

Women's contributions to the cost of marriage in Egypt

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The rising cost of marriage in the Middle East and North Africa (MENA) has recently received a considerable amount of attention in both academic and policy circles. Much of this discussion has focused on the challenges young men in the region face in accumulating sufficient funds to marry, particularly under prevailing conditions of high youth unemployment (Assaad and Ramadan, 2008; Assaad et al., 2009a). In a region where marriage is central to conceptions of a successfully established life, the combination of high unemployment and increasing marriage costs has been identified as a key component of the stalled transition to adulthood among youth. This has led to the coining of the term ‘waithood’ to describe the condition of the large number of Middle Eastern youth caught between adolescence and full adulthood as they try to secure employment and accumulate the funds to marry (Singerman, 2007; Dhillon and Yousef, 2009).

Despite the attention on the stalled transition to adulthood in MENA, relatively little is known about how young women’s employment is associated with their contributions to marriage costs, age at marriage, or other marital outcomes. Given the low rate of female labor force participation in the region and the high rate of unemployment among female youth, this is an important gap in the literature on how work and marriage interact in young women’s transition to adulthood. Whether or not employment improves women’s marriage outcomes has important implications for their incentives to work and long-term commitment to the labor force, as well as demographic trends in marriage and fertility.

In this paper I examine the relationship between women’s pre-marital labor force participation and two key marriage outcomes; namely, women’s and their families’ contributions to total marriage costs, and the timing of marriage. Using a rich data set on the costs of marriage in Egypt, I find that brides who are employed prior to marriage do in fact contribute a larger percentage of the total cost of their marriages. While a substantial portion of this individual contribution goes to offset some of her family’s contribution, when the bride is employed the total bride-side contribution to the cost of marriage is still increased. Yet this increased bride-side contribution does not appear to speed up the transition to marriage; employed brides do not have shorter engagement periods than non-employed brides, and they experience a longer period between school exit and marriage. Whether pre-marital employment improves or worsens a woman’s position on the Egyptian marriage market is thus a question in need of further exploration.

1 Marriage transfers

Interest in marriage transfers has been growing among economists and demographers as the extent and magnitude of such transfers worldwide has received greater publicity. As awareness of the economic significance of marriage transfers has increased, the implications of these transfers for intergenerational wealth distribution (Botticini and Siow, 2003), the functioning of marriage markets (Rao, 1993; Bhat and Halli, 1999; Dalmia, 2004; Anderson, 2007b), marriage timing (Singerman, 2007; Desai and Andrist, 2010), investment in girls’ education (Amin and Huq, 2008; Elbadawy, 2009) and women’s well-being (Zhang and Chan, 1999; Srinivasan, 2005), have been explored. Although much of this literature has centered on ‘dowry inflation’ in South Asia, marriage transfer systems have also been documented in Sub-Saharan Africa (Dekker and Hoogeveen, 2002) and East Asia (Zhang and Chan, 1999). In the Middle East, where the practice of marriage transfers dates back as far as 3000 CE (Quale (1988) cited in Anderson (2007a)), attention has only recently turned to the modern phenomenon of rising marriage costs (Singerman and Ibrahim, 2001; Singerman, 2007).

Marriage transfers are of two types: transfers from the bride's side to the groom's side, commonly referred to as dowry, and transfers from the groom's side to the bride's side, commonly referred to as brideprice. However, as Anderson (2007a) emphasizes, rights to these monetary or property transfers may lie either with the bride and groom themselves or with their families, with important implications for the welfare and incentives of all four parties. Marriage transfers that go directly to the bride and groom's families are, properly speaking, brideprice and groomprice, respectively, whereas transfers that stay with the bride and groom are dowry and dower, respectively. Egypt, where both the bride and groom's families invest in providing materially for the new couple, is thus a dual dowry and dower system. In addition, many Muslim Egyptians follow the practice of giving *mahr*, the traditional Islamic brideprice, to the bride herself. Marriage transfers in Egypt will be discussed in more detail in the following section.

1.1 The structure of marriage transfers and bride-side contributions

The structure of a given marriage transfer system is closely related to which bride and groom characteristics are particularly valued on the marriage market. One of the earliest explanations for why different marriage systems come to be structured as they are arises from an argument about women's employment. Boserup (1970) posited that brideprice systems are often associated with higher female productivity in agriculture and dowry systems with lower female productivity, i.e. dowry is essentially a payment to the groom's side for taking an unproductive member into the household. This theory has been used to attempt to explain the well-noted shift from brideprice to dowry in India, but in a review of this literature, Bhat and Halli (1999) suggest that empirical evidence for the theory is weak. In a long-term ethnographic study of the Indian province of Karnataka, Caldwell et al. (1983) also observed that many rural families are willing to pay higher dowries in an attempt to secure wage employed grooms and thus shield their daughters from a life of agricultural labor. The causality between female labor and dowry levels is thus unclear.

Theories of marriage transfer systems based on female productivity have since generally fallen out of favor, giving way to theories based on demographic and marriage market dynamics. Again, much of the relevant debate has focused on the issue of dowry spread and dowry inflation in India and elsewhere in the Asian subcontinent. Demographers have argued that the shift to dowry has resulted from the emergence of a marriage squeeze against women (Rao, 1993; Bhat and Halli, 1999). Even in societies with a sex ratio over 1.0, the fact that men tend to marry women who are younger than them means that the rapid population growth that has been experienced by much of the developing world over the past fifty years often leads to a surplus of marriageable women over marriageable men. Reductions in adult mortality may also reduce the supply of widows and widowers on the marriage market, which, in societies where widowers remarry at higher rates than widows, will exacerbate the marriage squeeze against women.¹ As a result of the marriage squeeze, women's families are forced to pay higher dowries in order to secure good marriage matches (Bhat and Halli, 1999).

Economists, in contrast, have leaned toward the view that marriage transfers are a pure marriage-market equilibrating function (Dalmia, 2004; Anderson, 2007a,b). Anderson (2007a) argues that the marriage squeeze will not cause dowry inflation but rather an increase in the average age at marriage, because brides who do not match at the ideal marriage age re-enter the

¹This point is also applicable in Egypt, where, as in South Asia, widowers remarry at considerably higher rates than widows.

marriage market when they are older. As brides will only be willing to delay marriage if they anticipate paying lower dowries in the future, Anderson argues that the marriage squeeze scenario is only consistent with a situation of dowry deflation. Her explanation for the empirical phenomenon of dowry inflation is that modernization has brought about greater differentiation among grooms of the same social class, through education and wage employment. Women and their families are thus prepared to pay higher dowries in order to make more advantageous matches within the same social stratum. It is notable that this explanation could be broadly applicable to the case of Egypt, where job quality varies widely and access to high quality private sector jobs has expanded much more rapidly among men than women (Assaad and Hamidi, 2009; Assaad et al., 2009b). Women may thus be willing to contribute more to the cost of marriage in order to secure high quality grooms.

Education, in contrast, has expanded rapidly for both men and women in Egypt, leading to important questions of how education and contributions to the cost of marriage complement or substitute for one another. This is a theme that runs through the South Asia literature as well. Dalmia and Lawrence (2005) find that both bride's and groom's education are positively associated with dowry size in India. They argue, like Anderson, that for brides this reflects hypergamous marriage matching. In Egypt, Elbadawy (2009) similarly finds that education does not appear to substitute for bride-side contributions to the cost of marriage, and suggests that this may be because more educated brides are achieving more advantageous marriage matches.

Several studies also suggest that educated and uneducated women operate in fairly separate marriage markets. In a mixed-methods quantitative and qualitative study of two villages in Bangladesh in 2000, Amin and Huq (2008), find that while less educated girls will go against the ideal of educational hypergamy and marry down in order to reduce their dowries, once a girl obtains a secondary degree this is no longer an option and she must face the likelihood of paying a higher dowry. Dalmia (2004) presents a fairly similar argument for uneducated women in India, arguing that dowry serves a marriage matching function. However, for educated women, among whom she finds that dowry is largely unresponsive to groom's characteristics, Dalmia argues that dowry is operating as a pre-mortem bequest from families. In the very different contexts of medieval Florence and modern-day Taiwan, Botticini and Siow (2003) and Zhang and Chan (1999), respectively, likewise argue that dowries are actually pre-mortem bequests to daughters. Although Botticini and Siow focus on the function of dowries as a means for altruistic parents to provide a bequest to daughters who otherwise did not have inheritance rights, Zhang and Chan argue that dowries also improve the non-monetary welfare of women in marriage. They find that, among employed wives in Taiwan in 1989, higher dowry is associated with greater husband time spent in housework.

