates of inflation during the 1970s and early 1980s (Scott, 1992).

Despite the differences in economic development, in 1988 both Ghana and Bolivia were at an early stage of demographic transition with both experiencing sharper declines in mortality than in fertility. Specifically, the total fertility rate in Ghana was 6.3, the crude death rate was 13, and the infant mortality rate was 88 (World Bank, 1990). The corresponding figures for Bolivia were 6.0, 14, and 108. Additionally, in both countries, only one-fifth of currently married women had ever used a modern contraceptive method (GSS and IRD, 1989; INE and IRD, 1990).

The cultural setting of women's lives and employment varies greatly in Ghana and Bolivia. In Ghana, cultural norms encourage economic independence among women, and facilitate and even compel their acquisition of property (Okali, 1983). Among the peoples of the dominant Akan tribe, a woman's children belong to her lineage and a woman expects little economic support from her spouse beyond some help in initiating independent economic activity to support herself and her children.

Although Bolivia is inhabited by several ethnic groups who speak pre-Colombian languages (Aymara and Quechua) and retain their traditional American-Indian culture, it is the Spanish-speaking population that predominates. In contrast to Ghana, norms about women's roles in Bolivia generally are patriarchal and more consistent with gender norms observed in other parts of the world. Patriarchal norms tend to encourage economic dependence of women on men while largely recommending domestic roles for women. Several legal statutes that explicitly limit women's economic roles reflect these patriarchal norms. For example, with some exceptions, women are not allowed to do night work, a 40-hour limit is placed on women's labor day (compared with 48 hours for men), women cannot constitute more than 45 percent of the wage/salary earners in an establishment, and women are barred from "dangerous," "unhealthy," or "hard-labor" jobs (Scott, 1992).

Based on the higher level of development in Bolivia than in Ghana, modernization theory would predict higher rates of female employment for cash in non-kin settings in Bolivia. However, based on differences in cultural norms, higher rates of labor force participation and a greater commitment to remaining in the labor force are expected in Ghana than in Bolivia. Also, given that Bolivia is more urbanized and has a more literate population, the type of work engaged in by the women in the two countries should be different.

Chapter 2

Sources, Description, and Limitations of Data

A special module of questions on women's current and past employment was fielded as an integral part of the Demographic and Health Surveys (DHS) conducted in Ghana and Bolivia in 1988 and 1989, respectively.[1] This analysis utilizes information on employment and other variables of interest from the standard recode files of these surveys. The surveys used a nationally representative sample of 4,488 women age 15-49 in Ghana and 7,923 women age 15-49 in Bolivia. However, employment history questions were asked only of urban women in Bolivia. Consequently, this study is restricted to a maximum subsample of 1,520 Ghanaian urban women and 4,672 Bolivian urban women.

A woman is defined as employed only if she worked for money other than on a farm or business run by her family. The list of questions and response codes used in the analysis of current employment is given in Table 2.1. Relevant questions used to examine childcare options exercised by currently employed women who had a child age six years or less are also included.

The DHS employment history module did not collect continuous employment histories. Instead, information was collected on the employment status of women before first marriage, and in combination with information on current employment status, at a maximum of four points of time after marriage: 1) between marriage and the first birth, 2) between the ante-penultimate and the penultimate birth; 3) between the last birth and the penultimate birth, and 4) at the current time (which serves as a proxy for the interval after the last birth). As a result, women with only one birth[2] yield employment information on intervals 1 and 2; women with two births yield information on intervals 1, 2, and 3; while women with three or more children yield information on all four birth intervals. If a women was employed during any interval, she was asked her occupation and whether the work was temporary or full-time using the questions listed in Table 2.1.

In addition to restricting this analysis to urban women, the need to use questions common to the employment modules fielded in both Ghana and Bolivia imposes yet another important restriction. Data were not collected in Bolivia on the total number of years worked in each interval. Thus, "continuity of employment" is measured by whether a woman has worked in all possible birth intervals rather than if she has worked in all intervals without interruption. This puts obvious limitations on documenting and understanding the degree of continuity of women's labor force participation in the two countries.

Furthermore, the Ghanaian sample for the employment history questions is more inclusive than the Bolivian sample. In Ghana, employment histories are available for all women, married and unmarried, who have had a live birth; whereas, in Bolivia, this information is available for all married women with a live birth and for unmarried women with a live birth who were currently employed. The Bolivian sample therefore excludes unmarried women who had a live birth but were not currently employed. This difference in sample coverage becomes irrelevant in the multivariate analysis, which is based only on ever-married women.

---

[1] Funding for the collection of these data was provided by the Rockefeller Foundation through a grant to the Demographic and Health Surveys program.

[2] Strictly speaking, the numbering of birth intervals is based not on "birth" but on "pregnancy resulting in a live birth." This allows the discrepancy in birth intervals and numbers of births arising out of the birth of twins or triplets to be accounted for.

Table 2.1 Questions and corresponding response codes used in the analysis: Ghana and Bolivia, Demographic and Health Surveys, 1988-1989

Questions	Answer codes
Current employment questions (asked of all women age 15-49)	
1) Aside from their usual housework, many women work in order to earn money. Are you currently doing any work for money other than on a farm or business run by your family?	1. Yes 2. No
2) What is your occupation, i.e., what kind of work do you do?	Occupational code. Occupational codes are then collapsed to form the following occupational categories: - Professional, technical, and managerial - Clerical - Sales - Agriculture: self employed or employee - Service: domestic and household/nondomestic - Production: skilled/ unskilled
3) Do you usually work at this job most of the time or part of the time or do you work seasonally or irregularly?	1. Most 2. Part 3. Seasonally 4. Irregularly 5. Other (In the analysis, 3, 4 and 5 are considered as one category unless otherwise specified.)
4) On a typical day when you are doing this work, how many hours do you spend working?	Hours
Childcare questions (asked only of currently working women with a child age six years or less)	
1) While you are working, do you *usually* have your children under age six with you, *sometimes* have them with you, *rarely* have them with you, or *never* have them with you?	1. Usually 2. Sometimes 3. Rarely 4. Never
2) Who usually takes care of your child or children under age six while you are working? (Asked only of women who gave answers 2-4 in the first childcare question)	1. Husband 2. Other child or children 3. Other relatives in or near household 4. Other relatives farther away 5. Neighbors 6. Friends/acquaintances 7. Servants/hired help 8. Children in school 9. Institutional childcare 10. Other
Employment history questions (sample is restricted to urban women with other qualifications listed in the text) During interval X (where X represents each of four possible birth intervals):	
1) did you ever work for money other than on a farm or business run by your family?	1. Yes 2. No
2) what was your occupation, that is, what kind of work did you do?	Occupational code
3) did you work most of the time, part of the time, seasonally or only irregularly?	1. Most 2. Part 3. Seasonally 4. Irregularly 5. Other

One final limitation of the data also concerns the Bolivian sample. In Bolivia, almost 10 percent of the women who qualified for the work-history questions are missing relevant information. While a comparison of the background characteristics of the missing women and of all eligible women show no major differences, the bias in the analysis arising from the large number of missing cases remains unmeasured. Other limitations of the data and the effective sample size relevant to the multivariate analysis are discussed in Chapter 6.

Chapter 3

Current Employment in Ghana and Bolivia

Current employment in Ghana and Bolivia is examined on two levels. The rate, type and intensity (as measured by the number of hours worked and regularity of work) of women's work in both countries are examined first. Women's employment status, the extent of their time commitment and the type of work that they do depend on several different factors, such as the structure of the labor market and the individual characteristics of women. Although a discussion of the structure of the labor market is beyond the scope of this paper, the background characteristics of women who work in Bolivia and Ghana are dealt with in section 3.2.

3.1 Extent and Nature of Current Employment

In Ghana, 58 percent of urban women age 15-49 years are currently employed for cash in non-kin settings compared with only 35 percent in Bolivia (Table 3.1). In Ghana, almost two-thirds of currently employed urban women of reproductive age are concentrated in only one occupational category, i.e., sales. The next largest occupational category, skilled production, employs 16 percent of the Ghanaian women. Together these two occupations account for almost four out of every five employed urban woman.

Table 3.1 Percent distribution of currently employed urban women age 15-49 by occupation, regularity of employment, and hours worked per day: Ghana and Bolivia, Demographic and Health Surveys, 1988-1989

Nature of work	Ghana	Bolivia
Currently employed urban women age 15-49	58.2	34.7
Occupation		
Professional, technical & managerial	6.4	23.2
Clerical	4.6	9.7
Sales	61.5	20.7
Agriculture	4.7	0.5
Self-employed	4.1	0.2
Employee	0.7	0.3
Service	6.1	34.0
Domestic and household	0.4	24.3
Not household	5.8	9.7
Production	16.6	11.9
Skilled	15.6	10.5
Unskilled	1.0	1.4
Regularity of employment		
Most of the time	77.8	64.0
Part of the time	13.3	26.7
Seasonally/Irregularly	9.0	9.3
Number of hours worked per day		
Up to 4 hours	17.6	19.5
5-7 hours	33.9	20.5
8-12 hours	43.8	54.3
More than 12 hours	4.7	5.8

By contrast, in Bolivia, most of the occupations other than agriculture accounted for at least 10 percent of urban working women of reproductive age. The largest employers were service occupations, which accounted for one-third of the women, and professional and sales occupations, which each accounted for about one-fifth of the women. Notably, the domestic and household service sector, the largest employer of Bolivian women, accounted for the employment of only a negligible number of Ghanaian women.

Employed women were also asked about the regularity of their employment ("most of the time," "part of the time" or "irregularly/seasonally") and the hours worked each day. Whereas the "regularity of work" variable indicates whether a woman is working all year round or not, the hours worked per day show the woman's time commitment to employment when she works. Women working "most of the time" for eight or more hours each day can be thought of as being employed full-time on a regular basis which implies the maximum commitment to the labor force.

Among currently employed urban women, the proportion working most of the time was greater in Ghana than in Bolivia. However, when they work, Bolivian women are more likely to have a longer work day than Ghanaian women—60 percent of Bolivian urban working women work eight hours or more per day compared with 49 percent of their Ghanaian counterparts. In addition, Table 3.2 shows that 79 percent of the women working most of the time in Bolivia worked eight or more hours compared with 41 percent of Ghanaian women. Clearly, among urban women who were currently employed, working full-time most of the time is almost twice as common in Bolivia than in Ghana, although the proportion of women working at all is much lower in Bolivia than in Ghana.

Table 3.2 Percent distribution of regularity of employment by hours worked per day for currently employed women age 15-49: Ghana and Boliva, Demographic and Health Surveys, 1988-1989

Regularity of employment		Hours worked per day 0-4	5-7	8+	Number
Work most of the time	Ghana	21.9	36.9	41.2	1,514
	Bolivia	7.0	13.8	79.2	1,315
Work part of the time	Ghana	32.3	34.3	33.3	396
	Bolivia	43.8	36.9	19.3	517
Work irregularly	Ghana	34.4	32.1	33.5	355
	Bolivia	31.4	21.9	46.7	255

Thus, despite a lower level of economic development in Ghana, almost two-thirds of the women of reproductive age are currently employed for cash. The majority of these women are concentrated in only one occupation, sales, and although most work regularly, they keep relatively flexible hours. However, in the more urbanized and developed Bolivia, only about one-third of the urban women of reproductive age are currently employed for cash. Similar to Ghana, most Bolivian women who do work are regularly employed, but unlike Ghana, they are spread across many occupations and most tend to work full-time. While the lower rates of participation in Bolivia and the higher rates in Ghana are more consistent with the differences in the cultural norms on women's employment, the distinctions in the nature of occupations are more consistent with the deviations in the levels of modernization.

3.2 Background Characteristics of Currently Employed Urban Women

As stated previously, the proportion of urban women age 15-49 that work for cash and the nature of the work they do differ greatly between Ghana and Bolivia. This section is an investigation of whether the typical Ghanaian working woman differs from the typical Bolivian working woman in terms of her socioeconomic and demographic characteristics. Given the very different socioeconomic contexts of Bolivia and Ghana, the distributions of currently employed women across demographic and socioeconomic variables cannot be examined without simultaneously examining the distribution of all women across these variables in the two countries. Consequently, Table 3.3 shows both the distributions of working women and of all women by each characteristic of interest. These data permit not only intercountry comparisons of currently employed women and all women, but also within-country comparisons of the two distributions for each socioeconomic and demographic variable.

Table 3.3 Percent and mean distribution of all urban women and currently working urban women by age, education, marital status, parity, and presence of child six years or younger: Ghana and Boliva, Demographic and Health Surveys, 1988-1989

	Urban women age 15-49			
	All		Currently employed	
Characteristics	Ghana	Bolivia	Ghana	Bolivia
Mean age in years	28.3	28.5	31.3	30.6
Mean number of years of education	6.5	7.8	6.3	8.2
Mean socioeconomic index	4.5	4.8	4.5	5.1
Percent household heads	20.0	8.3	27.0	13.5
Marital status (percent)				
Never married	26.1	34.6	12.8	32.0
Currently married	63.2	57.5	74.6	52.5
Formerly married	10.7	7.9	12.7	15.5
Mean number of children	2.7	2.3	3.3	2.3
Percent of women who:				
- have no children	29.9	34.8	16.7	30.2
- have a child age six or less	49.5	41.7	55.4	37.8

The urban Ghanaian working woman is, on average, almost one year older than her counterpart in Bolivia, even though the average age of women in the Bolivian sample does not differ from the Ghanaian sample. Furthermore, the Bolivian working woman has, on average, two more years of education than her Ghanaian counterpart, due in part to Bolivian women being more educated than Ghanaian women. While working women in Ghana have the same number of years of education as all urban women, working women in Bolivia have, on average, about half a year more education. Therefore, in Bolivia, educated women are slightly overrepresented among working women, while in Ghana they are not.

A socioeconomic index with a range of 0 to 6 has been constructed using information on toilet and water facilities in the home (to be explained in Chapter 5). The mean value of this index for working women in Ghana is the same as for all Ghanaian women; however, in Bolivia, the mean for working women is higher than that for all women. Thus, women from households with a higher socioeconomic status are again slightly overrepresented in the labor force in Bolivia but not in Ghana. As expected, women who are household heads also are overrepresented in the work force in both Ghana and Bolivia. While the overrepresentation is greater

in Bolivia than in Ghana, a much higher proportion of currently employed women are household heads in Ghana than in Bolivia—27 percent compared with 14 percent.

The currently working woman in Bolivia is more likely to be never married than a Ghanaian working woman; one-third of currently working women in Bolivia were never married compared with about one-tenth in Ghana. Further, the proportion of never-married women among all urban women is about twice the proportion among working women in Ghana, but is about the same in Bolivia. Therefore, in Ghana, never-married women are greatly underrepresented in the work force. Also, currently married women in Ghana are overrepresented in the work force where they account for three-fourths of the working women but only two-thirds of all women. By contrast, in Bolivia, currently married women account for 53 percent of working women but 58 percent of all urban women.

Currently working women are more likely to be women with no children in Bolivia than in Ghana. In fact, one-third of the currently employed women in Bolivia have no children as compared to 17 percent in Ghana. This conforms with the fact that never-married women constitute a higher proportion of working women in Bolivia than in Ghana. In Ghana, women with no children are represented almost twice as much among all urban women than among working women. However, there is little difference in Bolivia in the proportion of childless women among all urban women and urban working women.

