Demographic Change and Employment Inequality in Cameroon: Trends and Sources

Abstract

Like other developing regions, African countries have witnessed a global transformation in women's schooling, delayed marriage, and reduced fertility in the last three decades. Theoretically, these three trends could improve women's employment prospects, reduce gender inequalities in employment and enhance child and family welfare. Combining discrete event history analysis and qualitative data analysis in Cameroon, I assess how the employment gender inequality has changed and the relative contribution of schooling, marriage, and fertility to the observed changes. Findings suggest that the inequality in employment has persisted within both the informal and formal economic sectors and Cameroonian women have not reaped the anticipated economic benefits from the transition. Much as calendar time, periods of economic growth have not eased the gender inequality. Instead, institutional/segregated employment opportunities tied to demographic factors and to a smaller degree, discrimination, are driving the rooted employment inequality.

INTRODUCTION

Global efforts to promote development are premised on the expansion of girls schooling, delayed marriage, and reduced fertility; the rationale being that all three trends can induce social and economic development at the level of the individual, family and nation through increased labor force participation. Yet, according to the opening statement of "The State of the World's Children 2007" by Kofi Annan, then Secretary-General of the United Nations, most countries in the developing world, especially African countries may be falling short of reaping the anticipated benefits (UNICEF 2006).This paper is intended to update our understanding on how the employment gender inequality has changed over time and under varying national economic conditions within the context of Cameroon.

This study is timely in light of delayed or stalling fertility declines in Africa (Bongaarts 2006; World Population Prospects 2007) and against the backdrop ofthe region's recent history of economic crisis; increasing urbanization, privatization and cultural globalization; and slow growth in the formal labor market. Under such environments, the need for both married women and mothers to work is intensified at a time of a labor market squeeze.

On the international scene, the 20th century saw radical shifts in the global fight for gender equality as has been reaffirmed in several world conferences, the latest being the 2000 United Nations Millennium Summit that mandated signatory countries to eradicate poverty and promote development through eight Millennium Development Goals (MDGs) (United nations 2000). However, the United Nations progress report in 2005 showed limited progress in meeting the MDGs, especially those related to gender inequality in schooling and employment.It highlights many governments' inaction on their promises, deepening inequality and the gap between the haves and the have-nots (United Nations 2005). Given such apparent growing inequality, an update on how contemporary social change has impacted women's employment prospects is urgently needed.

BACKGROUND AND SETTING

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The last three decades of heightened international commitment to eradicate poverty and promote social and economic development have resulted in transformations in socio-demographic behavior, specifically, female schooling, delayed marriage, and reduced fertility across the developing world, Africa included.Concentrating on the sub-Saharan African region, women's secondary school enrolment rate rose from below 5% in 1970 to above 14% in 1985 and to 30% by 2005 (Hewett and Lloyd 2003; UNICEF 2003), surpassing that noted for men and resulting in the narrowing of the schooling gender inequality (Hewett and Lloyd 2003; UNICEF 2003). This progress in women's schooling has been paralleled by demographic changes. In terms of marriage and for developing countries as a whole, the proportion married in the ages 15 to 19 declined from 27% between 1970 and 1989 to 21% between 1990 and 2000 (National Academy of the Sciences 2005). The decline was especially dramatic in the Western/Central African sub-regions, where the percentages fell from 53 to 38% (National Academy of the Sciences 2005). This decline in marriage can be attributed to earlier reports of delayed marriages in the 1990s (Westoff 2003, 1992) due to prolonged schooling and a slow increase in non-marriage rates (DHS 2011). In 2008, in most of the 24 African countries with repeat surveys collected by the Demographic and Health Surveys (DHS) Program (DHS 2008), the proportion of never-married women among the 40-49 year olds has steadily increased in many parts of the region. Based on these surveys, the transformations have occurred in countries stretching from the western sub-region to the eastern sub-region, suggesting a retreat from marriage in the continent[1].

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[1] For instance, for countries with more than one wave of survey, non-marriage rates among 40-49 years old have risen in West Africa: Benin from 0.5 to 2.2% between 1996 to 2001; Burkina Faso from 0.2-0.4% between 1993 and 1999 (although the figures have declined in both countries in recent times); Ghana from 1. 0 to 2.1% after between 2003 and 2008 after stalling previously; Guinea: from 0.2 to 0.3% between 1999 and 2005; Mali: from 0.13 to 0.2% between 2001 and 2006; Niger: 0.1 to 0.8% between 1992 and 2006; Nigeria: 1.6 to 2.2% between 2003 and 2008; Senegal: from 0.5 to 1.3% between 1997 and 2005; and Togo: form 0.4 to 0.8% between 1988 and 1998. However, non-marriage rates have declined in this age group in recent times in Cote d'Ivoire and Liberia.

In the central sub-region: Cameroon: from 1.4 to 2.9% between 1991 and 2004; Chad: from 0.1 to 0.2 between 1996/7 and 2004. Highest non-marriage rates have been recorded in the eastern sub-region: Namibia: from 30.8 to 43.2% between 1992 and 2006/7; Kenya: from 3.7 to 7.1% between 1989 and 2003; Madagascar: from 3.7 to 5.7% between 1997 and 2003/4; Rwanda: 1.3 to 4.4% between 1992 and 2005; Tanzania: from 1.8 to 3.2% between 1999 and 2004/5; Uganda: from 1.1 to 2.5% between 2000/01 and 2006; Zambia: from 0.1 to 1.9% between 2001/02 and 2007; Ethiopia: from 0.5 to 1.2% between 2000 and 20005; and Malawi: from 0.4 to 0.8% between 2000 and 2004 while rates have declined in recent times in Eritrea; Uganda; and Zimbabwe.

With respect to fertility, rates declined in the developing world from a high of 6.7 in 1980 to 5.5 between 2000 and 2005 (World Population Prospects 2007). A similar trend has also been noted for various African countries: Botswana, Kenya, and Zimbabwein the 1980s (Arnold and Blanc 1990); Southwest Nigeria (Caldwell, Orubuloye and Caldwell 1992); Senegal and Sudan (Westoff 1992); and recently, Cote d'Ivoire, Ghana, Nigeria, Rwanda, and Zambia (Makinwa-Adebusoye 2001). It is noteworthy that most of these declines surpass the conventional gauge of a 10 percent decline as indicative of the onset of a transition (Bongaarts 2006), suggesting that a transition is underway in the region. DHS (2011) provides even more recent statistics on fertility trends in the region.

Cogent arguments exist as to why African demographic changes can yield social and economic dividends for children, women and society (Eloundou-Enyegue and Williams 2006; UNICEF 2003; United Nations 2000, 2005; UNFPA 2002; World Bank 2001). Yet, these arguments must be re-assessed against the backdrop of concurrentinstitutional and macro-contextual changes sweeping the developing world.Given the innate gender inequality in society, women's economic and social position as a consequence of their education may not fall within their sphere of influence or solely on their labor market status but also on prevailing marriage markets. Studies have shown that wife's education comparable to or higher than her husband's is more influential than her education per se in her leverage in extending economic assistance to family and kin (Eloundou-Enyegue and Calvès 2006 for Cameroon). Equally influential are country-specific processes (Jah2007, 2011) and the organization of work (Mason and Palan 1981) in shaping employment behaviors and the consequential elevation of women's position in society. For instance, in recent times, a growing dividend to marriage relative to schooling and fertility has been observed in African labor markets (Jah 2011). Said differently, the benefits to marriage for young women aged 15-24 are more evident within the skilled sector than the overall sector while the benefits to education areunexpectedly stronger in the overall than the skilled sector. These puzzling findings, inconsistent with the economic independence hypothesis (Becker 1981) are

consistent with (Calvès and Schoumaker 2004) who find educated Burkinabe youth faced with tight labor market options increasingly resorting to the informal sector[2].