In comparison to education and groom's employment, very little recent attention has been paid to the role of bride's pre-marital employment in raising or lowering bride-side marriage transfers. Amin and Huq (2008) do mention that in the villages they studied, girls were sometimes allowed to continue their schooling if it was thought that they had a chance at securing good employment afterwards, as they could thereby reduce their dowries. In a cross-regional study of India, in contrast, Desai and Andrist (2010) find that in regions with higher female labor force participation, girls tend to marry younger. They hypothesize that this is because families in these regions are afraid that if their daughters work outside the home they will be exposed to damaging rumors about their reputations that could raise their dowry payments. In this paper, I aim to address the lack of dedicated studies on women's employment and marriage transfer systems through an analysis of women's pre-marital employment and their contributions to the cost of marriage in Egypt.

2 The cost of marriage in Egypt

Although Egypt generally follows a brideprice system, both the bride's and groom's sides contribute to the overall cost of marriage following pre-defined traditions (Elbadawy, 2009). The ideal held through these expenditures at the time of marriage is that the newlywed couple should be established with a fully-equipped joint residence.² Typically, the groom's side is primarily responsible for securing housing for the couple, and fully responsible for providing jewelry gifts to the bride and paying *mahr*, the Islamic brideprice. The bride and groom's sides usually divide the cost of furnishings, electronics, kitchenware and other household goods for the new couple's residence, as well as the cost of marriage celebrations. Egypt is thus a dual dowry and dower system. While there is a standard understanding of which parts of these household and celebration costs should be covered by the bride or groom's side, negotiations over the amounts and division of the costs of marriage are often protracted, involving the couple and both of their families (Singerman, 1995; Hoodfar, 1997).

The high cost of marriage (COM) in Egypt is a continual subject of popular, and increasingly, academic, discussion. In what is likely the first statistical treatment of the issue, Singerman and Ibrahim (2001) calculated that, as of 1999, Egyptians spent approximately 13 billion Egyptian pounds (LE) annually on marriage costs, or USD 3.867 billion. This massive sum exceeded both total United States economic aid in 1999, at a price tag of USD 2.1 billion, and foreign remittances from the 1.9 million Egyptian migrant workers abroad (USD 3 billion). Yet surprisingly, despite the popular discourse on rising marriage costs, in an analysis of the 2006 Egypt Labor Market Panel Survey – the dataset used in this paper – Singerman (2007) found that the real cost of a marriage in Egypt has actually declined substantially over time. When adjusted for inflation, the average marriage from 1980 – 1984 cost just under 110,000 LE (in 2005 LE) whereas the average marriage from 2000 – 2004 cost just under 40,000 LE. Nevertheless, Singerman argues that in the context of a general real increase in the cost of living in Egypt, this still presents a significant financial burden on families.

The extent of the burden that marriage costs represent for young Egyptians and their families is demonstrated by the fact that, for marriages between 1990 and 2006, it took the average groom 29 months of saving his full salary to cover his 38% of the total marriage costs. For males in the lowest wage quartile this reached 37 months, or just over three years. In addition, the groom's family's contribution to the total COM represented, on average, 14 full months of the father's earnings. The time required for families to save varied much more than the time required for the groom himself, ranging from 51 months for fathers in the lowest wage quintile to only nine months for fathers in the highest wage quintile (Singerman, 2007).

These costs appear to play an important role in delaying marriage, as a 1996 rental law reform that effectively reduced the cost of obtaining a rental contract for an apartment appears to have had a significant effect on reducing the median age at marriage among men in Egypt.³ Median age at marriage for men, which rose from 26 for the 1960 birth cohort to a peak of 29 for the 1970 birth cohort, declined back to 26 for cohorts born in the late 1970s, who were marrying in the early 2000s after the new rental law went into effect (Assaad and Ramadan, 2008; Assaad et al., 2009a).

²In reality, co-residence with the groom's family following marriage is not uncommon, particularly among youth of lower socioeconomic backgrounds.

³Due to strong tenant protection and rent control clauses in Egyptian rental law, many landlords insist on charging a large up-front fee, known as 'key money' before renting out an apartment. This dramatically increases the cost to young men of obtaining even a rented apartment before marriage (Assaad et al., 2009a).

Among the 1966 – 1988 birth cohorts, getting a job also nearly doubled a young man’s hazard of getting married over the following three years, while getting a good job doubled his hazard of getting married in the following year (Assaad et al., 2009a). In short, for young men, an income is the route to marriage.

Evidence that high marriage costs are contributing to an involuntary delay in marriage among youth has lead to growing concerns about young people’s stalled transition to adulthood in Egypt and elsewhere in the region (Singerman, 2007; Dhillon and Yousef, 2009). Increases in age at marriage, particularly among women, are generally considered to be positive by demographers, because higher age at marriage is expected to be associated with more opportunities for female education, lower fertility, and greater female autonomy. Yet this perspective overlooks the negative social and psychological consequences for young people who want to establish families but are unable to due to economic circumstances, particularly in a society where adulthood is defined by entry into marriage (Singerman, 2007).

2.1 Egyptian women in the marriage market

Young women are often considered to be fairly passive actors in the Egyptian marriage market, as their ability to get married is popularly understood to be a matter of waiting for a suitable proposal and then waiting for the man behind that proposal to accumulate sufficient funds. To the extent that women’s marital outcomes have been examined with respect to their pre-marital characteristics, most of the attention has focused on education. A number of scholars have suggested that returns in the marriage market are an important motivation for girls’ schooling in Egypt (Lloyd et al., 2003; Mensch et al., 2003), in that more educated and wealthier men may prefer educated women as wives. Given the low rate of female labor force participation (LFP) in Egypt, this preference is largely based on the perception that more educated wives raise higher quality children, rather than on a wife’s potential labor market earnings (Elbadawy, 2009). A recent analysis of the ELMPS by Elbadawy (2009) confirms that young women with university degrees are in fact significantly more likely to marry a higher quality husband than young women with a secondary degree. However, she does not find that the families of more educated brides contribute less to the total COM, i.e. education does not seem to be a substitute for bride-side marriage transfers.

In terms of employment, it is quite unclear to what extent competition for husbands and the cost of marriage have created an incentive for women to work before marriage. Female LFP in Egypt is low and declining, particularly among the population of educated women who are most likely to be engaged in wage employment. In an analysis of the ELMPS, Assaad and Hamidi (2009) found that 26.9% of Egyptian women were engaged in wage work in 2006. For the youngest generation of girls who are currently transitioning to adulthood, data from 2009 indicate that among out-of-school females aged 15 – 29, only 17.6% are engaged in paid employment (Roushdy et al., 2010). Female participation in the waged labor force is sharply discontinuous in education in Egypt, largely due to the influence of a longstanding policy of guaranteeing public sector jobs to vocational secondary and university graduates. However, this policy is now effectively defunct, and the employment-to-population ratios for vocational secondary and university graduates fell from 47 % to 19% and 57% to 42% , respectively, between 1988 and 2006 (Assaad and Hamidi, 2009).

Thus far, few quantitative studies of the relationship between women’s employment and marriage costs in Egypt have been conducted. Using data from a 1999 national expenditure survey of 405 households, Singerman and Ibrahim (2001) did find that women’s contribution to the COM had been increasing over time. This was particularly true in regions where women had more em-

ployment opportunities, and the authors suggested that this may be linked to working women's increasing ability to contribute to marriage costs. Using the ELMPS, Singerman (2007) more recently found that the total cost of marriage for housewives and employed women is quite similar, and that among working women married in 1990 or later, the bride contributed on average 6% of the total COM, which took her seven months of wages to save. However, these results do not control for the bride's education or class background, and it is thus unclear whether women's contribution to the cost of marriage is acting as a substitute or complement for characteristics that are desirable on the marriage market. It is also possible that women's employment income is increasing their share of marriage costs relative to the share contributed by their families, rather than the share contributed by the groom's side.

Qualitative research has yielded somewhat mixed indications of whether employment is a benefit to women in terms of marriage outcomes, including their contribution to the costs of marriage. Amin and Al-Bassusi (2004) found that saving for marriage was an important motivation for working among young women with mid-level educational attainment, who saw their ability to contribute to their marriage costs as a means to speed up the marriage process. Among unmarried, wage employed women surveyed in the ELMPS, 21.9% gave saving for marriage as the primary use of their income, and 30.9% as the secondary use.⁴ On the other hand, Barsoum (2004) found that young working class women in Cairo feared losing good marriage prospects because potential husbands might disapprove of their work or work conditions. Among youth aged 15 – 29, a 2009 survey found that 31.8% of males and 46.8% of females agreed with the statement “when a girl works she will get better marriage opportunities” reflecting a split opinion among Egypt's younger generation as to whether or not women's employment improves their marriage prospects (Kogali et al., 2010).⁵

In sum, employment may help women cover the costs of marriage, but it may also increase their expected contribution. It is also unclear whether an increased contribution from the bride will substitute for groom-side expenditures or expenditures on the part of the bride's parents. Women's ability to contribute to marriage costs may allow them to marry younger, or to have shorter engagement periods, but could also lead them to lose potential matches due to social disapproval. A rigorous analysis of women's pre-marital employment and their marriage outcomes is thus called for in order to better understand the relationships between these components of young women's transitions to adulthood.