Examining the mean number of children ever born, the data shows that, on average, a woman in Ghana has only 0.4 more children than in Bolivia, but a currently employed woman in Ghana has one child more than her counterpart in Bolivia. In addition, employed women in Bolivia have the same number of children, on average, as all urban women, but in Ghana, currently employed women have, on average, a greater number of children than all urban women. In keeping with this, a working woman in Bolivia is less likely to have a child age six years or less as compared to her counterpart in Ghana, and women with young children are overrepresented in the work force in Ghana and underrepresented in Bolivia.

These disparities suggest that being married and having children increase the probability of being in the work force in Ghana, but not in Bolivia. Childcare arrangements are likely to influence women's labor force participation. In Table 3.4, the childcare arrangements of working Bolivian and Ghanaian women who have a child less than six years of age are presented.

Table 3.4 Percent distribution of currently working urban women age 15-49 who have a child age six years or less living with them, by childcare arrangements: Ghana and Boliva, Demographic and Health Surveys, 1988-1989

Childcare arrangements	Ghana	Bolivia
With mother	49.4	39.5
With husband	1.2	4.4
With other children	7.4	11.0
With relatives	26.3	30.7
With friends or neighbors	1.0	0.9
With domestic help	1.6	9.6
In school or other institutions	12.8	2.0
Other	0.4	1.9
Number	486	595

In Ghana and Bolivia, working women with young children are most likely to have their children with them when they are working. Indeed, about half of urban Ghanaian working women and 40 percent of urban Bolivian working women have their children under six years of age with them when they work. Despite the differences in the type of work and the hours worked by women in Bolivia and Ghana noted earlier, there appears to be a great degree of compatibility between work and childrearing in both countries.

The next most common childcare option is that of leaving children with relatives or with other children. The dependence on relatives other than the husband or older children for childrearing purposes has been documented in Ghana (Blanc and Lloyd, 1990), and in Bolivia, almost one-third of women with young children use relatives as childcare providers. In both countries, about three-fourths of mothers of children under six use only the two childcare options of "with mother" and "with relatives."

Leaving children with the husband or with neighbors or friends is uncommon in both countries. In Bolivia, almost 10 percent of working women with young children leave them with their domestic help. This option is not common in Ghana. On the other hand, leaving children in institutions such as schools or childcare centers is more common in urban Ghana than in urban Bolivia.

This comparison of currently employed urban women has revealed that Ghanaian working women have characteristics much like all Ghanaian women, whereas Bolivian working women, on average, tend to be more educated, come from the higher social class and have fewer children than all Bolivian women or Ghanaian working women, and are less likely to be married. This suggests that in economically less-developed Ghana, employment for cash is typical, whereas in more literate, urban, and developed Bolivia, women's labor force participation for cash is an innovation. On one hand, this finding conforms with macrolevel cross-country analyses that find high rates of women's employment at both low and high levels of development, but low rates at medium levels of development (Pampel and Tanaka, 1986). On the other hand, the results underscore the influence of culture, often ignored in economic discussions of female labor force participation, in determining the labor force participation of women.

Chapter 4

Labor Force Cycling Behaviors of Women in Ghana and Bolivia

Chapter 3 provided insight into the nature of current employment and of currently employed women of reproductive age revealing that women in Ghana are much more likely to be currently employed than women in Bolivia. Are the Ghanaian women more likely to be attached continuously to the labor force as well? Women currently working in Ghana are more likely to have children, especially young children, than in Bolivia. Does this imply that the employment trajectories of Ghanaian women are also less likely to be interrupted by the birth of a child than the employment trajectories of Bolivian women? Among women who work in both Bolivia and Ghana, almost two-thirds work most of the time. To what extent are women who are working regularly in the present likely to have been working regularly in the past? Are women who have never worked in the past more likely to enter the labor force and work most of the time, or do they tend to work irregularly? As women cycle in and out of the labor force, do they also change occupations? To examine the dynamics of women's labor force attachment, an analysis of the work histories of women will be presented in this chapter.

The work history data on urban women who have ever worked after marriage can be used to compare the patterning of labor force participation over birth intervals in the two countries. As explained in Chapter 2, these data permit an evaluation of whether urban women who have had at least one birth were employed or not at a maximum (depending on how many children they had) of four possible points of time: before the first birth, between the penultimate and ante-penultimate birth, between the last birth and the penultimate birth, and after the last birth (which serves as a proxy for current work status). In response to lifecourse events such as the birth of a child, a woman who was working could either remain in the labor force or leave it, and a woman who was not in the labor force could remain out of the labor force or enter it. Working or not working in each interval can thus be combined with working or not working in each of the other intervals. The particular combination of work and no work by interval for each woman yields a work trajectory based on the two states of being employed and not employed. However, moving between working and not working is only one of the many possible employment-related strategies that women can use to accommodate lifecourse events; other strategies could be to move between regular employment, part-time employment, and no employment, or to move between different occupations.

In light of the different employment-related strategies women can follow through the lifecourse, the work histories of women in Ghana and Bolivia are compared in three parts: across birth intervals between two states (working and not working); among trajectories based on three states, i.e., working regularly (most of the time), working irregularly (part-time or seasonally/irregularly) or not working; and across birth intervals between different occupations.

4.1 Movement between Working and Not Working

A woman with three or more births yields a maximum of four observations since she has an observation for each of the four intervals for which data were collected. Such a woman, moving between two alternative work states, working and not working, will have one of 16 work trajectories (i.e., 2^x where x=4, the number of intervals). Correspondingly, the numbers of alternative work and not work combinations for women with 2 births and 1 birth are 8 and 4, respectively. Of these, one trajectory involves not working in any interval. Restricting the analysis to the 78 percent of Ghanaian and the 56 percent of Bolivian urban women who worked in at least one of the four intervals, we get 15, 7, and 3 alternative work trajectories corresponding to 3 or more births, 2 births, and 1 birth, respectively. Table 4.1 presents the percent of Bolivian and Ghanaian women who have ever worked following each trajectory by parity. A woman is considered to be continuously attached to the labor force if she has worked in all possible intervals.

Table 4.1 Percent distribution of urban women who have ever worked after marriage and have at least one birth, by work trajectories: Ghana and Boliva, Demographic and Health Surveys, 1988-1989

Work trajectories		Parity		
		1	2	3 or more
Worked in all intervals	Ghana	55.15	35.46	34.70
	Bolivia	57.07	41.97	33.56
Worked only before first birth	Ghana	11.52	3.55	1.96
	Bolivia	26.01	18.39	16.88
Working currently after last birth but not in previous intervals	Ghana	33.33	14.18	4.27
	Bolivia	16.92	14.06	10.58
Worked in all intervals after first birth	Ghana	NA	29.79	30.07
	Bolivia	NA	10.39	9.92
Worked before first birth and currently working after last birth	Ghana	NA	4.26	1.42
	Bolivia	NA	3.20	2.26
Worked in all intervals before last birth but not currently working	Ghana	NA	10.64	5.87
	Bolivia	NA	9.05	5.69
Did not work before first birth and not currently working, but worked in the intervals between births	Ghana	NA	2.13	3.56
	Bolivia	NA	2.94	1.82
All remaining work trajectories	Ghana	NA	NA	18.14
	Bolivia	NA	NA	19.27
Number	Ghana	165	141	562
	Bolivia	255	299	869

NA = Not Applicable

Among women with only one birth, a similar proportion—55 percent in Ghana and 57 percent in Bolivia—have worked in both intervals. Among the remaining women, the majority have worked only in the interval after the last birth in Ghana, and in the interval between marriage and first birth in Bolivia.

Among women with two births, again the most common trajectory is one of continuous attachment to the work force. The next most common trajectory in Bolivia is "worked only before first birth," which accounts for 18 percent of the Bolivian women but only 4 percent of Ghanaian women. In Ghana, on the other hand, the second most common trajectory is "worked in all intervals after first birth," which accounts for 30 percent of Ghanaian women but only 10 percent of Bolivian women. Similar proportions of women follow each of the remaining trajectories in Ghana and Bolivia.

About one-third of both Ghanaian and Bolivian women with three or more children, who have worked since their union, have done so continuously. Again, a higher proportion of women in Bolivia than in Ghana worked only before the birth of their first child, and a higher proportion of Ghanaian women than

Bolivian women worked in each interval following the birth of the first child. In addition, the proportion of women currently working who did not work in any previous interval is 11 percent in Bolivia as compared to 4 percent in Ghana. The proportion of women in the remaining work trajectories is similar in both countries, with Bolivian women favoring work trajectories either very early or late in their reproductive cycles, and Ghanaian women favoring trajectories in which they work more or less continuously after the birth of the first child.

The following generalizations can be made with regard to the work trajectories of urban Ghanaian and Bolivian women who worked in at least one birth interval:

- In both countries, the most common trajectory is one of work in all intervals. Indeed, averaging across all parities, 40 percent of all women who worked after marriage worked in all intervals possible for their parity.

- The proportions of women following each work trajectory in the two countries are surprisingly similar, especially as parity increases.

- The major exception to the similarity in work trajectories is that a higher proportion of women in Bolivia work in the interval between marriage and the first birth, but not afterwards; while in Ghana, women tend to follow work trajectories that involve entering the labor force once a child is born.

Thus, despite the fact that a much higher proportion of Ghanaian women are currently employed at any given point than Bolivian women, the women who have ever worked have had similar labor force cycling trajectories.

4.2 Movement between Working Regularly, Working Irregularly, and Not Working

Depending on the number of children they have had, women who have worked in at least one of the birth intervals under consideration can move between working regularly, working irregularly, and not working in 8, 26 or 80 different ways. Because these numbers are too large for meaningful analysis or comparison of trajectories, some of the less common trajectories can be collapsed together. Table 4.2 shows the percent distribution by parity of women who have worked in at least one interval between different trajectories involving working regularly, irregularly, and not working.

In both Ghana and Bolivia, over half of the women with one child, and more than two-thirds of the women with two or more children moved between regular work, irregular work or not working at least once. This implies that most women who worked at all after marriage in both countries had work trajectories that involved switching between work statuses. Of the many strategies that were adopted when switching statuses, the most common was moving between regular work and no work. Indeed, in Ghana, all trajectories involving movement between regular work and no work account for about one-third of women with one child and 45 percent of women with two or more children. In Bolivia, they account for one-third of women with one or two children and over 40 percent of women with three or more children.

The least common strategies in both countries were those that combined either all three work statuses or involved moving between regular and irregular work. It is interesting that in both Ghana and Bolivia, women with two or more children are far more likely to have trajectories combining irregular work and no work than those combining irregular work and regular work.

Table 4.2 Percent distribution of urban women who have worked in at least one birth interval, by work trajectories defined in terms of three work states: Ghana and Bolivia, Demographic and Health Surveys, 1988-89

Work trajectories involving no work (N), regular work (R), and irregular work (I)		Percent of women by parity		
		1	2	3 or more
Trajectories with no change in work status	Ghana	**49.0**	**27.6**	**26.1**
	Bolivia	**44.0**	**31.7**	**25.1**
Worked regularly in all intervals (R, R or R, R, R or R, R, R, R)	Ghana	44.8	24.1	23.8
	Bolivia	34.8	21.6	17.3
Worked irregularly in all intervals (I, I or I, I, I or I, I, I, I)	Ghana	4.2	3.5	2.3
	Bolivia	9.2	10.1	7.8
Trajectories with regular and no work	Ghana	**33.9**	**44.7**	**45.4**
	Bolivia	**33.3**	**34.1**	**41.1**
No work in first interval, but regular work in all other intervals (N, R or N, R, R or N, R, R, R)	Ghana	24.2	21.3	22.0
	Bolivia	12.5	5.1	5.6
Regular work in first interval, no work in other intervals (R, N or R, N, N or R, N, N, N)	Ghana	9.7	3.5	1.8
	Bolivia	20.8	14.1	13.9
For parity 2 or more: No work in any interval but currently working regularly (N, N, R or N, N, N, R)	Ghana	NA	7.1	2.3
	Bolivia	NA	8.0	5.7
Regular work in all intervals, but not currently working (R, R, N or R, R, R, N)	Ghana	NA	8.5	5.0
	Bolivia	NA	4.4	4.4
Remaining trajectories involving regular work and no work (All other R, N combinations)	Ghana	NA	4.3	14.3
	Bolivia	NA	2.5	11.5
Trajectories with irregular and no work	Ghana	**10.9**	**14.9**	**10.6**
	Bolivia	**9.6**	**21.2**	**18.3**
Did not work in first interval, worked irregularly in other intervals (N, I or N, I, I or N, I, I, I)	Ghana	9.1	4.3	3.2
	Bolivia	4.4	4.6	2.9
Irregular work in current interval, did not work in other intervals (I, N or I, N, N or I, N, N, N)	Ghana	1.8	0.0	0.2
	Bolivia	5.2	4.4	3.0
For parity 2 or more: Did not work in any interval, but currently working irregularly (N, N, I or N, N, N, I)	Ghana	NA	7.1	2.0
	Bolivia	NA	6.2	5.1
Remaining trajectories involving irregular work and no work (All other I, N combinations)	Ghana	NA	3.5	5.2
	Bolivia	NA	6.0	7.3
Trajectories with regular and irregular work	Ghana	**6.0**	**7.8**	**8.6**
	Bolivia	**13.0**	**9.8**	**8.6**
Worked regularly in first interval, and irregularly in all others (R, I or R, R, I or R, R, R, I)	Ghana	4.8	2.1	4.1
	Bolivia	8.3	4.5	3.6
Remaining trajectories with regular and irregular work (All other combinations of I and R)	Ghana	1.2	5.7	4.5
	Bolivia	4.7	5.3	5.0
Trajectories with regular, irregular and no work	Ghana	**NA**	**5.0**	**9.1**
	Bolivia	**NA**	**3.2**	**7.0**
Number	Ghana	165	141	558
	Bolivia	255	297	851

Note: Four birth intervals considered: Between union and first birth, between ante-penultimate birth and penultimate birth, between penultimate and ultimate birth, and currently working.
NA = Not applicable

Trajectories involving irregular work generally are more common in Bolivia than in Ghana. In Bolivia, about one in 10 women of all parities have worked irregularly in all intervals compared to less than one in 20 in Ghana. Also, a higher proportion of Bolivian than Ghanaian women at each parity achieved continuous attachment to the labor force by working irregularly in one or more intervals. Finally, in both countries the same proportion of women with one child have combined no work and irregular work. However, women with two or more children are about one and a half times more likely to have had such trajectories in Bolivia than in Ghana.

In terms of individual trajectories, working regularly in all intervals is the single most common trajectory in both Ghana and Bolivia. This one trajectory accounts for 45 percent of women with one child and one-fourth of women with two or more children in Ghana, and between one-third and one-fifth of Bolivian women depending on their parity. The second most common trajectory differs between Ghanaian and Bolivian women. In Ghana, almost one-fourth of the women combine no work in the first interval with regular work in all other intervals. In Bolivia, on the other hand, the second most common trajectory is the one that involves regular work in the first interval and no work in the remaining intervals.

Thus, most women who had ever worked after marriage in both Ghana and Bolivia had work trajectories that involved switching between regular, irregular, and no work. Also, in both countries, switching between regular work and no work was much more common than switching between irregular work and no work or any of the other possible combinations. However, while most Ghanaian women who worked in all intervals worked regularly, only about half of the comparable Bolivian women worked regularly. For the other half, continuous attachment to the labor force was achieved by working irregularly in one or more intervals.