I examine this interesting puzzle with retrospective event-history data from Cameroon. This setting is interesting because the country has median values on key variables in this study, experienced a drastic economic recession between the early 1980s and mid 1990s, and implemented a series of economic policy reforms that adversely affected employment prospects of the labor force. Economic liberalization strategies led to the trimming of the civil service, salary and benefit reductions, hiring freezes, and reduced public spending in the economic and education sectors (Eloundou-Enyegue 1997; Eloundou-Enyegue et al. 2004), all of which heightened employment privatization. The tempo and magnitude of Cameroon's economic downturn facilitate investigation of the impact of structural adjustments programs on the relationship between changes in schooling, marriage, fertility and labor market prospects. The retrospective dataset, containing rich histories of key measures as well as background characteristics spanning several decades, lend itself to a simultaneous analysis not previously possible.

On the macro front, African nations have suffered untold setbacks in the macro-economic environment. In particular, contemporary transitions in Africa are occurring under economic duress with lack of parallel growth in quality labor market developmentdue to the past wave of economic downturn throughout the region. While remedial economic policies adopted by national governments have been reported to foster economic recoveries in some instances (World Bank 1996), these same policies have been reported to have resulted in a thinning of the civil service and unemployment and privatization (African Labor Research Network 2004; Eloundou-Enyegue 1997; World Bank 1994) with women likely to bear the brunt of the duress relative to men (African Labor Research Network 2004; Lloyd and Gage-Brandon 1993).Thus the opportunities for paid employment and how the quantitative and qualitative aspects of the education received by African children are related to labor market outcomes is questionable (Glewwe 1998).

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2   At the same time, informal sector work may not be always synonymous with poverty. In fact the informal sector isan important component of the economy and does actually support the formal economy.

THEORETICAL EXPLANATIONS AND EMPIRICAL EVIDENCE

Several theoretical perspectives exist to explain the relationship between education, marriage, and fertility and labor market prospects. The perspectives relevant to this research can be grouped into: 1) "Pro-effects" - those that facilitate participation and 2) "Cons-effects" - those that constrain participation. Perspectives based on facilitating assumptions include the human capital; "*modernization capital*"; "*marital autonomy*" (from delayed marriage); and "*fertility dividend*" (from fertility declines). Conversely, perspectives rooted on constraining factors include the work family incompatibility, occupational segregation, and discrimination.

Pro-effects

Human capital theoryunderlines the primacy of individual ability, education, experience and training labor force participation and has been invoked to explain successful labor market outcomes(Becker 1991; Mincer 1974). Within that framework, women's advances in schooling should facilitate their entry into the labor market. Three other important conclusions are implied by the perspective. First, educated women are more likely to be employed than their non-schooled counterparts. Second, as the education inequality between males and females narrows, so should the labor market inequality (Becker 1981; Goldin 1990; Mincer 1974). Third, as the occupational gender gap narrows, women's economic security and social status should improve (Goldin 1990). These predictions have been buttressed by cross-country evidence between women's education and the labor force participation (Schultz 1990). As a result, female education has become central in both national and international strategies addressing women's status and development (UNFPA 2002; UNICEF 2003).

Empirical evidence supporting and refuting the human capital perspective also exists in the African literature. Studies have shown a persistent gender inequality in employment (Appleton, Collier, and Horsnell 1990 for Cote d'Ivoire; Glick and Sahn 1997 for Guinea; Naude and Serumaga-Zake 2001 and Ntuli 2007for South Africa; Vijverberg 1993 for Cote d'Ivoire). Contending that African labor markets are the "least discriminatory in the world,"Appleton et al. (1990) and Glick and Sahn (1997) have generally blamed this inequality on women's lower human capital endowment.In a recent

large-scale historical study on 21 African countries by Jah (2011), the link between schooling and women's employment is mixed, depending on the country and the economic sector in question. Whatever the reason, lower economic benefits to education can ultimately lead to women's lower motivation than men to acquire schooling and seek employment.

Modernization theory, itself a variant of the human capital perspective, posits greater employment opportunities to occur with modernization or industrialization. Extending the predictions from human capital theory, modernization theorists regard expansion in the labor market and increased labor supply as by-products of the modernization process (see Chant 1991). This expansion, in turn, enhances employment opportunities for women who then make further investments in their education to take advantage of the increased demand for labor. The proponents of the perspective further advocate that greater economic activity stemming from economic progress and industrialization will reduce gender inequality in all spheres of society thereby lifting women's social status (Goldin 1990). How this perspective holds in the African region, with countries still struggling to provide basic services and a few still reeling in economic crises (e.g. Malawi and Zimbabwe), remains an empirical issue. Indeed, current studies have begun to qualify the relevance of education as a direct channel for women's occupational attainment and socio-economic mobility/wellbeing. In their recent review of the subject, although mostly based on Asia (Malhotra, Pande and Crown (2006) contend that education by itself cannot lift women out of their social and economic deprivation. They conclude that education is [] "*a necessary, but not sufficient investment for achieving gender equality or improving women's wellbeing.*"

Marital autonomy theorists, with Becker (1981, 1991) as the main proponent, have also made predictions about economic dividends accruing from marriage transitions. These underlying assumptions associated with marital autonomy are founded on gendered role orientations. Marriage delay/abandonment is presumed to enhance pre- and post-marital employment prospects both quantitatively and qualitatively and diffuse differentiated gender roles, ultimately yielding women's socio-economic autonomy (Becker 1991; Blossfeld 1995; Espenshade 1985; Goldscheider and Waite 1986). Thus,

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by inference, in all contexts where marriage is prevalent, a negative association between marriage and employment should be expected.

Much of the evidence on marriage and employment has come from studies of employment that included marriage only as a control variable: Congo Brazzaville (Shapiro and Tambashe 1997); Cote d'Ivoire (Appleton et al. 1990); Guinea (Glick and Sahn 1997); Ethiopia (Krishnan 1996); and South Africa (Naude and Serumaga-Zake 2001; and Ntuli 2007).The information gleaned from these studies is mixed. In West African contexts, the relationship between marriage and women's employment is reported as positive (Glick and Sahn 1997; Appleton et al. 1990). Conversely, a negative relationship is observed in East Africa (Krishnan 1996[3]) and South Africa (Naude and Serumaga-Zake 2001; Ntuli 2007), confirming the marital autonomy perspective.If these findings hold for the rest of the region, the effect of marriage on employment appears to be conditioned by geography, facilitating it in West Africa but impeding it in the Eastern and South African sub-regions. Yet, in a recent historical analysis of 21 African countries, Jah 2011 reported a growing significance of marriage for women's employment. Similarly, Eloundou-Enyegue and Calves (2006) have not found marriage to be antithetical to women's employment in Cameroon.

Fertility dividends have also been proposed by Becker (1991). Beckerand other proponents argue that women's rising economic activity increases the relative cost of children, which in turn, reduces the demand for children. Within this framework, a fertility dividend in the labor market is predicted to accrue from fertility declines. While the relationship in the West that has been largely negative, albeit turning positive in recent times (Brewster and Rindfuss 2000), the developing country evidence on the relationship has been mixed Some studies report negative findings (e.g., Connelly, DeGraff and Levison 1996 for Brazil; Rosenzweig 1976 for the Philippines; Torres and Mendez 2003 for Colombia; Wong and Levine 1992 for Mexico). Stokes and Hsiah (1984), however, find no relationship in Taiwan) while Gurak and Kritz (1982) find no relationship in the short run but find a positive link over the long term.