3 Hypotheses

I examine the association between women's pre-marital labor force participation and four outcomes: (1) The bride's individual contribution to the total COM, (2) The overall bride-side contribution to the total COM, (3) The number of years between the bride's exit from school and her marriage, and (4) The number of months between the couple's informal engagement and their wedding. With respect to these outcomes, I hypothesize that pre-marital wage employment on the part of the bride will be associated with:

1. The bride covering a larger percentage of the total cost of marriage.

⁴ Author's calculations.

⁵The ELMPS indicates similar numbers for unmarried, wage employed women, among whom 46.0% said work would increase their marriage prospects, 0.3% said it would decrease them, 36.7% said it made no difference, and 14.2% responded 'don't know.'

2. The combined bride's side covering a smaller percentage of the total cost of marriage
3. Shorter time to marriage following school exit, and
4. A shorter engagement period

Furthermore, I expect that the hypothesized relationships will be stronger among women who have higher quality jobs and those employed in the public sector.

4 Data and method

The data used for the paper are taken from the Egypt Labor Market Panel Survey (ELMPS), a nationally-representative labor force survey conducted in 2006.⁶ The ELMPS contains extensive data on labor force participation, employment characteristics, family background and the cost and timing of marriage that allows for a detailed analysis of women's marital outcomes. Furthermore, the survey contains data on the timing of school exit, labor force entry and first marriage that allow me to address some of the endogeneity issues entailed in examining relationships between women's employment and marital outcomes.

The ELMPS is one of the first and largest surveys in the MENA region to collect detailed data on the cost of marriage and marriage timing. The marriage module of the ELMPS was administered to all ever-married females age 16 – 49. This resulted in an N of 6,609, equivalent to 69.1% of females in the relevant age bracket. I restrict the analysis in this paper to marriages taking place in 1980 or later, which yielded an N of 5,974. The ELMPS module separates marriage costs into the most common components of brideprice (*mahr*), brideprice payable upon divorce (*muakhar*), jewelry gifts for the bride (*shabka*), the bride's trousseau (*gihaz* – this includes kitchenware, linens, carpets and clothes), furniture and appliances (*afsh*), housing costs, and celebration costs. Payment of the *afsh*, *gihaz*, housing, celebrations, and total marriage cost is also divided into the percentages contributed by the bride, the bride's family, the groom, and the groom's family. In this paper, I focus on the association between the bride's education and employment and the percent of the total marriage costs contributed by her, her family, and the combined bride's side.

Marriage timing indicators available in the ELMPS record the number of months that passed between the major stages of marriage in Egypt: the informal engagement (*qirayat el-fatiha*), the formal engagement, the signing of the marriage contract (*katb el-kitab*), and the actual wedding. I use the total months between the informal engagement and the wedding as a marriage timing variable. Given the concern with delayed marriage and 'waithood' among youth in Egypt, I create an additional variable that measures the number of years between when the bride completed or dropped out of school and when she married. This variable captures the timing of the transition to marriage while accounting for the fact that more educated women tend to marry later. For women who never attended school, the age of drop out is set at 16, the legal age of marriage for girls in Egypt at the time of the ELMPS survey.⁷

A key estimation challenge in this analysis is that the bride's socioeconomic characteristics, namely education and employment, must be measured prior to marriage in order to avoid problems with endogeneity. In order to address this issue in terms of educational attainment, I restrict the

⁶Economic Research Forum, Egypt Labor Market Survey 2006 online database. For survey documentation please see Barsoum (2007).

⁷The legal age of marriage has since been raised to 18 for females.

analysis to brides who exited school either during or prior to the year in which they married.⁸ This results in a loss of 6.6% of the sample, leaving a final N of 5,590 women. For employment, only those respondents who entered the labor force at least a year prior to their year of marriage were coded as employed.⁹ Of the 1,771 (31.5%) women in the sample who were ever in the labor force, 1,088 entered the labor force before marriage (19.5% of the total sample, 61.4% of those ever in the labor force). Employment was also restricted to wage employment, as this is the only type of employment expected to influence women's ability to contribute to marriage costs. This resulted in a total of 826 women being coded as wage employed prior to marriage (14.8% of the total sample). All other respondents were coded as not employed prior to marriage.

To gain measures of the characteristics of the respondent's job at the time of marriage, I rely on the detailed employment module in the ELMPS, which collected data on the characteristics of each household member's first job. In the absence of full employment histories with start and end date, I propose that the first job is more likely to be representative of the respondent's employment status at the time of marriage than his or her current job at the time of the survey. This is particularly true for women from earlier marriage cohorts.¹⁰ Of the 826 women working before marriage, 371 (45.0%) started their current job as of the 2006 survey after the year in which they were married, indicating that for nearly half of the sample current job would be an inappropriate measure for pre-marital employment characteristics. Furthermore, 58.8% of the employed women married within four years of entering the labor market, and 83.3% within seven years. The fact that labor force entry and marriage were fairly closely sequenced for much of the relevant population suggests that, barring significant labor mobility, the characteristics of the first job are likely to be a reasonable proxy for the respondent's employment situation at the time of marriage.

Based on the bride's first job, I use several indicators of employment status in the analysis. In addition to a binary indicator of having waged employment prior to marriage or not, I use two measures of employment characteristics: sector of employment (public versus private) and job quality, using a modification of the Job Quality Index developed by Assaad et al. (2009b). The JQI used in this paper is simpler than that developed by Assaad et al., due to the less detailed data collected on respondent's first jobs, compared to their current jobs. The index used in this paper is composed of four binary variables indicating whether the respondent's first job was in an establishment (e.g. an office or shop), was permanent, was under a contract, and whether the respondent received social insurance.

⁸For respondents who exited school during their year of marriage, the exact sequence of events cannot be determined from the ELMPS data. However, in either case the brides' final educational attainment could be considered quite certain before the wedding, and thus both families are likely to have been able to take this into account accurately when determining the division of marriage costs

⁹Respondents who entered the labor force in the same year that they married are coded as not employed, as they are unlikely to have had much time to save significant income.

¹⁰I also considered using the panel component of the Egypt Labor Market Survey 1998 (ELMS) and the ELMPS in order to overcome the endogeneity problem with respect to employment. However, the relevant sample is too small for the purposes of this paper. There are 727 women in the panel who were unmarried, aged 16–30, in 1998 and either currently or never married in 2006. I had hoped to use the 1998 employment and education characteristics of these women in order to obtain pre-marital measures, and then follow-up with their 2006 marital outcomes. However, as most of these women were still in school in 1998, their educational attainment at that point is not reflective of their completed education at the time of marriage. In addition, over half of the women in this sample who ever participated in the labor force (141 of 252) entered after 1998, so the ELMS does not contain any information on their employment. As the first job strategy would have to be resorted to for most of this population as well, I decided to use the much larger sample available in the full 2006 ELMPS survey.

5 Discussion

The 5,590 women in the final sample were divided into one six-year and four five-year marriage cohorts to account for trends in female education and employment, as well as trends in the COM, over time. As shown in Table 1, the percent of the total sample represented by the most recent two cohorts, 1996 – 2000 and 2001 – 2006, is substantially larger than the earlier three cohorts, with the most recent cohort representing a full third of the sample. This is as expected given the current ‘youth bulge’ in Egypt, which means that large numbers of young people are of marriage age.

Educational attainment also increased substantially across the five marriage cohorts, with 51.5% of the 1980 – 1985 cohort illiterate compared to 21.1% of the 2000 – 2006 cohort (see Table 1). Across the same cohorts, the percentage with a secondary degree approximately doubled, to 41.0%, and the percentage with a university degree increased almost fourfold, from 5.1% to 19.4%. Average age at marriage increased correspondingly, from 19.8 years among the earliest cohort to 22.0 for the most recent cohort. The percentage of women engaged in wage employment before marriage, in contrast, does not follow a regular pattern over time. The wage employment rate rose from its lowest point at 11.6% to its peak at 18.0% across the first two marriage cohorts. Wage employment then declined through the 1996 – 2000 marriage cohort before rising again slightly to reach 15.1% among the 2001 – 2006 cohort. These fluctuations are consistent with trends in female LFP in Egypt during the relevant period, following the increase in LFP that accompanied the expansion of higher education and public sector employment, and its subsequent decline with the slowdown in public sector hiring that began in the early 1990s.

In fact, 63.3% of all women in the sample who were employed before marriage worked in the public sector. This percentage declines only slightly over time, from 49.7% among the earliest marriage cohort to 43.0% among the most recent, perhaps reflecting the fact that many young women continue to prefer public sector jobs, even though they are increasingly difficult to get, because they are seen as socially appropriate and family-friendly, (Barsoum, 2004; Roushdy et al., 2010). Among the women in this sample who worked before marriage, public sector jobs were certainly of higher quality than private sector ones; 91.0% of the best jobs (with all four elements of job quality, i.e. in an establishment, permanent, with a contract, and with social insurance) were in the public sector. When standardized to a 0 to 1 scale, the average job quality index for private sector jobs was 0.43, compared to 0.91 for public sector jobs. Due to the very high correlation between job quality and sector of employment in this sample, my subsequent discussion of employment characteristics will focus only on a public-private sector comparison. Finally, due to the predominance of public sector employment among women in the sample, it is not surprising that wage employment is highly associated with educational attainment. While less than seven percent of women with below a secondary education were engaged in wage employment before marriage, 17.1% of women with a secondary degree, 34.0% with a post-secondary technical degree, and 37.8% with a university degree worked before marriage.