4.3 Movement between Occupations for Women Who Have Worked in at least Two Intervals after Marriage

Human capital theorists argue that women self-select into occupations which allow them to move in and out of the labor force without a significant loss in productivity or earnings precisely because they do not expect to remain continually in the labor force (Polachek 1975, 1979). These occupations tend to be low in productivity and earnings and require minimal investment in human capital. This suggested association between the nature of jobs and continuity of labor force participation inspires the questions: "What occupations are common among women who do not change occupations?" and "Is there movement between occupations as women cycle in and out of the labor force?" For obvious reasons, this analysis is restricted to women who have worked in at least two intervals of the possible four.

Table 4.3 shows that among women who have worked in two or more intervals after marriage, the proportion who do not change occupations is much greater than the proportion that do—about three in four women do not change occupations, irrespective of parity.

If the association between continuity in the labor force and working in all possible intervals is examined at each parity and occupation, the relationship in Ghana is unclear. For example, among women with parity 2, those who worked only two of the possible three intervals account for the highest share of those who did not change occupation; and among women with parity 3, those who worked three of the possible four intervals have the highest proportion who did not change occupations. However, in Bolivia, the women who work in all the possible intervals have the greatest share among the women who did not change occupations. This suggests that, for Bolivia at least, the women who appear to be the most committed to the labor force tend to remain in the same occupation.

Table 4.3 Percent distribution of ever married women who have at least one birth and worked in two or more intervals after marriage, by change in occupation and parity: Ghana and Bolivia, Demographic and Health Surveys, 1988-1989

Movement between occupations after marriage for women who worked in two or more intervals	Ghana	Bolivia
Women with parity 1:		
Changed occupation	20.0	13.2
Did not change occupation	80.0	86.8
Number	90	146
Women with parity 2:		
Changed occupation at least once	24.1	16.8
Did not change occupation and worked in:		
two intervals	47.3	29.8
three intervals	28.6	53.4
Number	31	191
Women with parity 3 or more:		
Changed occupation at least once	25.0	26.3
Did not change occupation and worked in:		
two intervals	7.1	9.5
three intervals	41.4	28.3
four intervals	26.6	35.9
Number	119	578

The occupational distribution of women who have *not changed occupations* by number of intervals worked is given in Table 4.4. The purpose is to identify occupations that have a greater share among women who are more committed to the labor force, i.e., women who have worked in many, more, rather than fewer, intervals. When interpreting these results note that the maximum possible number of intervals worked is 2 if parity is one, 3 if parity is 2, and 4 if parity is 3 or more.

In Ghana, sales is the most common occupation among women who do not change occupations. However, the share of sales occupations falls as the number of intervals worked increases, suggesting that sales occupations are least common among women who are most committed to the labor force. Professional, technical, managerial and clerical occupations are not significant employers of Ghanaian women as noted from the occupational distribution of currently employed women. However, among women who have not changed occupations, the share of these occupations increases from 0 percent to 14.5 percent as the number of intervals worked increases from "worked in all but two intervals" to "worked in all intervals." Thus, for Ghana, it appears that these human-capital-intensive occupations are larger employers of women who are more committed to the labor force and to their occupation than of women who are less committed.

In Bolivia, sales and service occupations account for the largest share of women who have not changed occupations and who have worked the least number of intervals possible. Among such women, the share of those working in professional, managerial and technical occupations is only 15 percent. By contrast, the professional, managerial and technical occupations are the largest employers (accounting for almost one-third) of women who have worked either all of the intervals or all but one. In addition, the share of sales, services and clerical occupations is lower among women who have worked in all intervals than among women who have worked in the least possible number of intervals.

Table 4.4 Occupational distribution of women who did not change occupations and worked in at least two intervals after marriage by number of intervals worked and the occupational distribution of currently employed women: Ghana and Bolivia, Demographic and Health Surveys, 1988-1989

Occupation	Country	Percent distribution of women who who did not change occupations by number of intervals worked: All intervals[1] minus 2	All intervals[1] minus 1	All intervals[1]	Percent distribution of currently employed women
Professional, technical and managerial	Ghana	0.0	3.9	7.7	6.4
	Bolivia	15.0	29.3	30.9	23.2
Clerical	Ghana	0.0	1.9	6.8	4.6
	Bolivia	8.2	9.4	7.6	9.7
Sales	Ghana	91.4	69.6	64.3	61.5
	Bolivia	26.6	23.8	21.9	20.7
Services	Ghana	0.0	4.3	3.8	6.1
	Bolivia	36.8	19.7	25.7	34.0
Production	Ghana	15.7	14.0	11.1	16.6
	Bolivia	13.4	17.8	13.3	11.9
Agriculture	Ghana	2.9	6.2	6.4	4.7
	Bolivia	0.0	0.0	0.5	0.5
Number	Ghana	35	257	235	885
	Bolivia	55	221	436	1620

[1] All intervals are the maximum number of intervals that a woman could have worked in at a given parity: 4 intervals for parity 3 or more, 3 intervals for parity 2, 2 intervals for parity 1.

Thus, in both Bolivia and Ghana, women who appear more committed to the labor force are more likely to be employed in professional occupations than women who are less committed. This finding is also supported by comparing the occupational distribution of women who did not change occupation and worked in all possible intervals with the occupational distribution of currently employed women (last two columns of Table 4.4). Professional occupations (including clerical occupations in Ghana but not Bolivia) are more typical when labor force commitment is taken into account than when looking at current employment rates alone.

Finally, the employment patterns of women who worked in two or more intervals and changed occupations are examined. It is not possible to trace the many different paths these women could have followed given a maximum of four intervals and six occupational groups. However, the occupational distribution of women's occupations in each interval of work can be obtained. By comparing the occupational distribution of women's work in the first interval of work with that of subsequent intervals of work, changes in the share of occupations can be determined.

Table 4.5 shows that there is movement between all occupations in both Ghana and Bolivia. Although the share of occupations between women's first interval of work and subsequent work intervals does not change in a consistent fashion, some trends are visible. In both countries, clerical and production occupations have a lower share in the occupational distribution of later intervals of work than in the first

Table 4.5 Occupational distribution in the first, second, third, and fourth intervals of work for women who changed occupations: Ghana and Bolivia, Demographic and Health Surveys, 1988-1989

Occupations	Interval of work: Ghana				Interval of work: Bolivia			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Professional, technical, managerial	5.9	8.3	6.4	3.1	8.4	13.8	11.3	12.8
Clerical	8.9	4.1	3.9	1.6	9.0	2.5	7.6	3.7
Sales	38.7	45.9	42.1	54.7	15.7	30.7	27.0	30.5
Services	8.3	8.3	13.5	7.8	43.7	31.3	38.6	36.5
Production	34.5	28.6	30.1	28.2	20.0	19.3	14.7	14.1
Agriculture	3.6	4.8	4.0	4.7	3.4	2.4	0.9	2.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	168	168	126	64	201	201	139	75

Note: Totals may not add to 100.0 due to rounding.

interval of work. This is also true of service occupations in Bolivia. On the other hand, sales occupations in both countries, and professional occupations in Bolivia only, have a greater share in later occupations than in earlier occupations. This suggests that women who persist in the labor force tend to be in professional and sales occupations and/or move into these occupations from other occupations later in their work trajectories. Indeed, in an analysis that permits comparisons in terms of numbers rather than proportions by controlling for numbers of intervals worked (data not presented here), more women moved into sales and professional occupations than out of them over time, especially if they worked in all four intervals. Thus, not only does the overall share of these occupations rise with a longer duration of labor force attachment, but they appear to be easy to enter later in the employment trajectory. The opposite appears true for clerical, production, and service occupations.

In summary, this analysis of movement between occupations reveals that most women who work in two or more birth intervals do not change occupations. Professional occupations appear to be more common among women who are more committed to the labor force than among those less committed. However, contrary to expectations, professional occupations are not necessarily those which women who change occupations cannot move into later in their work trajectories. Sales occupations, which are most common in Ghana, appear to be less favored by women who are more committed to the labor force and to their occupation, but are occupations into which women who change occupations can easily move. Service occupations, which are particularly common in Bolivia, are also occupations somewhat less favored by women most committed to the labor force and to their occupation; however, these occupations also appear to be less favored by women who do move between occupations.

Chapter 5

Some Hypotheses on Women's Labor Force Participation

From the discussion in Chapter 4, it is clear that women in both Ghana and Bolivia interact with the labor force in a complex fashion and that the current employment rate does not capture this complexity. Generally, however, whether a woman is employed for cash or not is a function of both the supply of and demand for labor in an economy. Although it is the economy-wide demand for labor that defines the employment opportunities available for the individual, such factors cannot be incorporated into this individual-level study. Nevertheless, the opportunities which a woman can avail of will, in part, be a function of several individual-level factors.

Different generations of labor economics models (Becker, 1965; Mincer, 1962) show that the supply of labor to the wage market is a function of both real wages and women's reservation wages, the latter being the wage at which women will enter the wage market. If real wages are higher than the reservation wage, women will supply their labor for wages. The reservation wage is likely to vary over a woman's lifecourse since at different stages of her life cycle the tradeoff between labor market participation and home involvement may be different (Mincer and Polacek, 1974).

Clearly of great importance in defining both reservation wages and realistic opportunities of employment, is the degree of human capital embodied in the individual in the form of training, education and work experience. In purely economic terms, the higher the level of human capital, the greater the opportunity costs of not only not working, but also of any disruptions in the work trajectory. This follows from the fact that the wage profiles of highly educated individuals are higher, and the potential loss of wages through not working or dropping out of the labor force is also higher. In addition, upon reentry into the labor force there is likely to be a loss in wages, i.e., wages at reentry will be lower than wages at the time of exit (Mincer and Polacek, 1974). The loss will be greatest in high wage jobs where human capital requirements are both high and specialized. Any discontinuities in work trajectories in such jobs can quickly erode this specialized human capital and lower subsequent wages (Polacek 1975, 1979).

In addition to human capital considerations, several other cultural and need-based factors define not only reservation wages and opportunities, but also the perception of opportunities. Research has repeatedly emphasized the cogency of culture in defining not only gender relations, but specifically, what is "appropriate" work for women and whether women from higher status groups enter the wage force or not (Dixon-Mueller, 1988, 1993; Dyson and Moore, 1983). However, few theoretical models of women's labor force participation explicitly consider variations in cultural motivations for work. Additionally, many theories of women's labor force participation for cash in non-kin settings see such participation as an innovation, and not an innate part of the culture. These theories are likely to be less applicable in Ghana where the culture appears to emphasize women's economic independence and assumes that women will be working.

Economic studies show that women's labor force participation is likely to vary by current age and current marital status because the opportunity costs of time will vary at different periods in the life cycle. For young, unmarried girls the tradeoff is likely to be between working and going to school, whereas the reservation wage for married women will depend in part on the tradeoff between housework, childbearing and rearing, and labor force participation. Further, at least in the formal labor market, the time profile of earnings per year has been found to be age dependent, rising rapidly during the early years, more slowly during middle age, and falling at retirement. Opportunities for employment may also differ over time so that labor force participation varies by cohort. In addition, culture is likely to dictate whether it is appropriate for

women to work at different stages of their life cycle. In patriarchal societies, for example, where purity of descent is valued (Dyson and Moore, 1983), interaction of young women and women of reproductive age with the outside world may be limited.

The socioeconomic background of women can also have several opposing effects on women's labor force participation. For one, household wealth has an income effect such that the wealthier one is, the less likely he or she will exchange leisure for work (Becker, 1965). Any characteristic that reflects a higher household income, such as higher socioeconomic status of the household, a more educated husband, or a husband in a high-paying or high-prestige profession, will be associated with lower rates of labor force participation. Conversely, anything that reflects poverty or a greater need for income, such as if the woman is a household head, will tend to increase labor force participation. Simultaneously, a countervailing effect of higher socioeconomic status is likely to be positively associated with exposure to new ideas and access to information, opportunities and better jobs. Particularly in societies where labor force participation and financial autonomy for women is an innovation, exposure to new ideas and ways of doing things and to Western gender ideology may result in an increase in women's labor force participation. The level of women's labor force participation is likely to be the result of these two opposing effects of socioeconomic status. If the income or status effect is stronger, labor force participation may fall, whereas if the exposure and opportunity effects are stronger, labor force participation may increase. However, the effect of socioeconomic status on women's labor force participation is unclear when the existing norm for women is to assume primary financial responsibility for themselves and their children.

Early work experience is likely to encourage later work force participation. Ever having worked gives women a work history to build on and it is expected that these women are more likely to be exposed to ideas of individual autonomy and independence. This exposure is even more likely if women not only worked in the past but also controlled their earnings. Another factor that is likely to increase exposure to new ideas and new opportunities for work is migration (Oppong, 1991). However, since migration (unless it involves an on-the-job transfer) involves leaving an existing job and having to find a new one, it is likely to be associated with an increase in discontinuities in the work trajectory.

Living in large families could affect labor force participation positively or negatively. If families are large because they are extended or joint families, they would be expected to display more conservative attitudes toward women's labor force participation. On the other hand, the more people in the household, the more help an individual woman may have for household chores or for baby-sitting, better enabling her to enter the labor force.

A woman's birth history has obvious implications for her labor force participation and work trajectory. If cultural norms either encourage or discourage women from working after the birth of her first child, then the age at first birth may indicate a cutoff point before or after which women are likely to work. Further, for women's labor force cycling behavior, age at first birth, as well as the length of the first and subsequent birth intervals, will indicate the time available for labor force participation. Thus, a woman whose marriage and births are all closely spaced may have less time available to enter the labor force in any given birth interval compared to a woman whose marriage and births are far apart. In addition, a woman whose first birth is before marriage may have a greater economic need to be in the labor force than a woman whose first birth is within marriage. A recent birth or the presence of a young child is likely to discourage women from working. However, this relationship is again likely to hold more if children are a culturally-promoted cause for exiting the labor force rather than for encouraging labor force participation. Finally, contraceptive use, whether as a cause or a consequence of labor force participation, spells greater control over the timing and number of births, and consequently is likely to affect labor force participation positively (Birdsall and Chester, 1987).

So far, few distinctions have been drawn between factors that affect labor force participation at a point in time and those that encourage either continuity or labor force cycling. This is, in part, deliberate since the most is known about women's current labor force participation only. However, expectations are that current employment and factors affecting labor force participation are also likely to affect labor force continuity in Ghana where the cultural norm is for most women to work. In Bolivia, where working after marriage is more of an innovation, continuity of labor force participation is likely to be a greater innovation, requiring women to be highly motivated. Even less is known about factors that are likely to promote labor force cycling in favor of either continuity or not working. However, since labor force cycling is an effective strategy for combining work and reproduction, any characteristic positively associated with labor force participation is also expected to be positively associated with trajectories involving labor force cycling.

Chapter 6

Variables and Methods

It is important to understand the variation in both current employment and the patterning of labor force participation over birth intervals observed in Chapters 3 and 4. Overall, it is necessary to determine whether the factors relevant to explaining current employment are the same as the factors explaining variations in labor force cycling behaviors. In addition, the following will be examined: a) how women who work at all, either continuously or cycling in and out of the labor force, differ from those who never work; b) how women who work continuously differ from those who cycle in and out of the labor force; and c) in predicting how changes in explanatory factors affect the probabilities of working continuously, cycling in and out of the labor force, not working at all, and currently working.