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[3]   Krishnan (1996) finds a large proportion of non-participating housewives and concludes that marriage is negatively associated with women's employment.

Against this background, literature on the work-fertility relationship has been sparse in Africa, partly due to a perceived weak link between the two variables. Thus, in the past three decades, existing knowledge on the relationship is provided by few studies (Beguy 2009; Glick and Sahn 2005; Jah 2011; Lokshin, Glinskaya, and Garcia 2000; Shapiro and Tambashe 1997). Unlike the mixed evidence emanating from other developing regions, the African evidence on the subject generally points to a negative link (Beguy 2009; Glick and Sahn 2005;Lokshin et al. 2000; Shapiro and Tambashe 1997).But this negative association is conditioned by both historical trends and employment sector (Jah 2011).

Cons-effects.Because childrearing remains primarily the responsibility of women, some scholars predict that women are less likely to continue employment following childbearing (Collver and Langlois 1962; Youssef 1972) with frequent labor market withdrawals resulting in high opportunity costs of children (Becker 1991). The maternal incompatibility theory has been invoked by demographers to qualify the presumed conflict (Mason and Palan 1981; Stycos and Weller 1967) by putting a contextual face on it. Premised on the existence of competition between fertility and modern sector work as countries industrialize, Stycos and Weller (1967) proposed that fertility affects employment only in restrictive paid jobs. On the other hand, Mason and Palan (1981) place greater emphasis on the structural organization of family and roles noting that mothers can engage in outside work because childrearing is shared by kin or taken up by paid child care.

Conversely, occupational segregation theorists (Anker 1997; Anker and Heim 1985) suggest that women are concentrated in less rewarding or prestigious jobs because of employer discrimination but also but also because of women's lower human capital and occupational aspirations, stemming from socialization. Finally, a common explanation for women's limited participation in the labor market, especially in the formal sector, is rooted in patriarchy and ingrained cultural norms operating at different levels: societal, educational/employment institutions, and family (Assie-Lumumba 2000; Birdsall and Sabot 1991; Greenhalgh 1991; Stromquist 1990). However, given the difficulty of measuring employment discrimination, empirical studies investigating the perspective are scarce.

In synthesis, with few exceptions (e.g., Glick and Sahn 1997 for education; Jah 2011 for education, marriage and fertility; Shapiro and Tambashe 1997 for fertility) the theoretical explanations of labor force participation have rarely been systematically tested in African settings. With respect to the opportunity cost of fertility, socio-demographic evidence in region differs. Such evidence (Blake 1981; Eloundou-Enyegue 1997), supported by the qualitative evidence from Cameroon, emphasize parents' preference for quality relative to women's expanded economic role as the main factor in family size reduction, especially against unfavorable economic climates and labor market conditions. The contradictory perspectives also warrant qualification. Although, women may be penalized indirectly for repeated birth events (through lower chances of job promotions), the presumed direct "*fertility burden*" to African women may be negligible where childrearing is shared and so dependent on country's fertility employment transition stage and urbanization. Finally, whether and how patriarchal institutions have weakened historically and amid the unfavorable economic and labor market environments remain to be tested. If the arguments of cultural theorists hold, women's changing employment behavior and socio-economic status will continue to be tied to their marital and reproductive roles, and not their education.

Further, educated women's increasing tendency to seek employment may well stem from a shortage of potential spouses and a shrunken marriage market given the tendency for men to marry down with respect to age (Goldman, Westoff and Hammerslough 1984). Marriage confers economic premium to women, both employed and unemployed, especially in contexts where household incomes are not pooled.

STUDY CONTRIBUTIONS

The foregoing review of African studies has enhanced our understanding of the subject. However, excluding a handful of the studies (see Calves 2006 and Beguy 2009) that employ event history data,due to past data scarcity in the region, most are cross-sectional and not representative, being based on either urban (Beguy 2009; Glick and Sahn 1997; Krishnan 1996), or rural data (Naude and Serumaga XXX). Until recently, comparable schooling, marital, fertility and employment histories have rarely been collected in the same surveys.To my knowledge, the only existing study in sub-Saharan Africa that

systematically exploredthe relationship between employment and the ongoing educational and demographic transitions in a historical perspectivein one study is that by Jah (2011). Yet, this study by Jah focused on only women and relied on repeat cross-sectional data to construct the historical data analyzed.

This study builds on the existing African literature by addressing several issues in this paper. To address the issues of non-representative and cross-sectional data and associated concerns over temporal fallacy, I use nationally representative event history data. I extend the study by Calves (2006) that analyzed only males in urban Burkina Faso by examining employment behavior of both male and females. The 40-year retrospective longitudinaldata that covers the period of economic upheavals provides an invaluable social petri dish for understanding the interaction of economic and demographic factors on individual employment behavior and the gender inequality. I focus on employment statusthereby extending the study by Glick and Sahn (1997) that concentrates on earnings, and like Shapiro and Tambashe, distinguished the formal sector from the overall economic sector.

Further, I control for several individual (notably school performance and duration of unemployment) and household characteristics that bear on economic activity than have been the case in the literature, including accounting for unmeasured fixed factors of families. To refine interpretation, I triangulate three methodological approaches, elaborated in the methods section and complemented the quantitative findings with qualitative data, also from Cameroon. Importantly, I broaden theoretical focus beyond the conventional human capital and discrimination dichotomy to include demographic and intervening macrofactors and assess the relative weight of these factors on the gender inequality in an African context through an innovative systematic and chronological approach, also detailed in the methods section.

HYPOTHESES

Against the general context of demographic and economic duress and limited policy resources in Cameroon and past historical evidence on the country, albeit based on repeat cross-sectional surveys (Jah 2011), I state four hypotheses:

- H1: Gains in schooling have had little influence on the gender inequality in employment.

- H2: Fertility transition has had little influence on the gender inequality in employment.

- H3: The macro-context, specifically historical and economic trends, has had little influence on the gender inequality in employment.

- H4: The marriage transition has been the dominant factor on the gender inequality in employment.

- The institutional context, notably differentials in segregated prevailing employment opportunities has played a critical role in fueling the gender inequality.

ANALYTICAL STRATEGY

DATA

The **event-history**data come from anationally representative Cameroon fertility and schooling survey (CFS) conducted in 1998/99[4]. A stepwise stratified random sampling approach was adopted wherein divisions within province, villages within the divisions, and households within villages were selected[5]. The total sample constituted 3,330 or 69 female respondents aged 15 years and over, their spouses, as well as their 11,590 children. Of these children, 6,943 had received schooling. For each child, detailed information on schooling, marriage, fertility, and employment histories, plus histories on other background information relevant to this study were collected. Each "child" contributed multiple records in "person-years" to the resulting employmentdataset,yielding 23451 records provided s/he is not censored (i.e., dropped from the data/risk set. In this employment dataset, an individual is observed from school exit until survey year or death, whichever came first.The generated histories, providing updated annual life transitions of women and men permit linking explanatory variables with employment outcomes annually for over 40 years (1959 to 1999: from the baseline

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to the survey year).

Yet, the CFS dataset is not without limitation. We had data on children fostered out at the time of survey. The problem here was rather the selective mortality of mothers and therefore (from a historical perspective) the under-representation of children born to women who died early). Another limitation is the problem of recall bias common in retrospective surveys, rendering the histories less reliable, especially as one movesfurther back in time. However, bias arising from this source was minimized through collaboration with the national University, particularly in the careful recruitment and extensive training of university students as interviewers and supervision of the interview process and through interviewer active participation in the survey instrument design and internal checks for consistency during the interviews. Life history calendars were employed to facilitate recall and triangulation of responses against other family and local events.