Given that 81.5% of the women who were employed before marriage had a secondary degree or above, compared to 45.9% of those who were not working, it is not surprising that the two groups are quite different on a variety of socioeconomic characteristics. As shown in Table 2, women who worked before marriage had on average a secondary degree and married at age 25.0. Women who did not work, in comparison, had on average a primary degree and married at 20.7 years of age. The fathers and mothers of women who worked also had, respectively, a level and half a level of education more than the parents of those who did not work. Parental education for the sample

overall is very low, reflecting the limited availability of formal education to these older generations. The fathers of 99% of women in both categories were employed when the respondent was herself 15, but labor force participation among their mothers was very low. At age 15, only 8% of the sample had a mother who was economically active, although this was slightly higher among the group who worked before marriage. Sibship size was slightly smaller among those who worked before marriage, at 4.5 siblings, compared to 4.9 among those who did not work. Reflecting the urban concentration of education and wage employment opportunities for women in Egypt, 37% of women employed before marriage lived in an urban governorate,¹¹ compared to 20% of those not employed. Employed women were also less likely to live in Upper Egypt, possibly due to the more conservative and rural setting in this part of the country.

5.1 The cost of marriage

Table 3 shows trends in the total cost of marriage, as well as bride-side contributions to the COM, by marriage cohort. The total COM has increased steadily over this time period, tripling between the earliest and most recent cohorts. However, it should be noted that these are nominal figures and once adjusted for inflation the trend is likely to flatten considerably. Bride-side contributions to the total COM have been remarkably constant over the 26 year period; the combined contribution of the bride and her family was 30.0% – 31.3% from the 1980 – 1985 through the 1996 – 2000 marriage cohorts. This rose very slightly to 33.0% among the 2001 – 2006 cohort. The bride’s average individual contribution was 1.9% for all marriage cohorts except the 1991 – 1995 cohort, among whom it was 2.5%.

The very low average individual contribution to the total COM on the part of brides reflects the fact that most young women do not contribute to their marriage costs at all. Of all the women in the sample, only 565 (10.1%) contributed to their marriage costs personally. Among those who did contribute, their mean contribution was 19.6% of the total COM. Somewhat surprisingly, the percentage contributed did not vary by the bride’s pre-marital labor force status. However, the percentage of women who contributed to their marriage costs did; only 5.6% of non-employed brides contributed, compared to 36.3% of employed brides. This suggests that women who worked before marriage were contributing to marriage costs with their wage income, while those who were not working were a small population with access to a fairly substantial non-wage source of income.

The final three columns of Table 3 address the practice of giving mahr, the Islamic brideprice, to the bride. In Egypt, it is common for the bride and her family to use money from the mahr to help cover the bride-side contribution of furniture and other household items (Elbadawy, 2009). However, Singerman (2007) suggests that younger couples in Egypt today are sometimes uncomfortable with the idea of paying a ‘price’ for the bride, and thus the practice of mahr is declining in favor of giving a larger shabka (jewelry gifts) to the bride. Data from this ELMPS sample confirm this trend, with the percent of brides receiving a non-zero mahr declining fairly steadily from 41.8% to 25.9% across the five marriage cohorts. The value of the shabka does also increase over time, but these figures must be adjusted for inflation before the claim that increased shabka values are compensating for declining mahr payments can be evaluated.

In Egyptian marriage contracts part of the mahr is often deferred and made payable to the wife in the event that the husband divorces her, in what is known as a muakhar. Such a deferred brideprice payment is common practice in many Muslim countries, and is seen as an insurance

¹¹Greater Cairo, Alexandria, Port Said, and Suez.

against divorce (Ambrus et al., 2010). Unlike with the pre-marital mahr payment, the percentage of brides with a muakhar clause in their marriage contracts actually increased slightly over time, from 79.6% among the 1980 – 1986 marriage cohort to 84.6% among the 2001 – 2006 cohort.¹² The importance of the muakhar as an insurance policy for the bride therefore does not seem to be declining, even as traditional mahr becomes less common.

Table 4 indicates that women who worked before marriage were somewhat less likely to receive mahr than those who did not work (26.2% compared to 32.3%), but slightly more likely to have a muakhar in their marriage contract (84.6% compared to 81.7%, respectively). This appears to be largely attributable to the compositional effects of education, in that about a quarter of women with secondary or university degrees received mahr compared to 40.9% of the illiterate. More educated women were also slightly more likely to receive a muakhar, but the educational differences were not nearly as great. The fact that both the mean value of the mahr and the muakhar, when present, were higher for women who were employed is also likely reflective of the fact that more educated women receive higher mahr and muakhar.

These educational effects are also highly visible in trends in the cost of other components of the COM (see Table 5).¹³ Educational attainment is highly correlated with class in Egypt (Hamidi, 2006; Cupito and Langsten, 2008), thus these increases in expenditures on the various components of the COM are likely to be at least partly attributable to the fact that better off families have higher expectations for the living standards of their children upon marriage, and are not just a reflection of the value of education on the marriage market. In particular, the costs of housing and furnishing rise dramatically with the bride’s education. For marriages in which the bride was illiterate, the average cost of furnishing was 4,254 LE and of housing 3,477 LE. These figures quadrupled for marriages in which the bride was university educated to 17,943 LE and 17,373 LE, respectively. Overall, the average COM for marriages in which the bride was illiterate was 12,006 LE, compared to 27,471 when the bride had a secondary degree and 48,491 when she had a university degree. Again, the fact that costs of marriage were higher for women who were employed prior to marriage is likely partly attributable to these education effects, and thus multivariate analysis is needed in order to parse out whether the COM is in fact higher for employed brides once education is held constant.

5.2 Who pays for the cost of marriage?

Figure 1 shows the division of the four major components of the cost of marriage in Egypt that are not the sole responsibility of the groom’s side. The total costs are divided into the percentages that are covered the bride, the bride’s family, the groom and the groom’s family. The figures demonstrate the low individual contribution to marriage costs on the part of brides, as well as the customary division of the different components between the bride’s side and the groom’s side. Housing is almost entirely covered by the groom’s side, with the bride’s side covering less than 10% of housing costs regardless of whether or not the bride is employed. Approximately one-third of

¹²Ambrus et al. (2010) argue that Bangladesh is the only Islamic country where mahr has become almost universally payable only upon divorce. At the same time, the practice of dowry has increased dramatically, as throughout the rest of South Asia (see also Amin and Huq, 2008). The extent to which a similar shift from mahr to muakhar may be occurring in the Middle East, in the context of changes in how families pay for the bride’s dowry and groom’s dower, would be an interesting point for further research.

¹³The figures in this table also need to be adjusted for inflation. However, since they combine women from the five different marriage cohorts, the general trends are expected to hold.

the afsh, which consists of furniture and appliances, was covered by the bride’s side. The overall portion of the afsh that was covered by the bride’s side was slightly higher when the bride was employed, which largely seems to be the result of an increase in her personal contribution.

The gihaz, which is perhaps most comparable to the Eurasian tradition of dowry, is the one component of the COM that is primarily a bride-side responsibility, with approximately two-thirds of the cost being covered by the bride and her family. On average, employed brides covered 14.8% of the cost of their gihaz, compared to 1.8% on the part of brides who were not employed. The corresponding increase in the percentage covered by the combined bride’s side is not nearly as large, however, indicating that employed brides’ individual contributions replaced some of their parents’ expenditures on their dowry.

Division of the costs of marriage celebrations reflected the standard practice in which the bride’s family pays for the cost of the engagement party and the groom’s family pays for the wedding. Correspondingly, the bride’s side typically covered about 20% of the total celebration costs. Bride’s individual contributions to celebration costs were very low, regardless of their pre-marital employment status. In summary then, when brides contributed more to the cost of their marriages, this contribution primarily went to purchase household items and furniture for the marital home.

The division of the total cost of marriage looks quite similar to the division of the cost of the afsh, with the bride’s side covering approximately one-third of the total expenditures. Brides employed before marriage contributed a noticeably larger percentage of the total COM, but the corresponding increase in the percentage covered by the combined bride’s side is smaller. This suggests that, while bride’s pre-marital employment did increase the percentage of the total COM covered by the bride’s side somewhat, a substantial portion of her contribution also went to offset some of her parent’s contribution.