The multivariate analysis is restricted to the subsample of ever-married[3] urban women who have had at least three children both on the grounds of parsimony, and because it allows a more complete picture of the lifetime labor force cycling behaviors of reproductive women in high fertility regime countries. In order to facilitate comparison, the analysis of current employment is also restricted to the same subsample of women. The resulting sample size for Ghana is 581 women and for Bolivia it is 1,688 women.

Including only ever-married women with three or more children in the analysis gives rise to some potential sources of bias which need to be considered. Compared with the sample of ever-married women who had at least one child, the sample of women with three or more children in both countries is, on average, about three years older (having a minimum age of 20 years instead of 15), has one year less of education, and has a slightly lower socioeconomic index, especially in Bolivia. However, it is of greater concern that women with three or more births may have unrepresentatively low employment rates. This would occur if women who wished to work had deliberately restricted their fertility, and as a result, would be concentrated among women with less than three children. However, this argument is not a relevant source of bias in Bolivia where the percentages of women who were currently employed and worked in at least one interval were almost identical among women with one or two children and women with three or more children. Approximately one-third of Bolivian women in both parity groups were currently employed and 54 percent of those with one or two children had worked in at least one interval compared to 53 percent of those with three or more children. In Ghana, on the other hand, women with more children are more likely to be currently employed as well as ever employed compared to women with fewer children; 57 percent of women with one or two children are currently employed and 77 percent have worked in at least one interval, whereas 72 percent of women with three or more children are currently working and 87 percent have worked in at least one interval.

The differences in current employment can be explained by the cross-sectional variation of hypothesized explanatory factors. However, the study of women's labor force cycling behaviors ideally needs information not only on women's labor force status at different points of time in their lifecourse, but also on the hypothesized explanatory factors at those same points of time. Yet, time-varying information on the explanatory factors is not available. For example, although a woman's employment status between marriage and first birth is known, whether she remained married or what her socioeconomic status was during that time is unknown. Instead, these explanatory characteristics are measured only at the time of interview.

---

[3] Never-married urban women with at least one birth constitute less than 100 women in Bolivia and one-fourth as many in Ghana. The elimination of this very small group of women makes the samples for Ghana and Bolivia comparable and also allows the incorporation of husbands' characteristics into the analysis.

This lack of time-dependent information on possible explanatory factors constrains the overall efficacy of the models being estimated for the labor force cycling behaviors. Strong assumptions regarding the time-varying nature of explanatory variables has to be made. Consequently, the dependent and independent variables and any assumptions underlying the use of different explanatory variables are examined.

6.1 Dependent Variables

The dependent variable for the analysis of current employment is the binomial variable that takes the value 1 if a woman is currently employed for cash and 0 otherwise. The dependent variable for the analysis of the labor force cycling behaviors of women is a four-category variable defined by collapsing together the 16 work trajectories possible for women with three or more children, moving between the two work statuses of working and not working, in the following way:

Category 1: NNNN: Did not work in any interval
Category 2: WWWW: Worked in all intervals
Category 3:
For Ghana: NWWW: Did not work between marriage and first birth, but worked in all subsequent intervals
For Bolivia: WNNN: Worked only in the interval between marriage and first birth
Category 4 : OTHER: all other cycling patterns. Note that for Ghana this category includes the cycling pattern WNNN and for Bolivia it includes the pattern NWWW.

Note that Categories 1, 2 and 4 are the same for Ghana and Bolivia. However, Category 3 had to be defined differently for the two countries since NWWW was identified as an important work trajectory in Ghana but not in Bolivia, and WNNN was identified as being important in Bolivia but not in Ghana.

This definition of the dependent variable focuses attention on alternative work trajectories so that factors that distinguish women with different trajectories can then be identified. Note that this is not an attempt to model the decision to work or not work in each interval, but instead to model the combination of work and not work decisions that together define the specific path followed.

6.2 Independent Variables

The means and standard deviations for all variables included in the analysis are given in Table 6.1. Unless otherwise mentioned, all the following variables defined are used in the analysis of both current employment and woman's labor force cycling behaviors:

1) *Individual characteristics*—The individual characteristics include two continuous variables, the current age of the woman between 20 and 49 years, and the number of years of education. Current marital status is given by a dummy variable that takes the value 1 if the women is currently married and 0 if she was formerly married. Exposure to the outside world is measured by whether the woman listens to the radio regularly, i.e., every day in Bolivia or at least once a week in Ghana. A woman is considered a nonmigrant if she has always lived in the place of interview. Finally, a dummy variable indicates whether the woman is head of the household at present.

In the analysis of work trajectories over time, the use of years of education and the migration dummy variable can be easily justified. Given that most of the years of formal education typically are restricted to the period before marriage, especially for women in developing countries, it is relatively safe to assume that education is not time dependent. Further, if a woman has never migrated, then at no point in time is her employment pattern affected by migration. However, the remaining variables cannot be assumed to be

Table 6.1 Mean and standard deviation of variables included in the analysis of current employment and women's labor force cycling behaviors for the sample of ever-married urban women who have had three or more children: Ghana and Bolivia, Demographic and Health Surveys, 1988-1989

Variables	Ghana		Bolivia	
	Mean	Standard deviation	Mean	Standard deviation
Individual characteristics				
Current age (years)	35.57	7.20	36.08	6.85
Proportion currently married	.88	.33	.91	.28
Number of years of education	5.06	4.69	6.09	4.86
Woman has never migrated	.37	.48	.46	.50
Listens to radio[1]	.63	.48	.80	.40
Proportion household head	.28	.45	.10	.30
Household characteristics				
Socioeconomic index	4.31	1.38	4.49	1.65
Household size (persons)	7.16	3.89	6.40	2.06
Husband's characteristics				
Husband's years of education	8.01	5.24	8.31	4.86
Husband's occupation (ref: Agriculture)				
Professional, technical, managerial	.17	.38	.19	.39
Clerical, sales, services	.24	.42	.28	.45
Production	.36	.48	.43	.50
Work experience				
Worked before marriage with: (ref: Not worked before marriage)				
Little or no control over earnings	.07	.25	.08	.27
Much control over earnings	.35	.48	.40	.49
Birth and contraceptive history				
Age at first birth (years)	18.82	3.25	19.99	3.55
Number of children ever born	5.35	2.10	4.98	2.04
Has child under six years of age	.72	.45	.62	.49
Interval between marriage and first birth: (ref: More than 24 months)				
First birth before marriage	.10	.30	.18	.39
1-12 months	.33	.47	.43	.50
13-24 months	.33	.47	.24	.43
First contraceptive use: (ref: Used anytime after third birth)				
Never used	.46	.50	.43	.50
Used between marriage and first birth	.07	.26	.02	.14
Used after first or second child	.19	.39	.24	.43
Currently using contraception	.23	.42	.38	.48
Length of penultimate birth interval (months)	37.73	19.97	34.17	22.10
Length of ultimate birth interval (months)	41.21	21.11	41.75	29.76
Country-specific characteristics				
Akan tribe	.53	.50	NA	NA
Spanish-speaking	NA	NA	.91	.29
Region				
Valle	NA	NA	.23	.42
Antiplano	NA	NA	.52	.50
Number	581		1688	

[1] For Ghana, respondent listens to the radio at least once a week; for Bolivia, respondent listens to the radio once a day.
NA = Not Applicable

independent of time. Nonetheless, current age is included as a control for cohort effects and for any cultural differences in labor force participation by age. Current marital status and household headship are included because they are at least likely to affect women's ever entering the labor force. Finally, current exposure to the radio is assumed to also be reflective of past exposure.

2) *Household characteristics*—The socioeconomic status of the household is measured by an index that ranges from a low of 1 to a high of 6, and is constructed from a combination of information on toilet and drinking water facilities in the household. A score of 6 is given to households that have access to tap water and have a water closet, and a score of 1 is given to households that use surface or rain water and have no toilet facilities. The household size is measured by the number of household members. Both these measures are admittedly inadequate but are used on the strong assumption that they are also reflective of the situation in the past.

3) *Husband's characteristics*—The characteristics of the husband, like those of the household, will affect women's employment decisions on the assumption that the socioeconomic status of the woman is closely linked to that of her husband. Thus, included in the analysis are the years of education of the current or previous husband, and dummies for his occupation. Again, the inclusion of the husband's level of education can justifiably be assumed to be time-independent. Also, since the occupational groups used are large, it is reasonable to expect a given husband to remain in the same occupation over time. Still, a less justifiable assumption is made that a woman has not changed husbands over time.

4) *Work experience*—Women's current employment and labor force cycling behaviors after marriage are likely to be influenced by whether they had any exposure to the work force before marriage, and whether such employment afforded them financial freedom. Early exposure to the work force and financial autonomy is measured by a three-category dummy: did not work before marriage, worked before marriage with little or no say over the disposal of earnings, and worked before marriage with total control over earnings.

5) *Birth and contraceptive history*—Since the labor force cycling behaviors deal with working or not working in various birth intervals, the age at first birth and the length of each relevant birth interval are included as controls. Age at first birth is measured directly in years. The interval between marriage and first birth is measured by a dummy that differentiates between the first birth taking place before marriage, within one year of marriage, in the second year of marriage, or three or more years after marriage. The lengths of the ultimate and penultimate intervals are measured directly in terms of months. A dummy indicating whether the woman has a child of six years or less is included as a proxy for the current interval.[4] This dummy variable is used instead of the length of the current interval to also control for the presence of young children in the house. The total number of children ever born is included as an additional control. Finally, ever use of contraceptives is included as a time-linked dummy with four categories: never used, used between marriage and first birth, used in the interval after first or after second birth, and used any time after third birth.

Of these variables, only the number of children and the presence of a child under six are used in the analysis of current employment. A dummy indexing whether the woman is currently using contraception or not is also included.

---

[4] The variable "has child less than six years living with her" assigns women who had all children born in the last six years die and women who had living children less than six years but not currently living with them to the category of women with no child less than six years. Thus, for such women the variable "has child less than six" over-estimates the current birth interval. However, the total number of such women is negligible—3.8 percent of all women in the sample in Ghana and 2.4 percent in Bolivia.

6) *Country-specific characteristics*—In Bolivia, the ecological and linguistic diversity are controlled with two sets of dummies: one for the three regions (the Altiplano, Valle and Llano, with the last as the omitted category) and one differentiating between Spanish speakers and the rest of the population. In Ghana, only one dummy is used to characterize the ethnic diversity, distinguishing between the Akan and non-Akan population.

6.3 Methods

Given the binary form of the current employment variable, the current employment equation is estimated using maximum likelihood techniques appropriate for logit regression. In Table 7.1 in the next chapter, the results of this estimation for both Bolivia and Ghana are reported in terms of the odds ratios.

Maximum likelihood multinomial logit regression techniques are used to analyze the four-category labor force cycling patterns. The multinomial logit estimation normalizes using any one category of the dependent variable. The exponentiated value of the estimated coefficient provides the relative risk associated with being in any given category compared to the base category (Greene,1993). Consequently, Tables 7.2 and 7.3 in the next chapter show the estimated relative risks of being in a given category of the dependent variable compared to the base category, for each independent variable, for Ghana and Bolivia. Two alternative base categories are used: women who have not worked in any of the four intervals and women who worked in all of the four intervals. Thus, the relative risk of working continuously (category 2), or cycling in and out of the labor force (categories 3 and 4) as compared to not working in any of the four intervals (category 1), as well as the relative risk of being in categories 3 or 4 compared to being in category 2, can be determined.

Finally, the probabilities of being currently employed and of having any of the defined work trajectories are also estimated and compared for different values of the independent variables. These calculations are presented in Figures 7.1 to 7.6 in the next chapter.

Chapter 7

Results of Multivariate Analyses

Results of the multivariate analyses are presented in three parts. First, the results of the logit estimation of current employment in Ghana and Bolivia are discussed. Then the multivariate logit results comparing work trajectories for women in the two countries are presented. Finally in the last section, based on the results of the previous sections, the probabilities of being currently employed and having different work trajectories at different values of several relevant explanatory variables are compared for both countries.

7.1 Current employment: Ghana and Bolivia

In Ghana, as expected, few factors distinguish currently employed women from those not currently employed (Table 7.1). Among the ever-married women age 20 to 49 years who have at least three children, the odds of being currently employed are significantly higher only if they are household heads and are significantly lower if they have a child below the age of six. The odds of being currently employed also increase the higher the socioeconomic status of the household. No other explanatory variable has a significant association with being currently employed in Ghana.

By contrast, in Bolivia, several factors distinguish women who are currently working from women not currently working. The older the woman, and the more educated she is, the more likely she is to be currently employed. Further, currently married women are only one-fifth as likely as formerly married women to be currently employed, and household heads are 80 percent more likely than non-household heads to be currently employed.

Although the socioeconomic index and the husband's education together are important elements of women's overall socioeconomic status, in Bolivia, these two factors have an opposing effect on women's current employment. The probability of a woman working increases by 16 percent for every unit increase in the socioeconomic index, but falls by about 4 percent with every additional year of education that her husband has. As previously argued, the impact of a higher socioeconomic status on women's labor force participation should be the resultant of two opposing effects: a positive effect due to the more favorable opportunity structure available to women from wealthier and more educated households, and a negative income effect. These results suggest that increases in the socioeconomic index impact women's labor force participation more by changing the opportunity structure than through the possible income effect. In contrast, the higher education level of the husband affects women's labor force participation more through the negative income effect than by changing the opportunity structure.

Women who have a young child in the house have a lower probability of being currently employed, but this effect is not significant. Early work experience, especially if it involved control over earnings, also significantly increases the probability of being currently employed in Bolivia.

In summary, it is clear that in Ghana, women's current employment status does not vary significantly by most of the widely accepted correlates of women's labor force participation. Explanations for the high rate of female labor force participation in Ghana need to be sought in terms of cultural norms and expectations. The case of Bolivia, on the other hand, fits more neatly into the widely accepted theoretical models of women's labor force participation within a developmental framework. In this case, current employment of women appears to be the net result of balancing modern influences such as education and early work experience against the pressures of lifecourse events such as marriage with associated commitments to domestic roles.

Table 7.1 Odds ratios of being currently employed estimated from the logit regression of women's current employment: Ghana and Bolivia, Demographic and Health Surveys, 1988-1989

Variables	Odds ratio of being currently employed	
	Ghana	Bolivia
Individual characteristics		
Current age	1.005	1.042***
Currently married	1.224	.232***
Number of years of education	1.013	1.084***
Woman has never migrated	1.382	.913
Listens to radio	1.265	1.127
Household head	1.687**	1.762**
Household characteristics		
Socioeconomic index	1.283***	1.161***
Household size	.993	.971
Husband's characteristics		
Husband's years of education	.991	.964**
Husband's profession		
Professional, technical, managerial	1.396	1.034
Clerical, sales, services	1.505	.857
Production	1.393	.867
Work experience		
Worked before marriage with:		
Little or no control over earnings	1.057	1.245
Much control over earnings	1.165	1.709***
Children and contraception		
Number of children ever born	1.035	.957
Age at first birth	1.053	.981
Has child under six years of age	.567*	.785
Currently using contraception	1.472	1.083
Country-specific characteristics		
Akan	1.145	NA
Spanish-speaking	NA	.869
Region		
Valle	NA	1.267
Antiplano	NA	1.175
Log Likelihood	-320.586	-973.682
Degrees of freedom	19	21
Pseudo R-squared	.075	.112
Number	581	1688

* p<.10; ** p<.05; *** p<.01.
NA = Not Applicable

7.2 Labor Force Cycling Behaviors

For each country, two comparisons are made. First, women who have trajectories involving work in one or more intervals are compared with women who have never worked in the four intervals being considered. Next, women with trajectories involving periods of work and no work are compared with women who have worked in all the four possible intervals. These comparisons illustrate the ways in which women who do not work at all, women who cycle in and out of the labor force, and women who work continuously differ from each other.