The **qualitative** data were generated fromthree focus group discussions each involving a minimum of six women of differing backgrounds. The first group consists of young women with different educational backgrounds and work status, to provide a range of perspectives on the issues being discussed. The second group was more homogeneous in the sense that the women were middle aged and older. This makes it possible to explore individual perspectives on historical trends as well as the current employment situation of women in general. The focus groups generally lasted three hours while the two interviews lasted an hour each. Additionally, two individual interviews were held with two female executives in relevant development institutions. The main themes focus on, but not limited to, current perceptions on women's employment and issues that hinder as well as facilitate current their employment prospects. Both focus group discussions and interviews were all recorded. While opinions different from these arose and were pursued, the broad themes include:

MEASURES

*Dependentvariable.*The dependent variable in all the analyses is employment status in the (1) informal and (2) formal sectors. Overall employment is measured dichotomously by

paid employment in any sector with unemployment or engagement in agricultural activity or unpaid family-work as the reference category. Formal employment is also measured dichotomously by the proportion of employed individuals in managerial,professional and technical work. Thus, conditional on being employed, this outcome models formal economic activity against all other non-agricultural paid employment, the reference. Informal employment which includes all non-agricultural paid work outside the home irrespective of occupation sectors; it therefore has lower human capital requirements for access and success and less restrictive of child and home care responsibilities. On the other hand, formal employment denotes more regulated occupation types with greater human capital prerequisites and more restrictive to child and household obligations.

Independent variables. The study's main goal is to estimate the effect of educational and demographic transitions on women and men's likelihood of accessing the labor market in order to assess the status of the gender inequality in the country. Granted that the gender inequality persists, the study goes on to investigate the sources of the inequality as it relates to these socio-demographic transformations. To be precise, it quantifies the relative contribution of each transition at both the aggregate and individual level versus general processes of change to the inequality. In estimating the role of educational transitions, schooling, measured by number of years of schooling attained, is used as the main independent variable. To account for possible curvilinearity in the schooling effect, models include both its linear and quadratic terms. The study attempted differentiating schooling levels but the estimates obtained were unstable because of the smaller distributions of women at secondary and higher levels of schooling.

To evaluate the demographic impact on individual employment with precision, the influence of delayed marriage is separately estimated from that of fertility transitions. Marriage is measured dichotomously, coded as "1" if the individual is married (civil and traditional), in a stable union, or cohabiting and "0" if (s)he single, divorced, or widowed, with the latter category as the reference. This marriage measure is not without drawbacks. Beyond the procedural and therefore elusiveness of the concept of marriage in African settings, the measure can be further complicated by the growing prevalence of cohabitation (DHS 2007). However, where cohabitating unions are unstable their

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inclusion can over-estimate the prevalence of marriage. This limitation can be considered trivial because of the time-varying nature of the event history data.Like marriage, fertility is measured dichotomously according to whether the individual (male or female) had a child in each year following the index year, coded as ("1") or otherwise ("0") and the reference. Measuring fertility through this annual update has the merit of addressing the differential impact of different ages of children on parents' time demands, even as it misses fostered children of deceased parents.

To estimate the influence of historical changes on the relationships, a trend variable, measured by the number of decades since 1959 (the baseline year) was included in the three sets of analyses, namely schooling, marriage and fertility. The influence of economic context on the relationships was estimated by incorporating the log of GNP per capita, updated annually. To assess the impact of macro factors on the relationships, both the trend and GNP variables were interacted with the three mainindependent variables.

Based on the theoretical/empirical review as well as the general premise of the paper, the study controls for several correlates of employment, These include four sets of influences to capture basic demographic; family compositional; economic need; and cultural factors. In addition, two critical pieces of information not readily available in most employment analyses: duration of unemployment and ability or school performance were adjusted for[6]. Like the main independent variables, control variables are also time-varying, thereby overcoming many of the limitations of cross-sectional data. One

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[6]   Basic correlates here include, in addition to age, the duration of unemployment and its quadratic term and ability. Duration of unemployment is measured by the number of years between school exit and employment while ability is measured by the mean grade repetition during an individual's schooling career.

Family characteristics include the SES of the family of origin (measured as family of origin's ownership of household durables); and mother's marital status, co-residence, and rural background. They are all measured dichotomously, coded ("1") if yes and ("0") if not. The first two are expected to be positively related to skilled sector work but unrelated or negatively related to overall employment while the reverse is expected in the case of the latter two.

Childhood economic constraints are captured by child's number of siblings measured continuously; whether child assisted in the schooling of his/her sibling; and his/her birth order rank, both of which were dichotomous and coded ("1") if yes and ("0") if not. Both are expected to induce an individual's propensity to work for pay, regardless of sector.

Aspirations/intergenerational attributes are captured by two variables. The first reflects aspirations and is measured by whether the individual has at least one sibling working in the skilled sector while the second is intergenerational and controls for whether his/her mother is employed outside the home. These are also categorical, coded ("1") if yes, otherwise ("0"). Unlike the correlates of childhood economic constraints, these two should encourage economic activity, particularly skilled work.

exception is the socio-economic status (SES) variable, which is time-invariant, because of the difficulty of establishing annual information on socio-economic status (Eloundou-Enyegue 1997).

METHODS OF ANALYSIS

To refine interpretations, three methods of analysis are used: discrete-time logistic regression using general estimating equations (GEE), fixed effects modeling using PHREG in SAS, and regression decomposition. One concern about event history data is the lack of independence among the observations, arising from the clustered and repeated nature of observations on each individual in these data. Estimating such interdependent data by ordinary logistic regressions can bias the tests of significance. The GEE, under the SAS framework, can correct for clustering. Another concern is the potentially influence effect of fixed individual/family characteristics that vary across individuals. These fixed characteristics are usually hard to measure and beyond family factorsinclude various dimensions of resources, aspirations and ambitions and failure to control for them can lead to different interpretations. For this reason, fixed effects modeling using the PHREG procedure in SAS (Allison 1996), which adequately corrects for these unmeasured factors, is resorted to. All estimations under the GEE and PHREG are run for each outcome and independent variable separately for men and women. Finally, the decomposition technique is used to quantify the relative contribution of each of the three predictors versus generalized social change to the gender inequality in employment.

Discrete-time Logistic Regression with GEE. In line with the dichotomous nature of outcomes, discrete-time logistic regression with GEE is employedin a first procedure to estimatethe gross effects of each predictor on employment. Gross effects, estimated under Model 1 controls for the basic correlates only (i.e., age and quadratic age, schooling ability, duration of unemployment and quadratic duration of unemployment).

*Fixed Effects Modeling with PHREG.*In a second procedure, the PHREG technique in SAS is used to estimate the net effects on employmentin a second model (Model 2), controlling additionally for the remaining sets of correlates. Using the same technique, two other models are estimated controlling further for historical (Model 3) and economic (Model 4) trends.

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Decompositions. While having gender-specific estimates is important in its own right, an added advantage of having separate estimates for men and women allows one to establish the presence or absence of labor market discrimination as a function of each of the independent variables. If differences persist even after controls are made for unobserved fixed effects of family, the disparity can signal labor market discrimination. With this in mind, regression decompositions were used to assess the source of the gender inequality in employment. The source of any inequality is established by decomposing the observed inequality into three components: 1) generalized contextual change as inferred from the baseline;2) transition effect (inferred from aggregate level of the predictor and 3) individual level effect of the predictor.