5.2.1 Multivariate analysis

Multivariate analysis using OLS regression was conducted in order to separate out the associations between female education and employment and bride-side contributions to the COM, as well as to examine period and regional trends in the division of the COM. Table 6 shows the results of two different models that were run for three outcomes: the bride’s individual contribution to the COM, the bride’s family’s contribution to the COM, and the total bride-side contribution to the COM, all of which are measured in percent. In addition to a dummy variable coded 1 if the bride was engaged in wage employment prior to marriage, dummies for below secondary education, secondary education, post-secondary technical education (two-year degree) and university are included. The reference category is illiterate.

Socioeconomic background is controlled for using father’s and mother’s education, which is coded as illiterate (reference category), low education (below a secondary degree) or high education (secondary degree or above). The categories for parental education were condensed due to the very low average educational attainment of the bride’s mothers and fathers. Sibship size is also included, as it may be expected that the parents of girls from larger families will be less able to invest in their marriage costs. Dummies for each five-year marriage cohort are also included, with the six-year 1980 –1985 cohort serving as the reference category. Dummies for urban governorate residence and Upper Egypt residence are also included. Finally, Model 2 for each outcome includes two interaction effects: wage employment interacted with university education and wage employment interacted with urban governorate residence. All regressions are weighted using the 2006 ELMPs population expansion weights.

The basic model for bride's contribution shows a strong positive association between bride's premarital employment and the percentage of the COM that she covers. With all else equal, an employed bride is predicted to contribute 5.5 percentage points more to the total COM than a non-employed bride. However, the model for the bride's family's contribution shows that when the bride is employed, her family is predicated to contribute 3.9 percentage points less to the total COM. This confirms the result from descriptive analysis indicating that much of an employed bride's increased contribution to the COM goes to offset part of her family's contribution. But not all of it does. The model for total bride-side contribution reveals that when the bride is employed, her side is predicted to contribute 1.6 percentage points more to the total COM.¹⁴ This may indicate either that employed brides are at somewhat of a bargaining disadvantage in the marriage market, and thus their families had to pay more of the total COM, or that when the bride is employed, she and her family prefer to contribute more to the COM. Whether employed brides may prefer to contribute more of the total COM because it allows them to marry earlier will be discussed in the following section.

University education is also strongly associated with a higher percentage of the total COM being covered by the bride, although the coefficient is smaller. No other level of education is significantly associated with the bride's contribution to the COM. However, compared to women who are illiterate, the bride's educational attainment is strongly associated with greater total bride-side contributions, and the coefficients increase with education.¹⁵ This agrees with the finding of Elbadawy (2009) that bride's education does not appear to serve as a substitution for bride-side contributions to the COM. However, neither analysis accounts for marital matching. As Elbadawy also shows that more educated brides get better quality husbands, it is important to consider that they and their parents may be investing in the COM in order to secure a higher standard of living.

With daughter's education accounted for, no level of parental education is significantly associated with contributions to the COM, except when the mother has high education. High mother education is associated with a lower individual bride contribution and a higher parental contribution at the .05 level. Given the low educational attainment of the parents of this population in general, and of the mothers in particular, brides whose mothers had a secondary school education or higher – and thus whose mothers were highly educated in an era when schooling for girls was uncommon – are likely to be quite upper class. The coefficients on high mother education may then indicate that girls from particularly highly educated or well off families are able to rely more on parental contribution to the COM and do not need to contribute themselves.

Bride's contributions to the COM do not appear to have varied significantly over time. However, compared to the reference cohort of 1980 – 1985, marriage cohorts between 1986 – 1995 appear to have seen somewhat lower bride-side contributions (results significant at the .05 level), before the bride-side contribution rose again. Regional differences in who pays for the cost of marriage are substantially larger than period ones. Residence in an urban governorate is significantly associated with increased contributions by the bride and the bride's side, although not the bride's family. In urban areas in particular, the bride's contribution thus seems to be offsetting some of the groom-side contribution. In Upper Egypt, in contrast, the bride's family contributes substantially less (nearly 8 percentage points, significant at the .001 level) and this is reflected in a reduction in the total bride-side contribution.

¹⁴ All coefficients for bride's employment are significant at the .001 level.

¹⁵ The lower significance level on the post-secondary coefficient is likely due at least in part to the fact that this is a small group and the standard errors are not measured as precisely.

In order to further examine these regional differences and the intersection of educational attainment and wage employment, Model 2 in Table 6 includes two interaction effects between wage employment and university education and urban governorate residence, respectively. The interaction between urban governorate and wage employment, which essentially indicates being employed in one of Egypt’s main urban areas, shows a strong positive association with the bride’s contribution and a negative one with her family’s contribution. Thus, while bride’s pre-marital employment raises her individual contribution to the COM and lowers that of her parents in all areas, this relationship is particularly strong in major urban areas. This may be attributable to the fact that opportunities for good quality wage employment for women in Egypt are fairly concentrated in urban centers, so the women who make enough money to be able to contribute substantially to their cost of marriage are more likely to reside in these areas.¹⁶ The interaction between university education and wage employment is significant only for the bride’s individual contribution, and is negative, indicating that the magnitude of the association between working and contributing more to the COM is smaller for women with a university degree than those with no education. This may represent the value of higher education for women on the marriage market, or that women with higher degrees tend to come from better-off families who are more able to cover the cost of their marriages.

As public sector jobs tend to be of higher quality than private sector jobs, it is expected that a woman’s sector of pre-marital employment will influence her ability to contribute to the COM. For the sub-sample of women who were employed before marriage, Table 7 does in fact show that brides employed in the public sector are likely to contribute 4.2 percentage points more of the COM than those employed in the private sector, significant at the .001 level. However, among the subsample of women who are employed, this contribution on the part of public sector employees seems to be entirely offsetting contributions by their families. The bride’s family is expected to contribute a significantly lower percentage of the total COM when she is employed in the public sector, but there is no association between sector of employment and the total bride-side contribution. Whether this increased contribution on the part of public sector employees is associated with shorter time to marriage will be addressed in the following section.

5.3 Marriage timing

The average length of the marriage process, from the informal engagement to the wedding, did increase over the cohorts under study, but not dramatically. Among marriages in the 1980 – 1986 cohort the average engagement period was 13.2 months, and among the 2001 – 2006 cohort it was 14.8 months, with an average of 14.5 months over the entire 26 year period (see Table 8). The different stages of the marriage process appear to have a fairly standard length, with the informal engagement being on average 2.1 months, the formal engagement 7.9 months, and the period between the signing of the marriage contract and the wedding 4.5 months.¹⁷ The full process took longer for marriages in which the bride was more educated, with an average time of 16.3 months when the bride had secondary education and 14.6 when she was university educated, compared to 12.0 months when the bride was illiterate. There was no significant variation by employment status.

¹⁶It may also be the case that adherence to customs regarding the division of the COM is less rigid in urban areas, so there is more bargaining over who will cover what.

¹⁷In many marriages, the informal and formal engagements were held on the same day, and the *katb el-kitab* on the same day as the wedding.

Variation in the time between school exit and marriage was considerably greater, with the number of years between school and marriage smaller for more educated women. University educated women married on average 3.1 years after leaving school, and those with secondary degrees after 3.9 years. For illiterate women, the age of school exit was set at 16 – the legal age at marriage – and this group married on average 5.2 years later. Given that the typical age of graduation for secondary school students in Egypt is 17 or 18, and university students 22 or 23, this still means that more educated women tend to marry at older ages. Employment appears to be associated with some additional delay in marriage, with employed women marrying an average of 6.1 years after school exit, compared to 4.4 years for women who were not employed.

Multivariate analysis using Cox proportional hazards regression confirms the finding that wage employment is associated with a longer period between school exit and marriage.¹⁸ With all other variables held constant, being engaged in wage employment reduced a woman’s yearly hazard of getting married by 52% (see Table 9). As shown in Figure 2, the corresponding survival function for years to marriage shows a much shallower curve for employed women relative to their non-employed counterparts. By five years after school exit, two-thirds of women who were not employed had married, compared to 44% of women who were employed. It takes until the ten year mark for two-thirds of employed women to marry, by which point only six percent of non-employed women remain unmarried.

The causality behind this association between employment and marriage delay is, however, unclear. It may be that women who cannot afford to marry, or whose families cannot afford to pay the full bride-side cost of marriage for them, are delaying in order to save for marriage. Given the perceived incompatibility between women’s work and family responsibilities in Egypt (Barsoum, 2004; Sieverding, 2008), as well as the lack of family-friendly employment conditions outside of the public sector (Assaad and Hamidi, 2009), women who prefer to work may also delay marriage so as to keep their employment longer. However, it is also possible that delayed marriage is leading to employment, rather than vice versa. A number of studies have noted that young women in Egypt often work until around the time of marriage and then leave the labor force (Assaad and Hamidi, 2009; Roushdy et al., 2010). It may be then that women who happen to not find marriage matches shortly after finishing school are the ones who are entering the labor market and remaining employed until they do get married.