7.2.1 Ghana: Comparison of trajectories involving working in one or more intervals with not working in any interval

Few factors distinguish Ghanaian women who have ever worked after marriage, either continuously (WWWW) or by cycling in and out of the labor force (NWWW and "Other" work trajectories) from women who have not worked in any interval (NNNN). This can be seen from columns 2-4 of Table 7.2.

Women who worked in all intervals are much more likely to have a higher socioeconomic status and to have worked before marriage than women who did not work in any interval. Further, the impact of work before marriage varies by the level of control over earnings before marriage. As compared to women who did not work before marriage, women who worked but had little or no control over their earnings are only 4.5 times as likely to have the trajectory WWWW than NNNN, whereas women who worked and had control over their earnings are over 30 times as likely. Women who worked before marriage with control over earnings are also much more likely to have a trajectory grouped under "Other" than to not work at all.

As expected, the probability of labor force continuity is lower among women who had a short (1-12 months) first birth interval as compared with those not working in any interval. However, unexpectedly, a longer ultimate birth interval lowers the probability of both working continuously or having one of the "Other" trajectories.

Contraceptive use may either spur or be spurred by labor force participation. The timing of contraception use, rather than whether it was used at all, distinguishes women who remain continuously attached to the labor force from those with the trajectory NNNN. However, contraceptive use does not affect the choice between cycling trajectories and not working at all.

Regular radio listening distinguishes women who cycle in and out of the labor force from women who do not enter the labor force. Indeed, as compared with women who do not listen to the radio, women who do are on average two and a half times as likely to have the work trajectory NWWW and one and a half times as likely to have trajectories grouped as "Other" than have the trajectory NNNN. Larger households appear to particularly discourage women from having the work trajectories grouped under "Other" in favor of not working in any interval. Further, women's labor force cycling behavior does not vary significantly by the husband's years of education but does depend on their husband's profession. Having a husband who is a professional increases the probability that a woman will cycle in and out of the labor force but does not affect the probability of her remaining continuously in the labor force.

7.2.2 Ghana: Comparison of trajectories involving labor force cycling with working in all four intervals

Columns 5 and 6 in Table 7.2 give the estimated relative risks of being in either of the labor force cycling categories NWWW or "Other" as compared with being in the category WWWW for women who worked in at least one interval after marriage. Women who have not worked in any of the four intervals are

Table 7.2 Relative risks estimated from the multinomial logit regressions of women's labor force cycling patterns: Ghana Demographic and Health Survey, 1988

	Relative Risks				
	All women[1]			Women[1] who have worked in at least one interval after marriage	
	WWWW vs. NNNN	NWWW vs. NNNN	Other vs. NNNN	NWWW vs. WWWW	Other vs. WWWW
Individual characteristics					
Current age	1.063	1.070	1.025	1.003	.962
Currently married	1.032	2.288	1.010	2.379*	.979
Number of years of education	1.015	1.027	1.034	1.002	1.010
Woman has never migrated	.922	1.147	.676	1.329	.746
Listens to radio	1.374	2.378***	1.799*	1.548	1.272
Household head	1.782	1.271	1.776	.690	.669
Household characteristics					
Socioeconomic index	1.405***	1.195	1.050	.830	.742***
Household size	.961	.958	.911**	.983	.939
Husband's characteristics					
Husband's years of education	.995	.998	.994	1.005	.999
Husband's occupation					
Professional, technical, managerial	2.174	3.731**	2.828*	1.762	1.472
Clerical, sales, services	1.470	1.676	1.239	1.183	.959
Production	1.612	2.672**	1.590	1.680	1.055
Work experience before marriage					
Worked before marriage with:					
Little or no control over earnings	4.507**	.469	1.558	.110***	.339**
Much control over earnings	30.866***	1.967	8.887***	.064***	.284***
Birth and contraceptive history					
Age at first birth	1.080	1.004	1.047	.921	.965
Number of children ever born	.875	1.052	.966	1.224	1.115
Has child under six years of age	1.101	1.566	1.047	1.409	.954
Interval between marriage and first birth:					
First birth before marriage	.767	.388	.976	.467	1.283
1-12 months	.427*	.820	.643	1.794	1.453
13-24 months	.708	.589	.785	.842	1.115
First contraceptive use:					
Never used	1.033	.829	1.410	.703	1.290
Used between marriage and first birth	5.633*	2.733	3.373	.520	.623
Used after first or second child	2.097	2.078	1.993	1.016	.966
Length of penultimate birth interval	1.005	1.008	1.005	1.004	1.000
Length of ultimate birth interval	.980*	.992	.982**	1.012*	1.002
Country-specific characteristics					
Akan	.602	1.185	.913	.820	.644*
Log likelihood		-635.996		-457.026	
Pseudo R-squared		.183		.177	
Number		581		506	

* p<.10; ** p<.05; ***p<.01.

NNNN: Did not work in any of the four possible intervals.
WWWW: Worked in all four possible intervals.
NWWW: Did not work in first interval (i.e., between marriage and first birth) and worked in all other intervals.
Other: All other labor force cycling patterns.

[1] Ever-married women with three or more children.

excluded from this estimation since the focus is on differences between women who have work trajectories involving cycling in and out of the labor force and women who work continuously.

The trajectories WWWW and NWWW differ only in women's work decisions for the first interval. Column 5 shows that women who are formerly rather than currently married, and those that worked before marriage are more likely to not work in the first interval than in all intervals. Note that the relative risk values for the dummies (work before marriage without and with control over earnings) are both about 0.1. Thus, it is the fact of working before marriage irrespective of earnings control which appears to influence the choice between the trajectories WWWW and NWWW.

The only factors which significantly distinguish women who have the "Other" work trajectories from those who work in all four intervals are the socioeconomic index of the household, work before marriage (with and without control over earnings), and membership in the Akan ethnic group. All these factors are associated with a lower probability of being in the "Other" category as compared with the WWWW category.

From these results little is learned about the choice of labor force cycling patterns in Ghana. Few of the predicted factors are consistently related to alternative labor force behaviors. All that can safely be stated is that work before marriage, coupled with control over earnings, positively impacts the probability of working after marriage, and of doing so continuously. A higher socioeconomic index of the household also increases the probability of having the trajectory WWWW as compared with not working or having one of the "Other" trajectories. Further, in Ghana, the husband's characteristics are not important in the choice of particular labor force participation strategies for women who enter the labor force, but having a husband in a professional occupation does increase the probability of women ever entering the labor force.

7.2.3 Bolivia: Comparison of trajectories involving working in one or more intervals with not working in any interval

In Bolivia, currently married women are about 80 percent less likely to have any trajectory involving work in favor of never working in any interval (NNNN). Each additional year of education increases the probability of having the trajectory WWWW by about 10 percent, and of having any of the "Other" trajectories by 6 percent, over having the trajectory NNNN. Notably, the education level does not distinguish women who work only in the first interval (WNNN) from those who do not work in any interval.

While household headship does not distinguish those who cycle, women who are household heads are almost two and a half times as likely to have the trajectory WWWW than NNNN compared to women who are not household heads. Husband's characteristics also significantly distinguish continuously working women from continuously nonworking women. While, each additional year of husband's education is associated with a reduction of about 7 percent in the probability that a woman will have the work trajectory WWWW, women whose husbands are professionals are, on average, twice as likely as other women to work in all intervals. Membership in larger households, even controlling for the number of children, is most likely to be positively associated with women having the trajectory WNNN rather than NNNN.

The impact of early work experience is consonant with expectations: women who work before marriage, with or without control over earnings, are much more likely to ever enter the work force. However, the increase in probability of having any of the work trajectories is affected by the degree of control over earnings. In general, women who work before marriage and control their earnings, in each comparison, have a higher probability than those who work before marriage but have little control over their earnings. In addition, work before marriage increases most the probability of having the trajectory WNNN. Thus, while work before marriage encourages work any time after marriage, and continuity in work trajectories, it especially has the effect of spilling over into the first birth interval. This continuation of work before

marriage into the period between marriage and first birth appears to be the main difference between women who have the trajectory WNNN and those with trajectory NNNN.

Few of the birth and contraceptive factors have any effect on women's labor force cycling behaviors in comparison with the trajectory NNNN. A higher age at first marriage significantly increases the probability of a woman having the trajectory WWWW, as does the length of her penultimate interval. A very short first birth interval (1-12 months), and never use of contraceptives is associated significantly with the reduction in the probability of having the trajectory WNNN in comparison with NNNN. The probability of being in the "Other" category is also reduced significantly if a woman has never used contraception. Additionally the latter probability is lower by almost 40 percent if the woman has a child six years or less. However, the longer the length of her ultimate birth interval, the higher the probability of her having one of the trajectories grouped under "Other."

Finally, women from the Valle region are much more likely than those from the Llanos region to be in any of the three categories WWWW, WNNN or "Other" as compared to NNNN. Also, Spanish speakers are only half as likely as non-Spanish speakers to be working in all four intervals.

Thus, we conclude that in Bolivia, being currently married consistently lowers the probability of ever having worked after marriage. On the other hand, work before marriage, with and without control over earnings, and living in the Valle region increases the probability of working after marriage. Also in Bolivia, unlike in Ghana, the level of education does distinguish women who had either the WWWW trajectory or one of the "Others" trajectories from those who did not work in any interval. Finally, the timing of contraceptive use is not important in Bolivia for labor force cycling, instead, never use is more consistently associated with a lower probability of having ever worked after marriage.

7.2.4 Bolivia: Comparison of trajectories involving labor force cycling with working in all four intervals

Concentrating on women who ever work after marriage, current marital status, which is important in distinguishing women who never work from those who ever work, does not distinguish women with alternative work trajectories. Increases in years of education, regular listening to the radio, being a household head, and having a husband in a professional occupation, all increase the likelihood of continuity over all intervals in labor force attachment. However, the husband's education, which has no impact on a woman's cycling behavior in Ghana, not only tends to decrease the probability of a Bolivian woman being currently employed (Table 7.3), but also decreases the probability of her being employed in all four intervals. Thus, while education and gains in status associated with having a husband in a professional occupation encourage ever working after marriage and working continuously, the income effect associated with having a highly educated husband reduces the probability of a woman working continuously or working at all after marriage.

Notably, work before marriage with little control over earnings increases the probability of having the trajectory WNNN as compared to WWWW, but working with control over earnings does not significantly affect this probability. On the other hand, work before marriage, especially with control over earnings, significantly reduces the probability that women will have any of the "Other" trajectories instead of WWWW. These results appear to reemphasize that work before marriage, while increasing the probability of work in all four intervals, is most strongly and positively associated with women continuing to work only until their first birth.

Table 7.3 Relative risks estimated from the multinomial logit regressions of women's labor force cycling patterns: Bolivia Demographic and Health Survey, 1989

	Relative Risks				
	All women[1]			Women[1] who have worked in at least one interval after marriage	
	WWWW vs. NNNN	WNNN vs. NNNN	Other vs. NNNN	WNNN vs. WWWW	Other vs. WWWW
Individual characteristics					
Current age	1.033	1.021	1.007	.991	.978
Currently married	.195***	.231***	.163***	1.094	.701
Number of years of education	1.107***	.975	1.061***	.894***	.956*
Woman has never migrated	1.042	.961	.855	.967	.797
Listens to radio	1.349	.745	.767	.571*	.638*
Household head	2.231**	1.006	.943	.426*	.375***
Household characteristics					
Socioeconomic index	1.087	1.010	1.069	.930	.986
Household size	1.040	1.133**	.944	1.089	.915*
Husband's characteristics					
Husband's years of education	.930***	1.012	.990	1.080**	1.054**
Husband's occupation:					
Professional, technical, managerial	2.261**	1.358	.843	.585	.326***
Clerical, sales, services	1.279	1.579	.777	1.176	.599
Production	1.132	1.740	.795	1.418	.623
Work experience before marriage					
Worked before marriage with:					
Little or no control over earnings	3.671***	10.283**	1.755**	2.827**	.475**
Much control over earnings	8.856***	12.991**	2.093***	1.333	.212***
Birth and contraceptive history					
Age at first birth	1.061**	1.062	.965	1.003	.915
Number of children ever born	1.067	1.023	.977	.961	.899
Has child under six years of age	.760	1.583	.604**	2.111**	.835
Interval between marriage and first birth:					
First birth before marriage	.784	.762	1.001	.935	1.733*
1-12 months	.764	.471**	1.153	.613	1.760**
13-24 months	.866	.860	1.414	1.011	1.442
First contraceptive use:					
Never used	.749	.373***	.584***	.518**	.792
Used between marriage and first birth	1.392	1.050	.561	.688	.502
Used after first or second child	1.291	.944	1.078	.745	.914
Length of penultimate birth interval	1.006*	.994	1.000	.986**	.990**
Length of ultimate birth interval	1.004	1.004	1.006**	.999	1.002
Country-specific characteristics					
Spanish-speaking	.542**	.701	.901	1.214	1.464
Region					
Valle	1.576*	3.324***	1.847***	2.047**	1.177
Altiplano	1.226	1.451	1.228	1.165	1.069
Log likelihood		-1763.348		-774.387	
Pseudo R-squared		.155		.160	
Number		1687		904	

* p<.10; ** p<.05; ***p<.01.

NNNN: Did not work in any of the four possible intervals.
WWWW: Worked in all four possible intervals.
WNNN: Worked in first interval (i.e., between marriage and first birth) and not in any other interval.
Other: All other labor force cycling patterns.

[1] Ever-married women with three or more children.

A woman with a young child is twice as likely as one without to have the trajectory WNNN than WWWW. Although lacking an intuitive explanation, this result suggests that it is women with young children who are not likely to work continuously. Further, the use of contraception increases the probability of working continuously in the labor force rather than cycling in and out. Thus it appears that women who either never enter the labor force or who have the trajectory WWWW are nonusers of contraception as compared with late users.

Not surprisingly, the probability of women's continuous employment as compared with a trajectory in the "Other" group increases the older the woman is at the birth of the first child and the longer the penultimate birth interval, and decreases if the first birth is before or within one year of marriage.

Finally, women from the Valle region are twice as likely to be in the category WNNN than in WWWW. It appears that although women from this region do have a higher probability of working after marriage than not working at all, amongst women who have worked, they appear most likely to have the trajectory WNNN.

7.3 Ghana and Bolivia: Comparison of probabilities at different values of explanatory variables

So far, the effects of explanatory variables on the relative probability of having a given work trajectory as compared to the base trajectory, or of being currently employed versus not being employed have been examined. The probability is now compared of having each of the alternative work trajectories, or of being currently employed, for different values of any explanatory variable of interest in absolute rather than relative terms. Absolute probabilities may not have the same relationship with explanatory variables as compared to relative probabilities which also vary by the choice of a base category. In these calculations, values of all other variables are held constant at their means.