While differences in the average levels of a predictor point to gender differentialsin the effect of the particular transition on employment, differences in the individual-levels effects on employment reflect disadvantage within the labor market or discrimination on the basis of the predictor in question. Likewise, differences in baseline effects reflect gender differences in employment opportunities associated socio-cultural and or structural factors stemming from the overarching gender systemnot included in the models.It is desirable to employ the net coefficients from Model 2, these fixed effects models do not yield estimates for the intercept. Accordingly, the estimates under Model 1, the gross estimates, are employed in the decompositions.

Innovative Chronological Strategy. In quantifying trends in the effect of each independent variable on employment, the replications for eachvariable noted above follows achronological life courseeventbeginning with schooling, then marriage, and finally fertility.Further, the estimations for each successive predictor are more stringent than its predecessor in the sense that the measures for the latter are retained as additional basic controls, as shown in the equations below.

Schooling

$$\text{Log } Y/(1-Y) = \beta_0 + \beta_1 G + \beta_2 A + \beta_3 A^2 + \beta_4 D + \beta_5 D^2 \beta_6 H + \beta_7 H^2 + \beta_8 S + \beta_9 E + \beta_{10} C \qquad 1$$

Marriage

$$\text{Log } Y/(1-Y) = \beta_0 + \beta_1 G + \beta_2 A + \beta_3 A^2 + \beta_4 D + \beta_5 D^2 \beta_6 H + \beta_7 H^2 + \beta_8 M + \beta_9 S + \beta_{10} E + \beta_{11} C \qquad 2$$

Fertility

$$\text{Log } Y/(1-Y) = \beta_0 + \beta_1 G + \beta_2 A + \beta_3 A^2 + \beta_4 D + \beta_5 D^2 \beta_6 H + \beta_7 H^2 + \beta_8 M + \beta_9 F + \beta_{10} S + \beta_{11} E + \beta_{12} C \qquad 3$$

where Log $(Y/(1-Y))$ is the odds of being employed; G refers to gender; A and A^2 are the respective measures for age and its quadratic term; D and D^2 are the respective measures for duration of unemployment and its quadratic term; H and H^2 are the respective measures for schooling and its quadratic term; M is the measure for marriage; F is the measure for fertility; and S, E, and C represent structural family structure, economic constraints, and cultural controls, respectively. The βsare regression coefficients for these various variables, with β_0 being the intercept.

FINDINGS

Before discussing the results, I briefly describe summary statistics for the main variables used in the analyses (Appendix table 1). Men generally have more years of schooling (7.5 years on average) than women (6.5 years on average). Sampled men are also generally older (about 25 years) than women (24 years). However, women are considerably more likely to be married than men (42% against 23%) and almost twice as likely to have one or more children (14% against about 7%).

The discussion begins with trends in the net effects of the explanatory variables (schooling, marriage, and fertility), on labor force participation to ascertain the existence of gender inequality in each case, separately for the informal and formal sectors. For this, only the net effects are discussed for brevity. It then examines how each of these predictors has responded to historical and economic trends. Finally, the relative contribution of each factor in the observed gender inequality in employment is discussed. The schooling results are discussed first, followed by those of marriage and then ending with those of fertility.

[TABLE 1]

GENDER, SCHOOLING AND INEQUALITY

Table 1 shows the trends in the effect of schooling on employment separately for women and men and the two economic sectors investigated. According to the table, schooling affects women and men(panel 1). On average, schooling hinders women's overall employment status by 28% but enhances that for men by 45%. The results for ability are in the expected direction and indicate that prior school performance facilitates access to theoverall labor market but it is much stronger for men than women. Next, I examine the

influence of historical trends and economic conditions on the observed effect of schooling. Table 1 (panels 2 and 3) also gives the impact of macro forces on the schooling employment relationship. Focusing first on overall employment, panel 2 indicates that historical time does indeed impact men and women's employment differently.The effect of historical time on men's likelihood of being employed in the overall sector as a functionof their schooling is negative while it does not affect the relation for women. Thus, this differential impact of historical time implies that men's advantage is weakening, resulting in some convergence in total labor market participation between the genders.Under a booming economy, women and men are similarly affected in the sense that their likelihood of accessing the overall labor market is somewhat enhanced.

Turning to the formal sector, the coefficients in the first panel suggests that, unlike the gendered effect of schooling on informal employment, the net education effect is on formal employment is unexpectedly nil for both women and men. However, the macro context differentially impacts the schooling employment relationship in terms of formal sector work for the two genders (panels 2 and 3). Results under panel 2 show that as in the case of informal employment, historical time does not influence the effect of schooling on women's chances of being employed in the formal sector. Thus, over time, the net returns to women's schooling continue to be nil. However, the effect of historical time on men's formal sector employment prospects is negative.These estimates mean that much like informal employment, any advantage men may have had over women is declining. Even larger differences emerge when changes in national economy is considered. Educated women appear to be significantly more likely than educated men to access the formal sector in times of economic prosperity. The impact of prosperous times on schooling can be linked to a general growth in employment opportunities but can also be interpreted as credentialism operating for women but not for men.Yet, these same prosperous times lead women to ultimately withdraw from the formal labor market. This contrasts with findings from past research in Africa (Glick and Sahn 1997; Naude and Serumaga 2001) which finds economic prosperity to be associated with greater participation, with the difference plausibly explained by differences in the methodology and data usedin this study. Theobserved tendency for Cameroonian women to

withdrawfrom the formal labor force can be attributed to their reservation to participate in an unfriendly labor market, a point that surfaced in the qualitative evidence. Conversely, that periods of economic prosperity bear no relation to men's formal sector employment behavior can be due to the fact that as the main household income earners, they tend to work irrespective of variation in the nation's economy.

In brief, there are large differences between the participation of men and women in the Cameroonian labor market, with the differences partly explained by macro contextual forces as well occupation sector. Yet these results are absolute and do not explicitly explain the contribution of schooling relative to other factors to the employment gender inequality.

[TABLE 2]

CONTRIBUTION OF SCHOOLINGTO THE GENDER INEQUALITY

What are the sources of the observedgender differences in employment? The decomposition results, given in table 2 address this question. Within the informal sector, the decomposition exercise indicate a gender inequality in employment of 0.45 logits, suggesting that educated women are still less likely than educated women to work in the informal sector, even as they are catching up as mentioned earlier. The main driver of this inequality is mainly differences in the effect of schoolingon employment (135%).Said differently, educated men are more likely than their female counterparts to be employed in the informal sector. This suggests that women's lower access to sector stems largely from discrimination in the labor market. Women's generally lower human capital endowment in the aggregate explains only 45% of the inequality. The evidence presented here is only partly consistent with Appleton et al.'s (1991) study that finds the occupational gender inequality in Cote d'Ivoire to be mostly due to women's lower human capital acquisition. Instead, the evidence mainly supports a cultural perspective (Beneria and Feldman 1992; Birdsall and Sabot 1991; Greenhalgh 1991) whereby labor market differences in this less rigid sector can persist even when gender parity in education is achieved because of discrimination. Importantly, the inequality within this mostly unregulated and heterogeneous economic sector is confirmed by the qualitative study, where women reiterated a disadvantage rooted in physical and sexual abuse.

Similarly, within the formal sector, the decompositions indicate that both men and women do not benefit from their education but the disadvantage is by far more substantial for women. However, the roots of the gender inequality here are markedly different from those noted for informalemployment. Surprisingly, gender differences in the baseline component (83%) are driving the gender inequality rather than differences in aggregate education (-12%).Differences in the benefits to schooling also account for 29% of the inequality. Thus, while women's informal employment disadvantage is mostly driven bylabor market discrimination, their disadvantage in the formal sector is driven by segregated employment opportunitiesin favor of men and most likely stemming from the gendered societalnorms. But discrimination is also implicated, accounting for 29% of the gender gap. A somber point is thateven if gender parity in education is attained, women relative to men would still be greatly disadvantaged in the formal sector as reflected in the negative contribution of aggregate education or the educational transition.