Turning to education, as can be seen in Table 9, women who are illiterate (the reference category) and women with less than a secondary degree had a very similar yearly hazard of marrying. However, higher levels of schooling were associated with considerably shorter periods between school exit and marriage. Relative to an illiterate woman, the yearly hazard of marriage for women with a secondary, post-secondary, and university degrees was 98%, 142% and 222% higher, respectively. Thus, within five years of school exit, 95% of female university graduates had married, compared to 58% of those with less education (see Figure 3).

This latter finding, which may seem counterintuitive given the well-established fact that schooling tends to delay marriage, could be attributable to several factors. First, as noted above, the shorter times to marriage observed among more educated women are still associated with an overall higher average age at marriage due to differences in the expected age at graduation. If the ideal age of marriage for women is fairly constant across educational attainment, women with more education may feel more pressure to marry quickly after completing their degrees. Second, it may be that

¹⁸Note this is a somewhat unusual application of the Cox proportional hazards model in which all respondents experienced the event of interest, i.e. marriage, by the definition of the sample.

there is more demand for highly-educated brides on the marriage market, so they are able to find suitable matches more quickly than their less educated counterparts. Finally, it may be that women with more education are from wealthier families who can cover their costs of marriage more readily (even though those costs are generally higher), and thus prevent their daughters from having to delay marriage for financial reasons. This financial argument may be supported by the fact that the only other factor that notably increases a woman’s hazard of marriage is having a highly educated mother. As discussed above, women in this sample whose mothers have a secondary school education or higher are likely to be quite upper class.

As expected based on the descriptive analysis, wage employment had no meaningful association with the monthly hazard of getting married once a woman got engaged (see column two of Table 9). Figure 4 shows that the survival curves for the employed and non-employed populations are nearly identical. This finding is contrary to the argument that women work in order to cover more of their marriage costs and thereby speed up their engagements. While that may indeed be an important motivation for women at the individual level, on a population scale female employment does not (yet) seem to be an important factor in determining the length of the marriage process. Also as suggested by the descriptive data, educational attainment is associated with a slightly lower monthly hazard of completing the marriage process relative to the illiterate reference category.

Finally, Table 10 shows the results of a Cox proportional hazard model examining the association between sector of employment and time to marriage among the sub-sample of women who were wage employed prior to marriage. The results indicate that being employed in the public sector was associated with a 34% lower yearly hazard of marrying following school exit, relative to employment in the private sector. As shown in Figure 5, this corresponds to 57% of women working in the private sector marrying by five years after school exit, compared to 45% of women working in the public sector. Ten years after school exit, 94% of private sector employees had married, compared to 82% of public sector employees. As in the full sample, there was no meaningful association between sector of employment and the monthly hazard of marriage following engagement.

6 Conclusion

Returning to the four hypotheses presented in the beginning of this paper, empirical analysis indicates that only one is supported by the empirical analysis. Hypothesis 1, that employed brides cover a larger portion of the total COM, does in fact hold true. It also appears that brides with higher quality jobs, measured here as a job in the public sector, contribute more to the total COM than brides who are employed in the private sector. However, Hypothesis 2, that when the bride is employed the bride-side contribution will be lower, turns out not to be the case. While a substantial portion of employed brides’ contributions to the COM do appear to offset contributions by their families, bride’s employment is still associated with her side covering in the range of 1.5 to 2 percentage points more of the total COM than when the bride is not employed.

Hypothesis 3, that employed brides will have a shorter time to marriage following school exit, and Hypothesis 4, that they will have shorter engagement periods, suggest that this greater contribution to the COM on the part of employed brides might help to speed along their marriage and reduce the time they spend in ‘waithood.’ Yet this also does not appear to be true. Whether or not the bride is employed does not appear to have any significant association with how long her engagement period is. Furthermore, employed women actually remain unmarried for longer after leaving school than do women who are not employed, and women with higher quality jobs

take longer to marry than women with lower quality ones. It is unclear whether these women are working because they are saving for marriage, or because they prefer to remain single and work, or whether this is an issue of selection.

In short, the results of this paper indicate that women's pre-marital employment is associated with the bride's side, and particularly the bride herself, contributing a greater percentage of the total COM without this contribution providing any benefit in terms of speeding up the marriage process. The key question raised from this study is thus whether contributing a greater percentage of the COM is, in general, positive or negative for Egyptian women's welfare.¹⁹ If women who work prior to marriage are able to gain a stronger bargaining position in the marital household – or perhaps vis a vis their own families or in-laws – by contributing more to the costs of marriage, then their increased contributions may be expected to improve their quality of life later on. If, on the other hand, employed women are contributing more to the COM because they are at a disadvantaged position in the marriage market relative to their peers who do not work, this has important consequences both for women's welfare and their commitment to the labor market following marriage. Further research is needed to examine the effect of women's pre-marital employment on their marriage outcomes in terms of health, fertility, and empowerment in order to examine these implications.

¹⁹In a future version of this paper, I plan to include an analysis of husband's characteristics to examine whether women who are employed prior to marriage may benefit in that they get better quality husbands.

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Table 1: Bride Characteristics by Marriage Cohort

Cohort	% of Sample	Wage Emp.	Illiterate	Secondary	University	Avg Age at Marriage
1980 - 1985	16.0	11.6	51.5	19.6	5.1	19.8
1986 - 1990	13.4	18.0	38.6	27.1	10.8	20.9
1991 - 1995	14.8	16.5	30.0	34.8	8.6	21.6
1996 - 2000	21.9	13.4	27.4	39.0	11.1	21.5
2001 - 2006	33.9	15.1	21.1	41.0	19.4	22.0

Table 2: Bride Characteristics by Pre-Marital Work Status (Mean)

	Full Sample	Not Wage Employed	Wage Employed
Age at Survey	31.1	30.5	34.6
Age at Marriage	21.3	20.7	25.0
Education*	3.7	3.5	5.2
Father Education*	2.2	2.0	2.9
Mother Education*	1.5	1.4	1.9
Father Employment**	0.99	0.99	0.99
Mother Employment**	0.08	0.07	0.11
Sisters	2.4	2.4	2.3
Sibship Size	4.8	4.9	4.5
Urban Governorate Residence	0.23	0.20	0.37
Upper Egypt Residence	0.37	0.38	0.29

Note:

*Education is coded as a seven-category ordinal variable where 1=Illiterate, 2= Read and write, 3=Primary, 4=Preparatory, 5=Secondary, 6=Post-secondary (two year technical), and 7=University or above. **Father s and mother's employment are coded as binary variables equal to 1 if the respective parent had wage employment when the respondent was 15 years old.

Table 3: Bride-side Contributions to the Cost of Marriage by Marriage Cohort

Cohort	Avg COM*	Avg Bride %	Avg Bride-side %	% Mahr	% Muakhar	Avg Shabka*
1980 - 1985	10,411	1.9	31.1	41.8	79.6	831
1986 - 1990	17,396	1.9	30.4	38.6	79.5	1,398
1991 - 1995	20,957	2.5	30.0	28.5	80.4	1,819
1996 - 2000	25,984	1.9	31.0	29.3	83.0	2,290
2001 - 2006	32,700	1.9	33.0	25.9	84.6	3,086

*Note figures have not yet been adjusted for inflation.

Table 4: Brideprice Components by Bride's Pre-Marital Work Status and Education

	Full Sample	Not Wage Emp.	Wage Emp.	Illiterate	Secondary	University
% Received Mahr	31.3	32.3	26.2	40.9	24.4	25.6
Mean Value of Mahr	2,650	2,592	3,064	2,097	3,181	4,742
% Received Muakhar	82.1	81.7	84.6	79.8	83.6	83.0
Mean Value of Muakhar	2,697	2,598	3,253	1,785	2,813	4,997

Monetary values given in Egyptian Pounds. Note figures have not yet been adjusted for inflation.

Table 5: Cost of Marriage Components by Bride's Pre-Marital Work Status and Education (Mean)

Component	Full Sample	Not Wage Emp.	Wage Emp.	Illiterate	Secondary	University
Shabka	2,138	2,090	2,415	1,486	2,372	3,762
Afsh	8,871	8,355	11,854	4,254	10,462	17,943
Gihaz	3,656	3,475	4,701	1,896	4,432	6,609
Housing	7,705	6,930	12,160	3,477	8,614	17,373
Celebrations	1,404	1,318	1,903	838	1,513	2,704
Total COM	23,905	22,302	33,138	12,006	27,471	48,491

Values given in Egyptian Pounds. Note figures have not yet been adjusted for inflation.