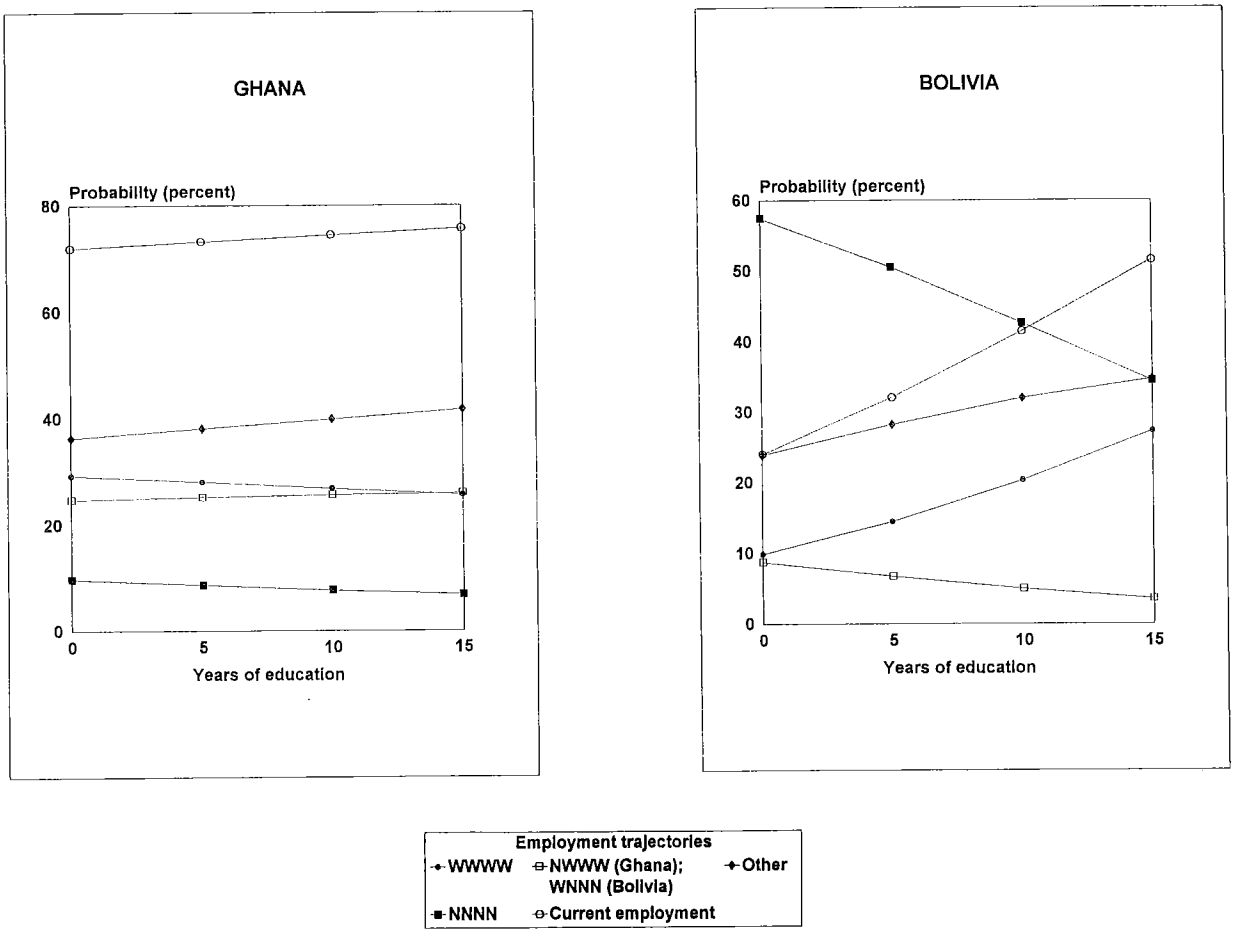
For both Ghana and Bolivia, separate probabilities are calculated for four continuous variables: years of education, husband's years of education, socioeconomic index, and age at first marriage; and two dummy variables: work experience before marriage and radio listening. The effects of these explanatory variables on employment behavior are not consistently significant in both countries. Nevertheless, these explanatory variables are most cogent since their values are, in general, determined before women embark on their post-marriage work trajectories, and since they can be manipulated by policy instruments. The estimated probabilities are plotted in Figures 7.1 to 7.6.

7.3.1 Employment and years of education

In Ghana, the relative insignificance of the effect of education on women's employment shown in the relative probabilities analysis is also reflected in Figure 7.1. As years of education increase, there is little change in any of the probabilities.

In Bolivia (Figure 7.1), by contrast, as education increases, the probability of not working in any interval (NNNN) declines sharply and the probability of working continuously (WWWW) and currently working both increase sharply. In addition, the probability of having one of the "Other" trajectories also increases while that of having the trajectory WNNN decreases. Thus, in Bolivia, education has the effect of increasing, in absolute terms and not just relative to not working, labor force continuity, the probability of ever working after marriage (with the exception of having the trajectory WNNN), and the probability of working at any given point in time as measured by current employment.

Figure 7.1 Probability of being currently employed and of having alternative work trajectories by years of education, Demographic and Health Surveys, 1988-1989

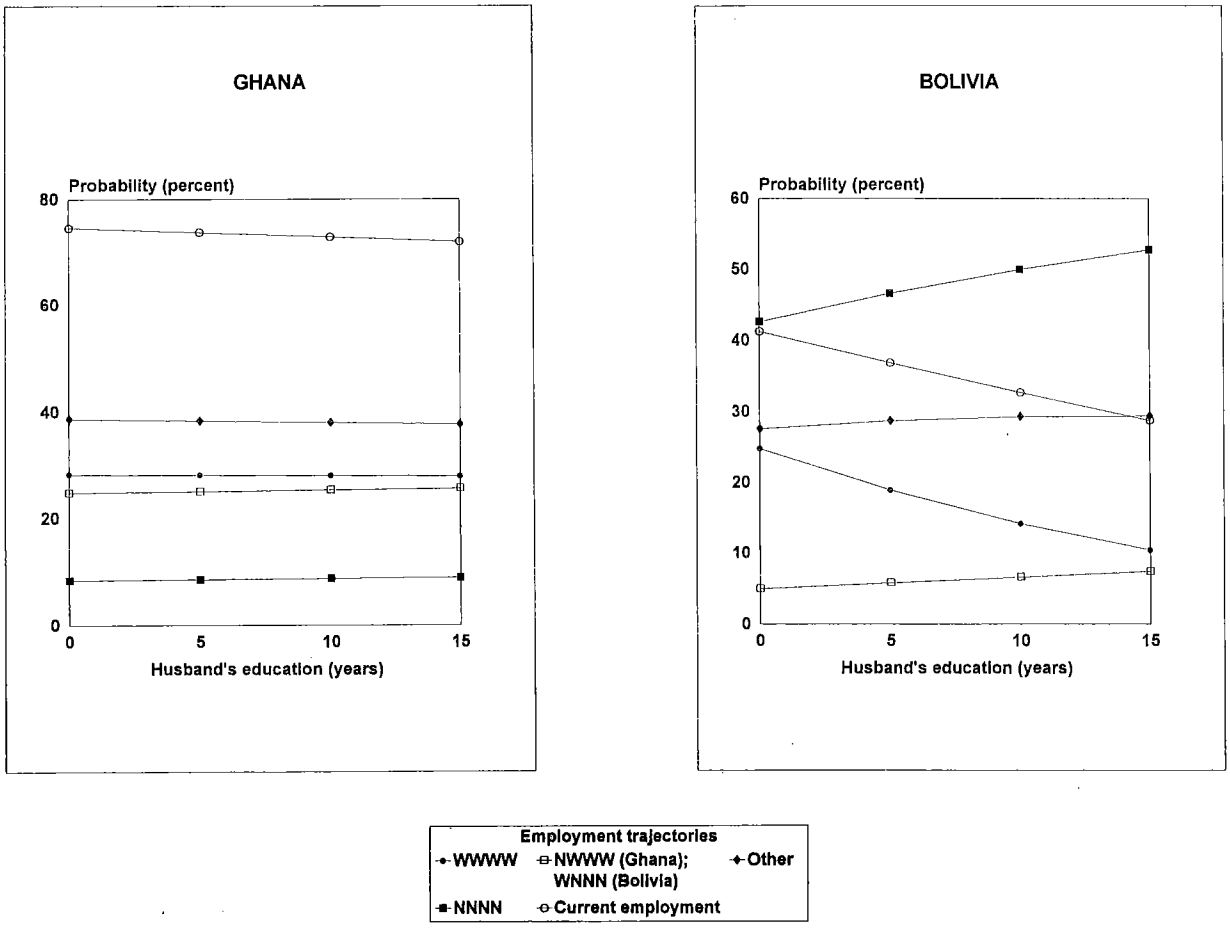


7.3.2 Employment and husband's years of education

Again, there is no relationship between women's employment patterns and husbands' education in Ghana. This is clear from the near zero slopes of all the probability lines in Figure 7.2.

In Bolivia (Figure 7.2), a husband's education has the reverse impact on a woman's labor force participation as compared to the impact of her own education. Her probability of being currently employed or of having the trajectory WWWW both decrease as husband's education increases. Women with husbands who have no education have about a 40 percent probability of being currently employed and a 25 percent probability of having the trajectory WWWW; for women with husbands with 15 years of education, these probabilities fall to about 30 percent and 10 percent respectively. By contrast, the corresponding probability of not working in any interval (NNNN) rises from about 40 percent to 50 percent. Thus, husband's education has a strong negative effect on the absolute probability of a woman being currently employed, ever being employed after marriage, or of working continuously in Bolivia.

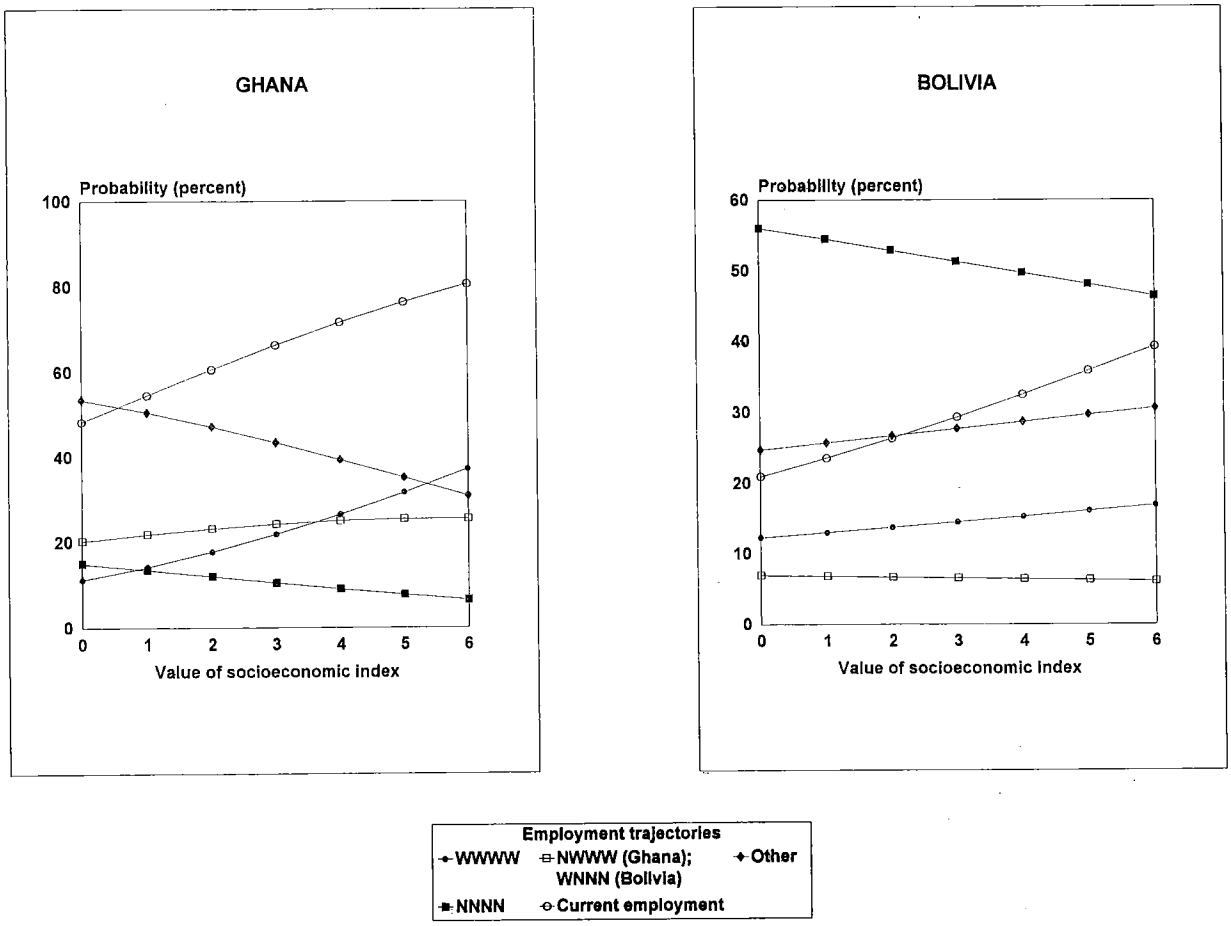
Figure 7.2 Probability of being currently employed and of having alternative work trajectories by husband's years of education, Demographic and Health Surveys, 1988-1989



7.3.3 Employment and the household's socioeconomic status

The socioeconomic status of the household as measured by the socioeconomic index has a similar impact on women's labor force participation in both Bolivia and Ghana. In both countries, increasing socioeconomic status is associated with a similar decline in the probability of never working in any interval (NNNN) and a similar increase in the probability of being currently employed (Figure 7.3). While the probability of having the trajectory WWWW also increases in both countries with the socioeconomic status of the household, the rate of change in this probability is greater in Ghana than in Bolivia. In both countries, the probability of a woman with a socioeconomic index of 0 having the trajectory WWWW is about 12 percent. However, this probability rises for women with a socioeconomic index of 6 to 40 percent in Ghana but only to about 20 percent in Bolivia. Further, as the socioeconomic index increases, the probability of having a trajectory listed under "Other" decreases sharply in Ghana but increases in Bolivia. Clearly, a higher socioeconomic status of the household has the effect of increasing continuity of labor force participation in Ghana, but has its strongest effect in Bolivia, on reducing the probability of no labor force participation.