Thus, Cameroonian women relative to men, for the most part, have not reaped the anticipated economic benefits to their education. Macroeconomic forces can be seen as part of the baseline component that drives much of the gender inequality in employment. Faced with irregular or delayed salaries during periods of national economic downturns and when confronted with discriminatory labor markets, women may be inclined to trade economic rewards and the status associated with a career with child and family well being. The decomposition evidence is consistent with the multivariate evidence in that education is not the most critical factor in the gender gap, particularly with respect to the formal sector where it is presumed to be more crucial. While the finding invalidates both the human capital and modernization perspectives, it supports the cultural hypothesis. The next set of analyses will examine how demographic change is contributing to the deep-rooted inequality beginning with marriage.

[TABLE 3]

GENDER, MARRIAGE AND INEQUALITY

In theory, marriage should be inversely related to women's labor force participation (Becker 1981; 1991) but positively related to men's (Oppenheimer 1988). Further, the relationship should be stronger within the formal than overall sector. Table 3 indicates that, in the informal labor market, the net effect of marriage on women's employment is

zero. Similarly, in the case of men, marriage has no bearing ontheir informal sector participation.

Within the formal sector, a different scenario emerges: the risk of accessing this sector becomes markedly different for men and women. For women, marriage isnegatively related to their formal economic activity. The effect is large and highly significant, providing strong support for the specialization theory (Becker 1981; 1991). Judging by the estimate, married women are 97% less likely than their unmarried counterparts to be formal sector employees. Conversely, married men's prospects for formal sector work are increased by 186% relative to their unmarried peers.These findings are neither inconsistent with theory nor with conventional wisdom. Men generally benefit professionally from marriage more than women (Becker 1991), indicating, crucially, a disequalizing effect of marriage within as well as across genders.

Examinationof the results on the last two panels in table 3 shows that economic context has no impact on married women and men's informal employment alike. And this holds irrespective of historical and macroeconomic trends. However, as in the case of schooling,formal employment trends diverge between men and women once historical and economic factors are considered.While married women continue to be disadvantaged relative their unmarried peers over time and during national economic growth, neither historical time nor economic growth has any direct impact on how marriage affects women's employment. While no effect is discernible for married women, the advantage that married men have over their unmarried counterparts is reduced by historical trends, signaling a potential emergence of inequality at the disadvantage of married families.In sum, historical context in employment, examined by including in the final model, an interaction term for the marriage and trend variables, is not a potential facilitator of women's employment status. Thus, one can say that married women's current labor force inequality has not improved as a result of passage of time per se or with economic growth.

[TABLE 4]

CONTRIBUTION OF MARRIAGETO THE GENDER INEQUALITY

As with schooling, the relative importance of marriage as opposed to other factors on individual employment is assessed from the decomposition results. If the inequality stems

mostly from the effect of marriage on employment, then labor market discrimination based on marital grounds is implicated, with employers giving preferential treatment to married men but not women, thereby providing supportfor the cultural perspective. On the other hand, where the gap stems from baseline effects, the specialization hypothesis receives support as well as the cultural explanation in so far as gendered role segregation is contributory factor to the underlying baseline opportunities.

The contribution of marriage to changes in employment is presented in table 4. The disaggregated results from the decomposition are every telling, indicating gender inequality in both sectors. In terms of informal employment, the inequality isdriven by differences in the employment opportunities, inferred from the baseline, which explains 86% of the inequalityand by, to a lesser extent, differences in the effect of marriage on employment, which accounts for 33% of the inequality. Differences in average marriage levels or the differential gender impact of the marriage transition have little impact on the employment inequality.

The gender inequality in employment is even more striking within the formal sector, with employment prospects being positive for men (0.71 logits) and negative for women (-2.20), implying that men's likelihood of being formal sector employees by far surpasses that of women. Again, the source of this large employment disparity is mainly driven by gender differences in employment opportunities (84%) followed distantly by differences in the effect of marriage on employment (14%). The finding that differences in effect of marriage on employment (i.e., labor market discriminatory practices tied to marriage) explains a smaller portion of the gap (i.e., 14 percent) compared with overarching segregated employment opportunitiesconfirms the specialization thesis only partially, with instead the cultural perspective receiving greater credence.

[TABLE 5]
GENDER, FERTILITY AND INEQUALITY

Drawing from the work family incompatibilityperspective, fertility should have an inverse relationship with formal employment for women (Stycos and Weller 1967) but a positive relation for men (Oppenheimer 19988). Beginning with informal employment, fertility is unrelated to both men and women's employment. Similarly, within the formal labor market, fertility does not have any effect the employment of both women and men.

On the basis of these results, there is little association between fertility and labor market outcomes for men and women. Has this absence of any association persisted through time and under varying economic conditions?

Historically, the influence of fertility has changed neither for women nor for men with respect to informal work. Likewise, this effect has also remained stable in the formal labor market for women. To further probe these findings, I investigate the specific influence of changing economic conditions. Within the informal sector, the response of the fertility effect to economic progress is non-significant for men as well as women. The same is true with respect to the formal sector.

Thus, fathers' greater formal labor market activity relative to mothers has been unaffected by historical or economic trends. Some of the disadvantage faced by mothers may stem from, as garnered from the qualitative results, but not limited to, reservation wage, husband reluctance, and unfavorable work conditions stemming from economic downturns. Improvements in the nation's economy could invariably reduce mothers' reservation wage, labor market discrimination, and encourage husbands support for wives' outside work leading to their increased entry into the formal sector.

[TABLE 6]

CONTRIBUTION OF FERTILITY TO THE INEQUALITY

Table 6 reports the sources of the gender differences in employment. As with the preceding analyses, data show that fathers are more likely to be employed in the overall sector than mothers. Yet, the sources of this female disadvantage are tied neither to differences in fertility (i.e. their higher parities relative to men) nor to differences in labor market returns based on discrimination against mothers or conflict between the roles of mother and employee. Rather, women's lower overall labor force participation arises exclusively from differentials in the effects of prevailing baseline opportunities for employment that prevent mothers but not fathers from working (i.e., general improvements in work opportunities for men but not for women).

The more interesting differences come from the formal sector. Here, fathers are again more likely to work than mothers. While the baseline is driving 70% of this inequality, 22.5% of the remaining inequality stems from differences in the effect of fertility within the formal labor market. Said differently, fathers rather than mothers are

more likely to be hired all else being equal which essentially amounts to discriminatory practices, whether direct or indirectly. This finding does provide some support for the incompatibility thesis, even if indirectly, within Cameroonian labor markets.

Looking collectively at the evidence from the decomposition analyses for the three predictors, however, the institutional hypothesis receives the lion share of support insofar as the hindering baseline processes are predominantly normative. I will elaborate this proposition in the conclusions.

CONCLUSIONS AND IMPLICATIONS

The purpose of this research was to advance our understanding of how the gender inequality has evolved under changing economic conditions, limited policy resources, growing competition for employment, and the relative contribution of these trends on to the gender inequality in employment. Related to these questions, five hypotheses were tested using event history data from Cameroon, and focusing on the formal sector where the hypotheses can be meaningfully assessed.

With respect to the educational transition, both men and women have not benefited from their schooling with respect to accessing the formal sector but women have become more disadvantaged over time. Furthermore, while men's access to formal jobs are generally unaffected by growth in the economy, educated women retreat from formal sector jobs and instead become channeled into the overall sector in prosperous economic times. By extension, the gender inequality has persisted rather than narrowed; if anything, it has widened despite the advances in female schooling. The statement is further confirmed by the decomposition results: individual human capital had no bearing on the gender inequality. Instead, segregated employment opportunities, followed by labor market discrimination, have been the driver of the inequality as it relates to schooling in Cameroonian labor markets. Thus, the paper's hypothesis of a limited role of schooling in employment behavior has been confirmed. Furthermore, the anticipated benefits from female schooling have not been forthcoming.