Figure 1

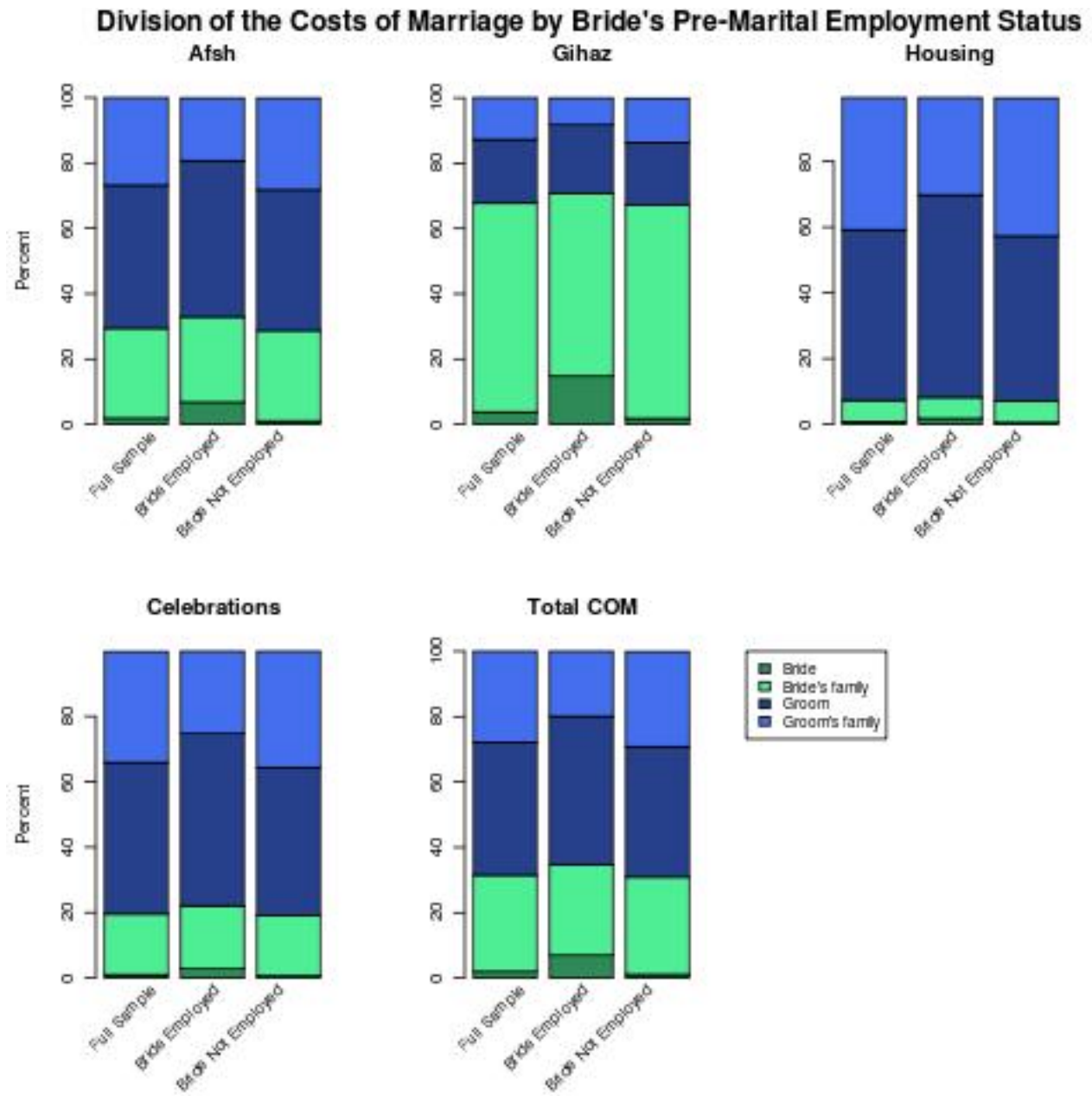


Table 6: OLS Regression of Bride-side Contributions to the Total COM (Percent) on Bride's Characteristics: 1980 - 2006 Marriage Cohorts

	Bride Contribution		Bride Family Contribution		Total Brideside Contribution	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
(Intercept)	0.420 (0.380)	0.571 (0.379)	31.617*** (0.812)	31.407*** (0.811)	32.036*** (0.785)	31.978*** (0.787)
Below Sec.	0.108 (0.294)	0.180 (0.292)	0.949 (0.627)	0.855 (0.626)	1.057 [†] (0.607)	1.035 [†] (0.607)
Secondary	0.298 (0.265)	0.322 (0.264)	1.526** (0.566)	1.464** (0.567)	1.823*** (0.548)	1.786** (0.550)
Post-sec.	-0.097 (0.538)	-0.010 (0.538)	2.596* (1.149)	2.396* (1.152)	2.499* (1.112)	2.386* (1.118)
University	1.581*** (0.413)	2.089*** (0.456)	2.052* (0.882)	1.758 [†] (0.976)	3.633*** (0.854)	3.847*** (0.947)
Wage Emp.	5.546*** (0.297)	4.356*** (0.379)	-3.892*** (0.633)	-2.111** (0.812)	1.654** (0.612)	2.245** (0.787)
Father Low Edu.*	0.016 (0.231)	0.034 (0.229)	0.699 (0.492)	0.669 (0.491)	0.715 (0.476)	0.703 (0.477)
Father High Edu.*	0.255 (0.406)	0.245 (0.403)	-0.676 (0.866)	-0.654 (0.864)	-0.421 (0.838)	-0.410 (0.838)
Mother Low Edu.*	0.011 (0.301)	0.063 (0.299)	1.155 [†] (0.641)	1.102 [†] (0.640)	1.166 [†] (0.621)	1.164 [†] (0.621)
Mother High Edu.*	-1.299* (0.569)	-1.287* (0.565)	2.477* (1.214)	2.482* (1.212)	1.178 (1.175)	1.195 (1.175)
Sibship Size	0.006 (0.046)	0.001 (0.046)	-0.036 (0.099)	-0.031 (0.099)	-0.031 (0.096)	-0.030 (0.096)
1986 - 1990	-0.298 (0.366)	-0.340 (0.364)	-1.222 (0.782)	-1.165 (0.780)	-1.520* (0.757)	-1.505* (0.757)
1991 - 1995	0.250 (0.354)	0.236 (0.352)	-2.078** (0.756)	-2.050** (0.755)	-1.828* (0.732)	-1.815* (0.732)
1996 - 2000	0.116 (0.325)	0.099 (0.323)	-1.414* (0.693)	-1.380* (0.692)	-1.297 [†] (0.671)	-1.280 [†] (0.671)
2001 - 2006	-0.058 (0.308)	-0.115 (0.306)	1.059 (0.657)	1.124 [†] (0.656)	1.001 (0.636)	1.010 (0.636)
Urban Gov.	2.313*** (0.271)	1.273*** (0.296)	0.326 (0.577)	1.623* (0.634)	2.639*** (0.559)	2.897*** (0.615)
Upper Egypt	0.131 (0.221)	0.150 (0.220)	-7.926*** (0.472)	-7.940*** (0.471)	-7.795*** (0.456)	-7.789*** (0.457)
Univ. x Emp.		-1.635* (0.684)		0.856 (1.466)		-0.780 (1.422)
Urban Gov. x Emp.		5.158*** (0.615)		-6.444*** (1.317)		-1.286 (1.277)
<i>N</i>	5357	5357	5357	5357	5357	5357
<i>R</i> ²	0.102	0.114	0.081	0.085	0.108	0.108
adj. <i>R</i> ²	0.100	0.111	0.079	0.082	0.105	0.105
Resid. sd	309.604	307.588	660.530	659.177	639.232	639.263

Standard errors in parentheses.

*Low education indicates some education, and high education indicates a secondary degree or higher.

The reference category is illiterate for all education variables.

[†] Significant at $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 7: OLS Regression of Bride-side Contributions to the Total COM (Percent) on Bride's Sector of Employment: 1980 - 2006 Marriage Cohorts

	Bride Contribution	Bride Family Contribution	Total Brideside Contribution
(Intercept)	2.373 (2.178)	28.229*** (2.805)	30.602*** (2.632)
Below Sec.	3.369 [†] (2.000)	1.689 (2.576)	5.058* (2.417)
Secondary	-1.112 (1.641)	2.198 (2.113)	1.086 (1.983)
Post-sec.	-1.786 (2.034)	3.517 (2.619)	1.730 (2.457)
University	-0.976 (1.837)	3.581 (2.366)	2.605 (2.219)
Public Sector	4.193*** (1.081)	-4.803*** (1.393)	-0.610 (1.307)
Father Low Edu.*	-0.266 (1.110)	3.695** (1.429)	3.430* (1.341)
Father High Edu.*	-1.046 (1.588)	4.703* (2.045)	3.656 [†] (1.918)
Mother Low Edu.*	1.053 (1.181)	-0.217 (1.521)	0.836 (1.427)
Mother High Edu.*	-2.164 (1.900)	-0.240 (2.447)	-2.404 (2.296)
Sibship Size	-0.088 (0.220)	0.099 (0.283)	0.011 (0.265)
1986 - 1990	-0.330 (1.682)	0.741 (2.167)	0.411 (2.033)
1991 - 1995	1.233 (1.661)	-1.516 (2.139)	-0.284 (2.007)
1996 - 2000	2.528 (1.599)	-4.965* (2.059)	-2.436 (1.932)
2001 - 2006	0.482 (1.505)	1.956 (1.938)	2.438 (1.818)
Urban Gov.	7.653*** (1.117)	-4.975*** (1.438)	2.679* (1.350)
Upper Egypt	1.229 (1.141)	-5.491*** (1.469)	-4.262** (1.379)
<i>N</i>	778	778	778
<i>R</i> ²	0.090	0.064	0.076
adj. <i>R</i> ²	0.071	0.045	0.056
Resid. sd	522.747	673.277	631.652

Standard errors in parentheses.