Figure 7.3 Probability of being currently employed and of having alternative work trajectories by household's socioeconomic index, Demographic and Health Surveys, 1988-1989

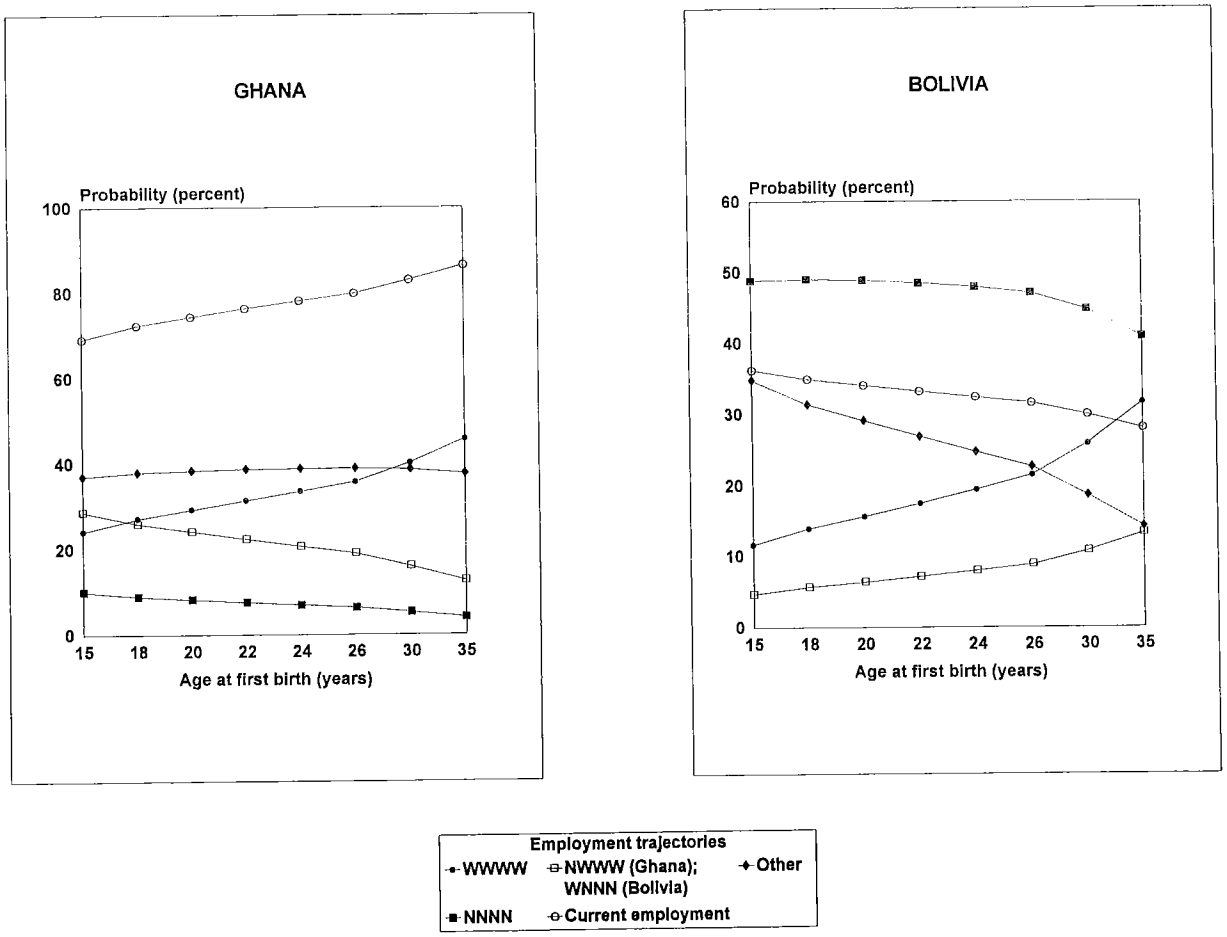


7.3.4 Employment and age at first birth

A higher age at first birth has its strongest impact in Ghana, on the probability of being currently employed, and of having the work trajectory WWWW (Figures 7.4). In Bolivia, on the other hand, a higher age at first birth is, surprisingly, associated with a lower probability of being currently employed and a sharply falling probability of having one of the "Other" trajectories (Figure 7.4). Nonetheless, the probability of having the trajectory WWWW or WNNN both rise sharply with age at first birth.

Thus, in Bolivia, a higher age at first birth appears to have two contradictory effects: it leads to a higher probability of women working continuously in the labor force, but it is also simultaneously associated with a lower probability of being currently employed. This apparent contradiction may be due to two opposing forces. On the one hand, women who have their first child later in life are also most likely to be the ones who will participate in the labor force. On the other hand, their current employment will be limited because they are also likely to be the ones currently bearing children, or who have a number of relatively young children. These effects are not evident in Ghana where the presence of children appears to be a spur to labor force participation rather than a deterrent.

Figure 7.4 Probability of being currently employed and of having alternative work trajectories by age at first birth, Demographic and Health Surveys, 1988-1989

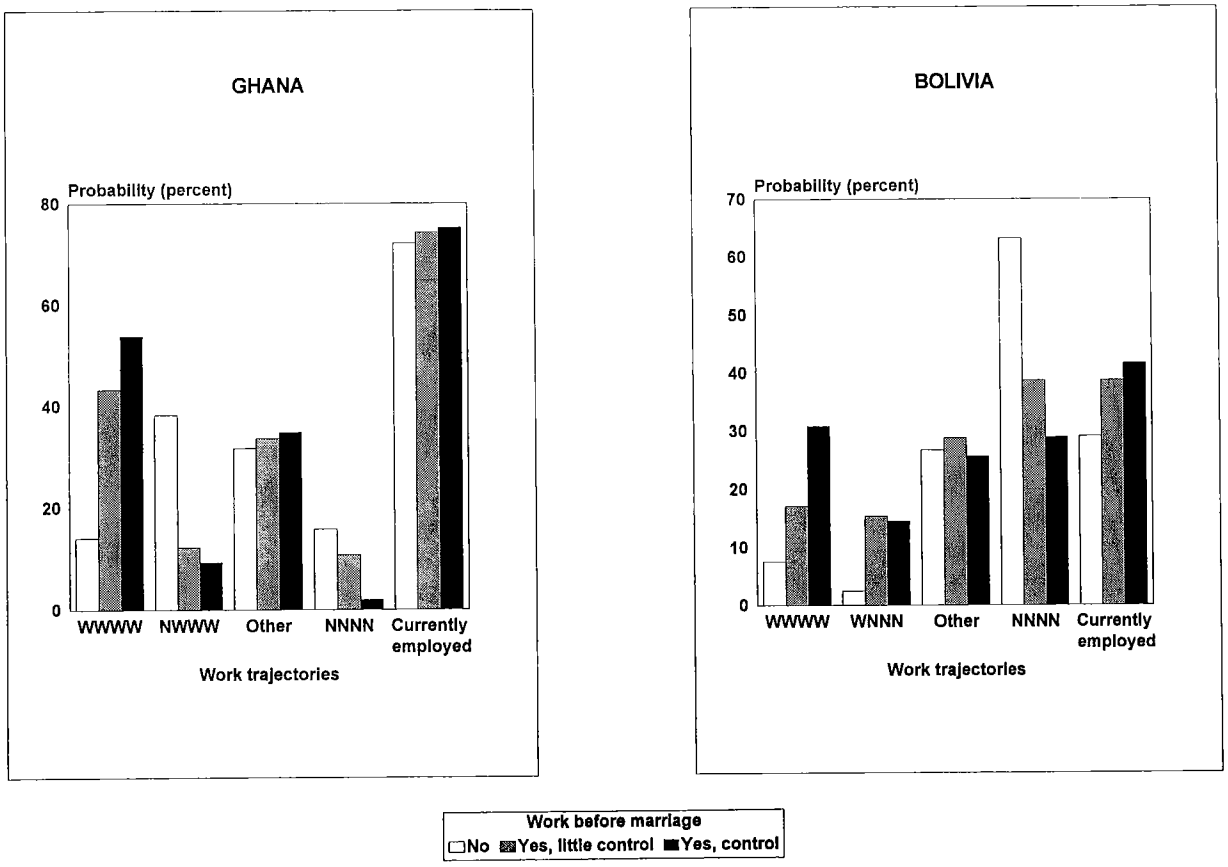


7.3.5 Employment, work before marriage, and relative control over earnings

In Ghana, current employment is unaffected by early work experience (Figures 7.5). The probability of never working after marriage (NNNN) varies across all three categories of work before marriage: 15 percent among those that did not work before marriage, 10 percent among those that worked with little control over their earnings and negligible among those that worked and controlled their earnings. The probability of having the trajectory WWWW also varies by each of the three categories being least for women who have not worked before marriage and highest for those who worked and controlled earnings. The probability of having the trajectory NWWW, however, is affected only by working before marriage and not by control over earnings. Thus women who work before marriage, irrespective of control over earnings have a much higher probability (about 15 percent) of having the trajectory NWWW than women who did not work before marriage.

In Bolivia (Figure 7.5), the probabilities of having the trajectories WWWW and NNNN also vary most between the three categories no work before marriage, work with little control over earnings and work with control over earnings. Thus, the probability of never working after marriage falls from over 60 percent when a woman has not worked before marriage, to about 40 percent if she worked with little control over earnings, and finally to about 30 percent if she worked with control over earnings. The probability of having the trajectory WWWW, on the other hand, rises from about 8 percent for women who did not work before marriage, to over 15 percent for those who worked but had little control over earnings, and finally to about

Figure 7.5 Probability of being currently employed and of having alternative work trajectories by whether the respondent worked before marriage and had control over earnings, Demographic and Health Surveys, 1988-1989



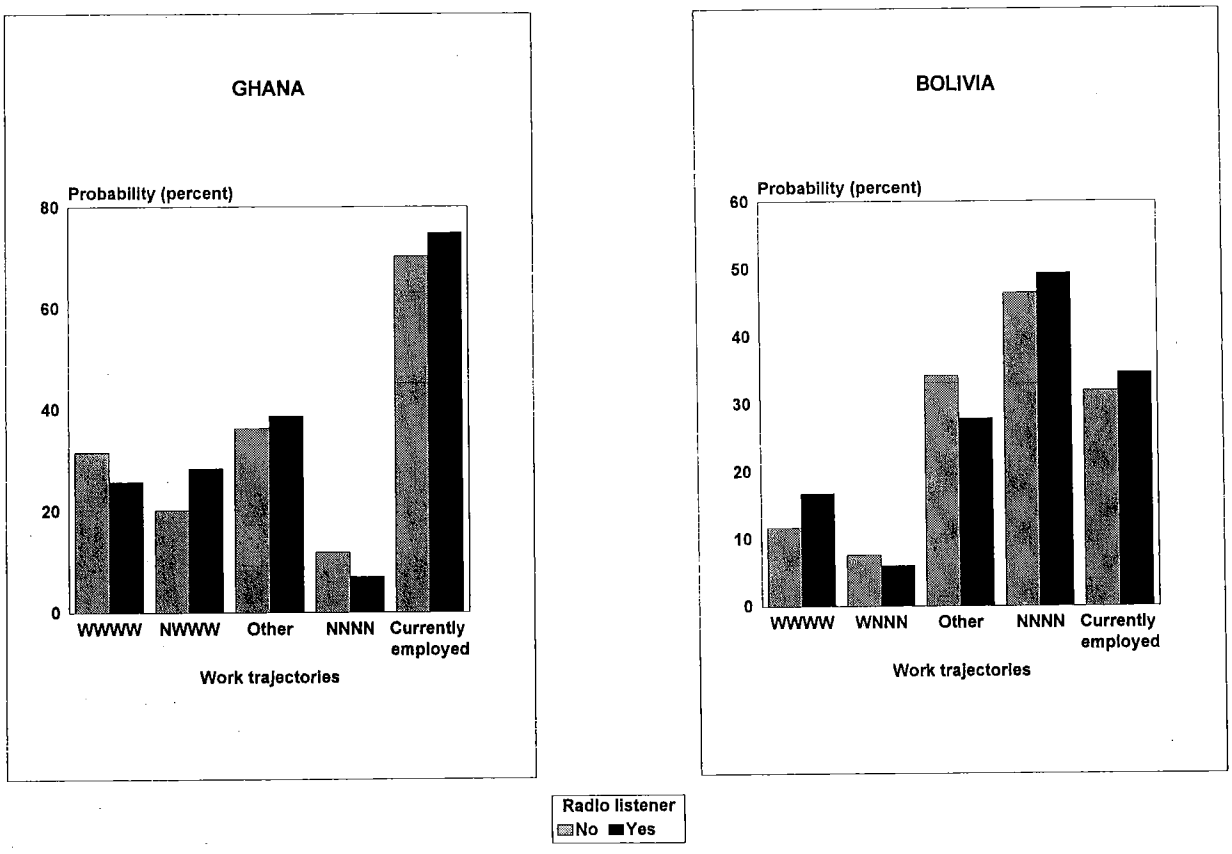
30 percent for those who worked with control over earnings. By contrast, the distinction between working and not working before marriage appears to be more significant for women who are currently employed or have the trajectory WNNN. As a result, those who worked before marriage, irrespective of control over earnings, have a higher probability of being currently employed and having the trajectory WNNN than those who were not employed before marriage.

Thus, employment before marriage increases the probability of working after marriage in both countries. In addition, no work after marriage (NNNN) and work in all four intervals both vary by control over earnings, so that the greater the woman's control over earnings, the greater the probability of WWWW and the lower the probability of NNNN.

7.3.6 Employment and exposure to the outside world through radio listening

In both Ghana and Bolivia, women who listen to the radio regularly are more likely to be currently employed than women who do not (Figure 7.6). However in Ghana, radio listeners, as compared with non-listeners, have a lower probability of having either the WWWW or NNNN trajectories and a higher probability of having the NWWW and "Other" trajectories. The reverse is true in Bolivia where radio listeners are less likely to cycle in and out of the labor force (trajectories WNNN or "Other") and are more likely to have the trajectories WWWW or NNNN than nonlisteners.

Figure 7.6 Probability of being currently employed and of having alternative work trajectories by whether the respondent listens to the radio, Demographic and Health Surveys, 1988-1989



Note: For Ghana, respondent listens to the radio at least once a week; for Bolivia, respondent listens to the radio once a day.

Chapter 8

Summary and Conclusions

This study examines the employment of urban women in Ghana and Bolivia from two different standpoints: a single point of time as reflected in women's current employment status, and a continuum, as reflected in women's work trajectories defined across birth intervals. The objectives are to understand how women in different cultural and developmental, but similar demographic contexts pattern their labor force participation over their reproductive lifecourse, and to compare what is learned about women's labor force participation from their current employment with what is learned from their employment trajectories. Despite severe limitations imposed by data availability, this analysis provides meaningful insights into the nature of labor force participation of women and of the factors that influence it.

Perhaps the most important finding of this study is that no single theoretical model explains women's labor force participation patterns. In Ghana, women's current employment and the patterning of women's labor force participation appears to be mostly independent of modernizing influences such as education; instead, cultural factors not captured by the tested models appear to account for the high levels of labor force participation, and for the differences in trajectories among Ghanaian women. In Bolivia, by contrast, current labor force participation and the patterning of labor force interaction are better correlated with both modernizing influences and life cycle factors.

Interestingly, Ghana and Bolivia look more dissimilar in terms of the rate of current employment of women and the work they are involved in, than in terms of lifetime strategies regarding labor force behavior of women who do work. The share of the currently employed women among urban women in the reproductive ages is almost twice as high in Ghana than it is in Bolivia. Further, sales is the major occupation in Ghana, whereas, in Bolivia, working women are dispersed among several occupations especially services, professional occupations, and sales. While women in Ghana are more likely to be working most of the time, they appear to keep more flexible hours than Bolivian women. Despite these differences in the amount, type and intensity of current employment, 50 percent of women in Ghana and 40 percent of women in Bolivia have their young child with them while working.

Other similarities become evident on examining the labor force cycling behaviors of urban Ghanaian and Bolivian women who have ever worked after marriage. In both countries the most common work trajectory, accounting for about 40 percent of women who worked at all after marriage, is the one which involves working in all intervals possible depending on parity. In addition, the percent share of all but 3 of the 15 possible work trajectories that women with three or more children who ever worked after marriage could have, does not differ by more than 2 percentage points between the two countries. This finding implies that, despite the much greater current labor force participation rate of women in Ghana as compared to Bolivia, women who ever work after marriage in both countries display a remarkable similarity in the way that they accommodate the demands of childbearing, rearing and labor force participation. There is, however, one notable difference between labor force strategies among Bolivian and Ghanaian women: women in Ghana enter the labor force once a child is born and remain employed much more often than in Bolivia; conversely, women in Bolivia work between marriage and the first birth, but not afterwards, much more frequently than in Ghana. Indeed, whatever variation there is in the two countries in the percent of women with each work trajectory (other than the one involving work in all intervals) can be explained by one overarching finding: Bolivian women favor trajectories in which they work either early in their reproductive life cycle or at the end, and Ghanaian women favor more continuity in labor force attachment especially once a child is born.