The same conclusions can be extended to the role of the fertility transition. Findings show no differential outcomes within and across genders when it comes to fertility. And the same holds even after consideration of the macro-contextual factors.

Rather, and based on the decomposition exercise, women's lower labor market disadvantage arises mainly from baseline effects differentials that prevent mothers but not fathers from working (i.e., general improvements in work opportunities for men but not for women). But the decomposition results also indicate that over one-fifth and about 7.2% of the gender inequality within the formal sector is driven by discrimination and fertility differentials, respectively.

Historical context, particularly macro-economic influences in employment, examined by including in the final models, interaction terms for the three predictors and GNP and trend variables, is not a potential facilitator of women's employment status. Thus, one can say that women's current labor force inequality has not improved with the passage of time per se or with economic growth. While the formal employment premium associated with, for example married men, has declined historically, without effective labor market policies, improvements in the macroeconomic context, much as calendar time, have little impact on the gender inequality in the Cameroonian labor market.

Finally, the evidence on the marriage-related hypothesis seems initially strong. Married men are significantly more likely than unmarried men as well as married women to participate in the formal sector, implying a disequalizing effect of marriage within as well as among genders. These findings, although absolute and not relative, appear to be consistent not only with theory (Becker 1991), but the paper's hypothesis about the importance of marriage in employment behavior as well as the generally presumed greater marriage premium for husbands relative to wives. However, the more decisive decomposition evidence provides only partial confirmation. Only a perceptible portion of the formal sector gender inequality (14%) is driven by discrimination due to marriage with the main source of the inequality driven by differential segregated employment opportunities.

The institutional context has turned out to be the most critical factor behind the gender inequality, even more than the hypothesized marital transition. Based on the findings from this study, the importance of the institutional context is substantial. As a preliminary step, it is conceptualized broadly and to include perhaps normative demographic factors that may be linked to the organization of women's work (Mason and Palan 1981).

Yet, a synthesis of different pieces of evidence in this study and elsewhere suggests processes within marriage rather than marital status and how these impact wives' employment status, occupy a central role in understanding the future course of the fertility transition. The continued emphasis on marital processes to further distil the nature of the disequalizing impact of marriage in the Cameroonian labor market is based on the insights drawn from three sources: the qualitative study (Jah 2011), the Cameroon DHS historical analysis (Jah 2011, and from a critical examination of the controls in this study. This critically assessment of the controls corroborated by the qualitative data points to husband reluctance and women's reservation wage in the face of unfavorable work conditions are important considerations.

In terms of the correlates, the schooling results without the marriage variable shows women's education to be unrelated to their labor force participation. However, a strong and positive effect of schooling emerges in both sectors once the marriage variable is incorporated in the analyses, even if marriage itself is unrelated or negative. This insinuates that subtle processes within marriage bear on women's labor market behavior, a fact that emerged from the qualitative analyses. Similarly, the potential influence of women's reservation wages also surfaced from the qualitative study (Jah 2011). These results show that, added to age and urban residence, husband's work status and co-residence govern women's overall employment behavior.

To further distill the effect of marital relations on the organization of women's work and how the relationship between these two critical factors have changed under different periods of economic context future research will explore the role the economic crisis in Cameroon in the late 1980s and early 1990s. This will be done by disaggregating the forty years of data into pre-recession, during recession, and post-recession periods. This, in turn, can be used to understand employment changes as they relate to the fertility transition in the region in so far as the Cameroon results can be extended to countries with similar national contexts.

Table 1. Effect of schooling on individual employment, Cameroon 1959-1999

	Fixed Effects								
	Overall estimates			Macro Context					
	Panel 1			Panel 2			Panel 3		
	Net effect			Historical trends			Economic condition		
	B	HR	Sig	B	HR	Sig	B	HR	Sig
Informal employment: Women									
Educational transition									
Schooling (no. of years)	-0.32	0.72	**	0.26	1.30	*	-0.87	0.42	**
Schooling (no. of years), squared	-0.02	0.98	***	-0.02	0.98	***	-0.02	0.98	***
Ability	2.50	12.16	**	2.56	12.96	**	2.74	15.49	**
Historical trends									
Log of time				0.16	1.17		0.33	1.39	
Schooling (no. of years)*log of time				0.02	1.02		0.00	1.00	
Economic condition									
Log of GNP							-1.13	0.32	***
Schooling (no. of years)*log of gnp							0.18	1.19	***
Informal employment: Men									
Educational transition									
Schooling (no. of years)	0.37	1.45	***	0.56	1.76	***	-0.11	0.89	
Schooling (no. of years), squared	-0.02	0.98	***	-0.02	0.98	***	-0.02	0.98	***
Ability	4.06	57.86	***	3.95	52.11	***	3.95	51.91	***
Historical trends									
Log of time				0.07	1.07		0.16	1.18	
Schooling (no. of years)*log of time				-0.06	0.94	***	-0.08	0.92	***
Economic condition									
Log of GNP							-0.57	0.57	*
Schooling (no. of years)*log of gnp							0.11	1.12	**
Formal employment: Women									
Educational transition									
Schooling (no. of years)	0.34	1.41		0.55	1.72		5.41	224.62	*
Schooling (no. of years), squared	0.05	1.05	**	0.05	1.06		0.06	1.06	
Ability	-7.83	0.00		-13.54	0.00		-14.27	0.00	*
Historical trends									
Log of time				-9.52	0.00	***	-8.77	0.00	***
Schooling (no. of years)*log of time				0.04	1.04		-0.01	0.99	
Economic condition									
Log of GNP							5.89	359.61	*
Schooling (no. of years)*log of gnp							-0.71	0.49	*
Formal employment: Men									
Educational transition									
Schooling (no. of years)	-0.19	0.83		0.33	1.39		-0.33	0.72	
Schooling (no. of years), squared	0.04	1.04	***	0.04	1.05	***	-0.04	0.96	***
Ability	-2.24	0.11		-1.68	0.19		1.68	5.39	
Historical trends									
Log of time				1.53	4.61	**	-1.53	0.22	*
Schooling (no. of years)*log of time				-0.19	0.83	**	0.19	1.20	*
Economic condition									
Log of GNP							1.59	4.89	
Schooling (no. of years)*log of gnp							-0.20	0.82	

***, **, *, and # indicate significance at the <0.001, 0.01, 0.05, and 0.10 levels, respectively. All estimates
are net of all the correlates but only key estimates are shown for brevity. HR refers to hazard ratio

Table 2. Decomposition results for the relative contribution of schooling to the gender inequality in labor force participation, Cameroon 1959-1999

| | Predicted Employment (logits) | | | | | |
| | Men | Women | Total difference | Percent of difference associated with | | |
				Baseline	Average education	Effect of schooling
			Overall employment			
Logits	-1.59	-2.04	0.45	-0.36	0.20	0.61
Contribution				-81%	45%	135%
			Formal employment			
Logits	-1.83	-4.75	2.92	2.43	-0.35	0.84
Contribution				83%	-12%	29%

Table 4. Decomposition results for the relative contribution of marriage to the gender inequality in labor force participation, Cameroon 1959-1999

| | Predicted Employment (logits) | | | | | |
| | Men | Women | Total difference | Percent of difference associated with | | |
				Baseline	Average marriage	Effect of marriage
			Overall employment			
Logits	-2.96	-3.16	0.21	0.18	-0.04	0.07
Contribution				86%	-19.11%	33%
			Formal employment			
Logits	0.71	-2.20	2.91	2.45	0.07	0.40
Contribution				84%	0.02%	14%

Table 3. Effect of marriage on individual employment, Cameroon 1959-1999

	Fixed Effects								
	Overall estimates			Macro Context					
	Panel 1			Panel 2			Panel 3		
	Net effect			Historical trends			Economic condition		
	B	HR	Sig	B	HR	Sig	B	HR	Sig
Informal employment: Women									
Demographic transition									
Marital status	0.20	1.22		-0.11	0.89		-2.23	0.11	
Schooling (no. of years)	0.33	1.40	**	0.32	1.38	**	0.32	1.38	**
Schooling (no. of years), squared	-0.02	0.98	***	-0.02	0.98	***	-0.02	0.98	***
Ability	2.40	11.06	**	2.43	11.41	**	2.44	11.51	**
Historical time									
Log of time				0.18	1.20		0.21	1.23	
Marital status*log of time				0.09	1.09		0.06	1.06	
Economic condition									
Log of GNP							-0.07	0.93	
Marital status*log of time							0.33	1.39	
Informal employment: Men									
Demographic transition									
Marital status	0.01	1.01		0.75	2.12		-1.94	0.14	
Schooling (no. of years)	0.37	1.45	***	0.38	1.46	***	0.36	1.44	***
Schooling (no. of years), squared	-0.02	0.98	***	-0.02	0.98	***	-0.02	0.98	***
Ability	4.05	57.64	***	3.94	51.55	***	4.00	54.55	***
Historical time									
Log of time				-0.32	0.72		-0.34	0.71	
Marital status*log of time				-0.21	0.81		-0.22	0.80	
Economic condition									
Log of GNP							0.12	1.12	
Marital status*log of gnp							0.42	1.52	
Formal employment: Women									
Demographic transition									
Marital status	-3.55	0.03	***	-10.79	0.00	**	-29.41	0.00	*
Schooling (no. of years)	0.12	1.13		1.06	2.88		1.24	3.45	
Schooling (no. of years), squared	0.07	1.08	*	0.17	1.19		1.07	2.92	*
Ability	-8.94	0.00		-40.48	0.00	***	-0.01	0.99	**
Historical trend									
Log of time				-22.51	0.00	***	-22.22	0.00	***
Marital status*log of time				0.89	2.43		0.96	2.61	
Economic condition									
Log of GNP							-2.51	0.08	*
Marital status*log of time							2.73	15.27	
Formal employment: Men									
Demographic transition									
Marital status	1.05	2.86	***	4.29	73.22	**	7.44	1699.84	
Schooling (no. of years)	-0.17	0.85		-0.20	0.82		-0.20	0.82	
Schooling (no. of years), squared	0.04	1.04	***	0.04	1.04	***	0.21	1.23	**
Ability	-2.81	0.06	*	-2.88	0.06	*	0.00	1.00	
Historical time									
Log of time				0.39	1.48		0.41	1.51	
Marital status*log of time				-0.84	0.43	*	-0.89	0.41	*
Economic condition									
Log of GNP							0.31	1.36	
Marital status*log of time							-0.45	0.64	

***, **, *, and # indicate significance at the <0.001, 0.01, 0.05, and 0.10 levels, respectively. All estimates are net of all the correlates but only key estimates are shown for brevity. HR refers to hazard ratio

Table 5. Effect of fertility on individual employment, Cameroon 1959-1999

					Fixed Effects				
	Overall estimates			Macro Context					
	Panel 1			Panel 2			Panel 3		
	Net effect			Historical trends			Economic condition		
	B	HR	Sig	B	HR	Sig	B	HR	Sig
Informal employment: Women									
Demographic transition									
Fertility (no. of living children)	0.10	1.11		0.05	1.05		-1.02	0.36	
Schooling (no. of years)	0.33	1.39	**	0.32	1.38	**	0.32	1.38	**
Schooling (no. of years), squared	-0.02	0.98	***	-0.02	0.98	***	-0.02	0.98	***
Achievement	2.41	11.08	**	2.46	11.66	**	2.45	11.62	**
Marital status	0.18	1.20		0.18	1.19		0.18	1.19	
Historical time									
Log of time				0.23	1.25		0.23	1.26	
Fertility (no. of living children)*log of time				0.02	1.02		-0.01	0.99	
Economic condition									
Log of GNP							0.00	1.00	
Fertility (no. of living children)*log of gnp							0.17	1.19	
Informal employment: Men									
Demographic transition									
Fertility (no. of living children)	0.01	1.01		0.90	2.45		-2.33	0.10	
Schooling (no. of years)	0.37	1.45	***	0.37	1.45	***	0.36	1.44	***
Schooling (no. of years), squared	-0.02	0.98	***	-0.02	0.98	***	-0.02	0.98	***
Achievement	4.05	57.64	***	3.97	53.02	***	4.02	55.66	***
Marital status	0.01	1.01		0.00	1.00		0.01	1.01	
Historical time									
Log of time				-0.35	0.71		-0.39	0.68	
Fertility (no. of living children)*log of time				-0.25	0.78		-0.30	0.74	
Economic condition									
Log of GNP							0.19	1.21	
Fertility (no. of living children)*log of gnp							0.52	1.68	
Formal employment: Women									
Fertility (no. of living children)	0.04	1.04		-1.59	0.20		23.98	3.E+10	
Schooling (no. of years)	0.12	1.13		0.93	2.53		0.75	2.12	
Schooling (no. of years), squared	0.07	1.08	*	0.17	1.19		0.20	1.22	*
Achievement	-8.99	0.00		-38.15	0.00	***	-40.05	0.00	***
Marital status	-3.56	0.03	***	-7.36	0.00	***	-7.47	0.00	***
Historical time									
Log of time				-22.31	0.00	***	-22.42	0.00	***
Fertility (no. of living children)*log of time				0.45	1.56		0.75	2.12	
Economic condition									
Log of GNP							-0.93	0.39	
Fertility (no. of living children)*log of gnp							-4.00	0.02	
Formal employment: Men									
Demographic transition									
Fertility (no. of living children)	-0.19	0.82		2.60	13.47		-2.72	0.07	
Schooling (no. of years)	-0.17	0.85		-0.18	0.83		0.18	1.20	
Schooling (no. of years), squared	0.04	1.04	***	0.04	1.04	***	-0.04	0.96	***
Achievement	-2.81	0.06	*	-2.81	0.06	*	2.81	16.64	*
Marital status	1.09	2.98	***	1.11	3.04	***	-1.12	0.33	***
Historical time									
Log of time				0.32	1.38		-0.34	0.71	
Fertility (no. of living children)*log of time				-0.78	0.46		0.78	2.18	
Economic condition									
Log of GNP							-0.19	0.82	
Fertility (no. of living children)*log of gnp							0.02	1.02	

***, **, *, and # indicate significance at the <0.001, 0.01, 0.05, and 0.10 levels, respectively. All estimates
are net of all the correlates but only key estimates are shown for brevity. HR refers to hazard ratio

Table 6. Decomposition results for the relative contribution of fertility to the gender inequality in labor force participation, Cameroon 1959-1999

	Predicted Employment (logits)					
					Percent of difference associated with	
	Men	Women	Total difference	Baseline	Average fertility	Effect of fertility
			Overall employment			
Logits	-3.03	-3.20	0.17	0.17	0.00	0.00
Contribution				102%	-1%	-1%
			Formal employment			
Logits			3.48	2.45	0.25	0.78
Contribution				70.40%	7.16%	22.45%

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