In order to accommodate the pressures of reproduction and labor force participation, women can not only switch between working and not working but also between working regularly and working irregularly. In both Bolivia and Ghana, about 7 out of 10 women who worked in at least one interval after marriage, change status at least once. However, this change in status most often involves movement between regular work and no work. Trajectories involving only regular work or moves between regular work and no work account for about three-fourths of Ghanaian women and two-thirds of Bolivian women. Notably, trajectories involving irregular work are more common in Bolivia than in Ghana.

In both Bolivia and Ghana, the work trajectories of three out of four women who have worked in at least two birth intervals do not involve a change in occupation. While there is no clear link between the number of intervals worked and occupational changes in Ghana, women in Bolivia who have worked in more intervals are the least likely to change occupations.

Human capital theorists argue that the high human capital requirements of high paying jobs along with the easy erosion of human capital from a lack of use imply that those involved in more specialized higher paying jobs will be more committed to the labor force. In support of this argument the findings indicate that, in both Bolivia and Ghana, the more intervals worked at each parity by women who did not change occupations, the greater the share of the high human capital occupations of the professional, managerial and technical group. Nonetheless, among women who did change occupations, there is no evidence that movement into the professional group of occupations from other occupations is unusual. In Bolivia especially, women with a long-term commitment to the labor force appear to move more frequently into these professions than out of them.

In both Bolivia and Ghana, further along their work trajectories, more women move out of than into clerical and production occupations; however, sales occupations appear to show a net gain of women as women move between occupations. Looking at occupations in a dynamic perspective, it is apparent that sales is not just a major employer of currently employed women but it also acts as an occupation into which women can move with ease from other occupations. The service profession, a major employer of currently employed Bolivian women, is a net loser of women in Bolivia, but its share in Ghana does not change significantly by intervals of work.

Thus, even in the very diverse economic conditions of Ghana and Bolivia, women who work at all for cash appear to use similar strategies when combining labor force participation and childbearing. However, despite this similarity, different factors are found to be relevant in explaining labor force participation behavior in the two countries. Also, as expected, factors relevant to working at a point in time as captured by the probability of a woman being currently employed, are not necessarily relevant, or did not necessarily have the same relationship with a woman's work trajectories over time.

For Ghana, the overwhelming conclusion is that few of the modernizing or lifecourse factors included in the models tested are relevant in explaining women's labor force behavior. The majority of women work at some point in their reproductive lifecourse. However, those who do not work at all are not consistently distinguishable from those who are currently working or who work but follow different work trajectories by any single variable, such as differences in cohort as measured by age, education, marital status, or timing of births.

Nevertheless, even in Ghana, where most women are likely to work, there is some evidence that "continuity" in the labor force—both as compared to never working and cycling in and out of the labor force—is encouraged by better opportunities as represented by a higher socioeconomic status of the household, early exposure to work with control over earnings, and a longer first birth interval. Notably, belonging to the Akan group appears to encourage cycling over continuity as does being currently married.

The correlation of continuity in the labor force with the use of contraception very early in the reproductive cycle suggests that even in a regime where the birth of a child appears to encourage labor force participation, having a work trajectory which involves working in all intervals does require some measure of control over timing of births. This finding is also reaffirmed by the fact that the absolute probability of having the trajectory WWWW goes up the higher a woman's age is at first birth.

Interestingly, in Ghana, having a husband who is a professional and listening regularly to the radio are two factors which are consistently associated with labor force cycling. The positive relationship between having a professional husband and cycling in and out of the labor force can perhaps be explained by the interaction of the income effect, which allows women periods of nonwork, and the effect of the cultural requirement that all women work. However, the role of radio listening is intriguing; it consistently appears to encourage labor force cycling rather than continuity or nonwork. This effect needs further exploration.

In Bolivia, women's labor force participation is more in conformity with a theory that explains women's labor force interaction in terms of modernization, economic, and lifecourse factors. Thus, women who are older, are more educated, are household heads, have had early work experience and financial autonomy, and are from households with a higher socioeconomic index, are more likely to be currently working than not working. Additionally, if women are married, have young children, or have husbands who are highly educated, they are less likely to be working.

Continuity of work, i.e., working in all intervals as opposed to not working in any interval or cycling in and out of the labor force, is more likely among the more educated women and women who have ever worked before marriage. Interestingly working before marriage with little control over earnings increases the probability of having the trajectory WNNN in favor of WWWW, whereas working before marriage with earnings control encourages continuity over having a trajectory from the "Other" category. Thus, work before marriage increases the probability of women working at all after marriage particularly in the first interval, and if there is earnings control, it encourages continuity in such participation.

While the socioeconomic status of the household as measured by the socioeconomic index is not important, the income effects of having a highly educated husband and having a husband who is a professional are significant but opposite in direction. The more highly educated a woman's husband, the less likely she is to work continuously, but if a woman has a professional husband, the more likely she is to work continuously. Also consistent with the life cycle approach to women's labor force participation, a higher age at first birth and longer birth intervals encourage continuous labor force participation in comparison with never working after marriage.

The choice of one of the "Other" trajectories over not working in any interval is also more likely among women who are educated and who worked before marriage, and less likely among currently married women. However, unlike the choice of WWWW, the choice of these trajectories is not affected by status factors embodied in the education and profession of the husband. On the other hand, the choice of the work trajectory WNNN over NNNN is more common among women who are married, who are living in a large household, and who live in the Valle region of Bolivia. However, the factor that mainly distinguishes such women from those who have never worked after marriage is labor force participation before marriage. In a regime where working after marriage is more innovative than not working, women have the trajectory WNNN mainly because they were working before marriage and did not stop until their first birth. This conclusion is also supported by the fact that women who had a birth in their first year of marriage were less likely to have had this trajectory in favor of not working at all.

Nonusers of contraception are more likely to have never worked than to have had trajectories that involve cycling. However, the timing of contraceptive use does not distinguish women with respect to their

labor force behavior in Bolivia. Contrary to expectations, never use of contraception, also does not distinguish women who have never worked after marriage from those who worked in all intervals after marriage. Additionally, women who have never used contraception are only half as likely to have the trajectory NWWW as compared to WWWW. Thus in Bolivia, women who have never used contraception are most likely to be either those who never entered the labor force after marriage or those who worked in all four intervals. This conclusion is the opposite of the conclusion for Ghana where women with the trajectory WWWW were more likely to have used contraception very early in their reproductive lifecourse.

This contrast between the association of contraceptive use and labor force cycling behaviors in the two countries is perhaps due to a fundamental difference in the approach in the two countries to labor force participation. In Ghana where working is the norm, women who use contraception are those who are best able to maintain continuity in their labor force participation. However, in Bolivia, where working for cash after marriage is less common, it may be that it is women who are occasional entrants into the labor force who depend more on being able to manipulate the number and timing of births. Women who are committed to the labor force and maintain continuity are the exception in Bolivia; and perhaps, for such women, contraceptive use is not the main motivating or facilitating factor. These women depend more on other individual and background characteristics which set them apart from all other women. The suggestion that Bolivian women who cycle in and out of the labor force are more likely to be dependent on lifecourse factors is also supported by the following: relative to women with the trajectory WWWW, women who have a child less than six years are more likely than women who do not to have the trajectory WNNN; and, women who have had a premarital birth or who had their first birth within one year of marriage are more likely to follow cycling behavior using one of the "Other" trajectories. Nonetheless, lifecourse factors which prolong the available time period in which women may work, such as a later age at first birth or a longer birth interval, are both related to a higher probability of working in all intervals.

Finally, by examining the relationship of various factors with employment, are the findings very different when employment is defined in terms of work trajectories instead of current employment? Not surprisingly, the answer is yes. At the very least, note that in both Bolivia and Ghana, a far higher proportion of women have worked some time in their lifecourse than the proportion currently working. Further, neither country has the probability curve for current employment always running parallel to the curve for any labor force trajectory. Nonetheless, the slope of the current employment probability curve for some, though importantly not all variables, most closely resembles the slope of the WWWW trajectory probability curve. For example, in Ghana the two curves are very similar when plotted against the socioeconomic index and the age at first birth, whereas, in Bolivia, they are similar when plotted against own and husband's education. Additionally, in Bolivia, the effect of both working before marriage and listening to the radio is similar on the probability of both being currently employed and of having the trajectory WWWW. Thus, while current employment tells little about the alternative work strategies of women, it perhaps says most about women who have the trajectory WWWW. This conclusion is not surprising since women who are committed to the labor force are the ones most likely to be working at any given point of time, and the current employment measure is a point measure; however, this measure is limited in its usefulness because it cannot be determined when current employment is reflecting continuous commitment and when it is not. Thus, if the concern is with the continuity of women's labor force participation then labor force trajectories, not current employment rates, should be examined.

References

Anker, Richard. 1983. Female labor force participation in developing countries: A critique of current definitions and data collection methods. *International Labor Review* 122(6): 709-723.

Becker, Gary S. 1965. The theory of the allocation of time. *Economic Journal* 75 (September): 493-519.

Birdsall, Nancy and Lauren A. Chester. 1987. Contraception and the status of women: What is the link? *Family Planning Perspectives* 19(1):14-18.

Blanc, Ann K. and Cynthia B. Lloyd. 1990. *Women's childrearing strategies in relation to fertility and employment in Ghana.* Population Council, Research Division, Working Paper No. 16. New York: Population Council.

Boserup, Ester. 1970. *Woman's role in economic development.* New York: St. Martin's Press.

Dixon-Mueller, Ruth. 1989. Patriarchy, fertility, and women's work in rural societies. In *International Population Conference, New Delhi.* Vol.2. Liege, Belgium: International Union for the Scientific Study of Population. 291-303.

Dixon-Mueller, Ruth. 1993. *Population policy and women's rights: Transforming reproductive choice.* Westport, Connecticut/London, England: Praeger.

Dyson, Tim and Mick Moore. 1983. On kinship structure, female autonomy, and demographic behavior in India. *Population and Development Review* 9(1):35-60.

Elder, Glen H. Jr. 1981. History and life course. In *Biography and society: The life history approach to the social sciences,* ed. Daniel Bertaux. Beverly Hills, California: Sage. 75-115.

Felmlee, Diane H. 1984. A dynamic analysis of women's employment exits. *Demography* 21(2):171-183.

Ghana Statistical Service (GSS) and Institute for Resource Development/Macro Systems Inc. (IRD). 1989. *Ghana Demographic and Health Survey 1988.* Columbia, Maryland: GSS and IRD.

Greene, William H. 1993. *Econometric Analysis.* New York: Macmillan.

Instituto Nacional de Estadística (INE) and Institute for Resource Development/Macro Systems Inc. (IRD). 1990. *Encuesta Nacional de Demografía y Salud 1989.* Columbia, Maryland: INE and IRD.

Lloyd, Cynthia B. 1991. The contribution of the World Fertility Surveys to an understanding of the relationship between women's work and fertility. *Studies in Family Planning* 22(3):144-161.

Maret-Havens, Elizabeth. 1977. Developing an index to measure female labor force attachment. *Monthly Labor Review* 100 (May): 35-37.

Masnick, George and Mary Jo Bane. 1980. *The Nations's Families: 1960-1990.* Cambridge, Massachusetts: Joint Center for Urban Studies of MIT and Harvard University.

Mason, Karen Oppenheim. 1986. The status of women: Conceptual and methodological issues in demographic studies. *Sociological Forum* 1(2): 284-300.

Mincer, J. 1962. Labor force participation of married women: A study of labor supply. In *Aspects of labor economics*, ed. H.G. Lewis, Princeton, New Jersey: Princeton University Press. 63-97.

Mincer, J. and S.W. Polachek. 1974. Family investments in human capital: Earnings of women. *Journal of Political Economy* 82(2):S76-S108.

Moen, Phyllis. 1985. Continuities and discontinuities in women's labor force activity. In *Life course dynamics: Trajectories and transitions 1968-1980*, ed. Glen H. Elder Jr. Ithaca, New York: Cornell University Press. 113-155.

Okali, C. 1983. *Cocoa and kinship in Ghana: The matrilineal akan of Ghana.* London, England: Kegan Paul International.

Oppong, Christine. 1986. The changing occupational and familial roles of women and men and the impacts upon procreation and parenthood of social and spatial mobility: Some Ghanaian evidence. Paper presented at the Rockefeller Foundation's Workshop on Women's Status and Fertility, July, Mt. Kisco, New York.

Oppong, Christine. 1991. *Relationships between women's work and demographic behavior: Some research evidence in West Africa.* World Employment Program Research Working Paper No. 175. Geneva, Switzerland: International Labor Office.

Pampel, Fred C. and Kazuko Tanaka. 1986. Economic development and female labor force participation: A reconsideration. *Social Forces* 64(3): 599-619.

Polachek, Solomon. 1975. Discontinuous labor force participation and its effects on women's market earnings. In *Sex, discrimination, and the division of labor*, ed. Cynthia Lloyd. New York: Columbia University Press. 90-122.

Polachek, Solomon. 1979. Occupational segregation among women: Theory, evidence and a prognosis. In *Women in the labor market*, ed. Cynthia Lloyd, Emily Andrews and Curtis Gilroy. New York: Columbia University Press. 137-157.

Safilios-Rothschild, Constantina. 1982. Female power, autonomy, and demographic change in the Third World. In *Women's roles and population trends in the Third World*, ed. R. Anker, M. Buvinic and N.H. Youssef. London: Croom Helm. 117-132.

Scott, Katherine MacKinnon. 1992. Women in the labor force in Bolivia: Participation and earnings. In *Case studies of women's employment and pay in Latin America*, ed. George Psacharopoulos and Zafiris Tzannatos. Washington, D.C.: The World Bank.

United Nations. 1985. *Women's employment and fertility: A comparative analysis of World Fertility Survey results for 38 developing countries.* Department of International Economic and Social Affairs, Population Studies No. 96. New York: United Nations.

United Nations. 1993. *Urban women in development model/rural women in development model.* New York: Department of Economic and Social Development, United Nations.

World Bank. 1990. *World Development Report 1990.* New York: Oxford University Press.

Youssef, Nadia Haggag. 1974. *Women and work in developing societies.* Population Monograph Series No. 15. Berkeley: Institute of International Studies, University of California.

Demographic and Health Surveys Occasional Paper Series

1 Curtis, Siân L. and Fred Arnold. 1994. ***An Evaluation of the Pakistan DHS Survey Based on the Reinterview Survey.***

2 Kishor, Sunita. 1995. ***Autonomy and Egyptian Women: Findings from the 1988 Egypt Demographic and Health Survey.***

3 Curtis, Siân L. 1995. ***Assessment of the Quality of Data Used for Direct Estimation of Infant and Child Mortality in DHS-II Surveys.***

4 Gage, Anastasia J. 1995. ***An Assessment of the Quality of Data on Age at First Union, First Birth, and First Sexual Intercourse for Phase II of the Demographic and Health Surveys Program.***

5 Kishor, Sunita. 1996. ***Urban Women's Employment Trajectories in Ghana and Bolivia.***