*Low education indicates some education, and high education indicates a secondary degree or higher.

The reference category is illiterate for all education variables.

[†] Significant at $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 8: Marriage Timing Indicators by Bride's Pre-Marital Work Status and Education (Mean Number of Months)

Period	Full Sample	Not Wage Emp.	Wage Emp.	Illiterate	Secondary	University
Fatiha - Khutuba	2.1	2.3	2.1	1.9	2.3	2.0
Khutuba - Katb Kitaab	7.9	8.6	7.8	6.6	8.7	8.0
Katb Kitaab - Wedding	4.5	4.9	4.4	3.5	5.2	4.6
Full Marriage Process	14.5	15.8	14.3	12.0	16.3	14.6
School to Marriage (Yrs)*	4.7	4.4	6.1	5.2	3.9	3.1

*For those who did not attend school, age of school exit is set to 16, the legal age of marriage for girls in Egypt at the time of the ELMPS survey

Table 9: Cox Proportional Hazards Regression of Years to Marriage after School Exit and Length of Engagement Period (Months) on Bride's Characteristics: 1980 - 2006 Marriage Cohorts

	Years to Marriage	Length of Marriage Process
Below Sec.	0.947*** (0.001)	0.827*** (0.001)
Secondary	1.985*** (0.001)	0.750*** (0.001)
Post-sec.	2.421*** (0.002)	0.744*** (0.002)
University	3.215*** (0.001)	0.868*** (0.001)
Wage Emp.	0.482*** (0.001)	0.978*** (0.001)
Father Low Edu.*	0.942*** (0.001)	0.983*** (0.001)
Father High Edu.*	0.905*** (0.001)	0.974*** (0.001)
Mother Low Edu.*	0.994*** (0.001)	0.941*** (0.001)
Mother High Edu.*	1.378*** (0.002)	1.100*** (0.002)
Sibship Size	1.000* (0.000)	1.000† (0.000)
1986 - 1990	0.929*** (0.001)	0.983*** (0.001)
1991 - 1995	0.780*** (0.001)	0.937*** (0.001)
1996 - 2000	0.717*** (0.001)	0.905*** (0.001)
2001 - 2006	0.731*** (0.001)	0.951*** (0.001)
Urban Gov.	0.723*** (0.001)	0.839*** (0.001)
Upper Egypt	1.112*** (0.001)	1.177*** (0.001)
<i>N</i>	5359	5357
Wald	1701455 on 16 df, $p = 0.000$	416516 on 16 df, $p = 0.000$
R^2	1.000 (Max 1.000)	1.000 (Max 1.000)

Standard errors in parentheses.

*Low education indicates some education, and high education indicates a secondary degree or higher.

The reference category is illiterate for all education variables.

† Significant at $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 10: Cox Proportional Hazards Regression of Years to Marriage after School Exit and Length of Engagement Period (Months) on Bride's Sector of Employment: 1980 - 2006 Marriage Cohorts

	Years to Marriage	Length of Marriage Process
Below Sec.	0.643*** (0.004)	1.104*** (0.004)
Secondary	1.341*** (0.003)	1.008* (0.003)
Post-sec.	2.173*** (0.004)	0.801*** (0.004)
University	2.322*** (0.004)	1.317*** (0.004)
Public Sector	0.659*** (0.002)	1.022*** (0.002)
Father Low Edu.*	1.025*** (0.002)	1.063*** (0.002)
Father High Edu.*	1.048*** (0.003)	0.967*** (0.003)
Mother Low Edu.*	0.930*** (0.002)	0.935*** (0.002)
Mother High Edu.*	1.334*** (0.004)	1.074*** (0.004)
Sibship Size	0.970*** (0.000)	0.995*** (0.000)
1986 - 1990	0.637*** (0.003)	1.336*** (0.003)
1991 - 1995	0.555*** (0.003)	1.210*** (0.003)
1996 - 2000	0.409*** (0.003)	0.913*** (0.003)
2001 - 2006	0.465*** (0.003)	1.033*** (0.003)
Urban Gov.	0.676*** (0.002)	1.406*** (0.002)
Upper Egypt	1.010*** (0.002)	0.883*** (0.002)
<i>N</i>	778	778
Wald	253056 on 16 df, $p = 0.000$	88918 on 16 df, $p = 0.000$
R^2	1.000 (Max 1.000)	1.000 (Max 1.000)

Standard errors in parentheses.

*Low education indicates some education, and high education indicates a secondary degree or higher.

The reference category is illiterate for all education variables.

† Significant at $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Figure 2

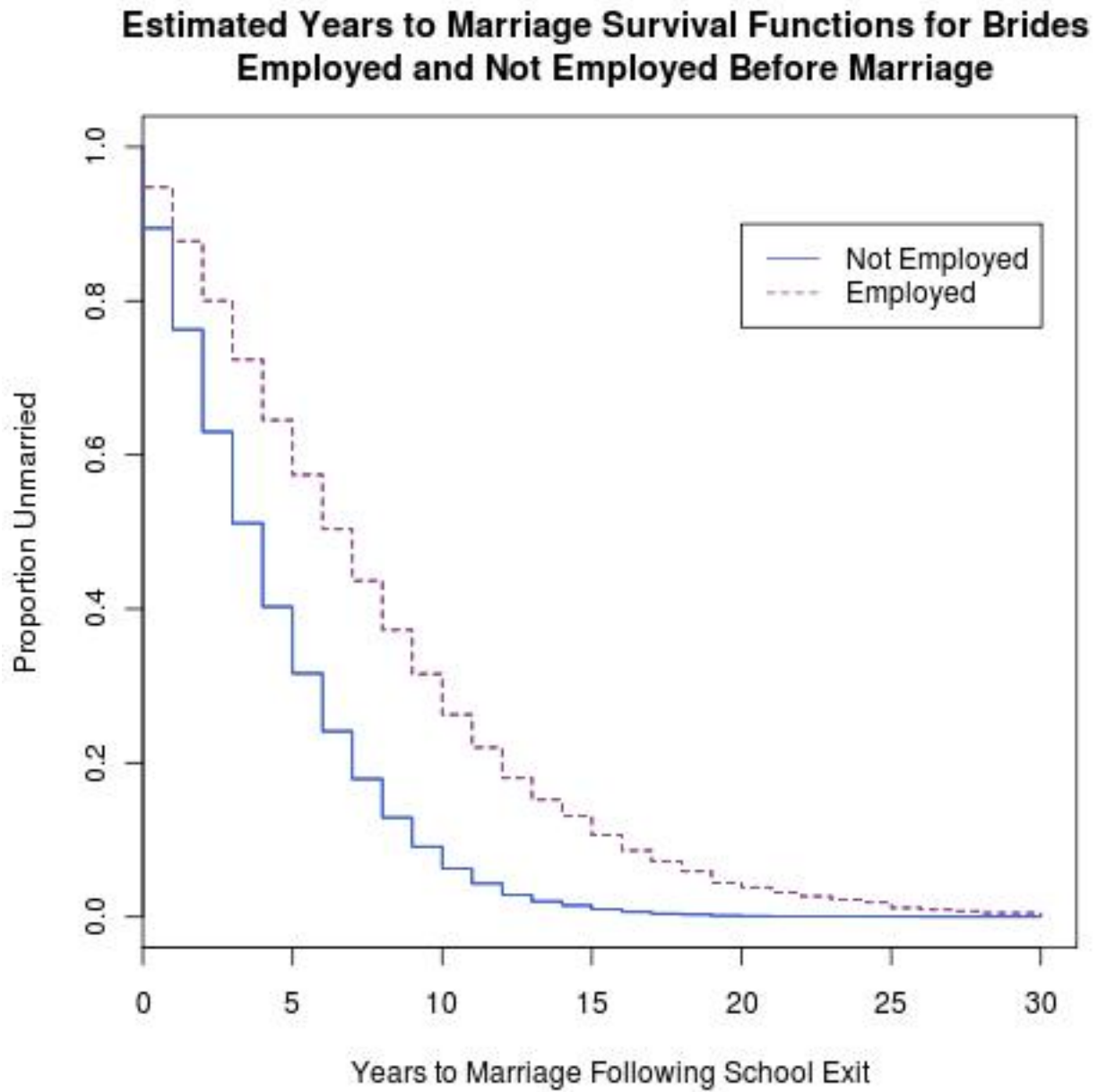


Figure 3

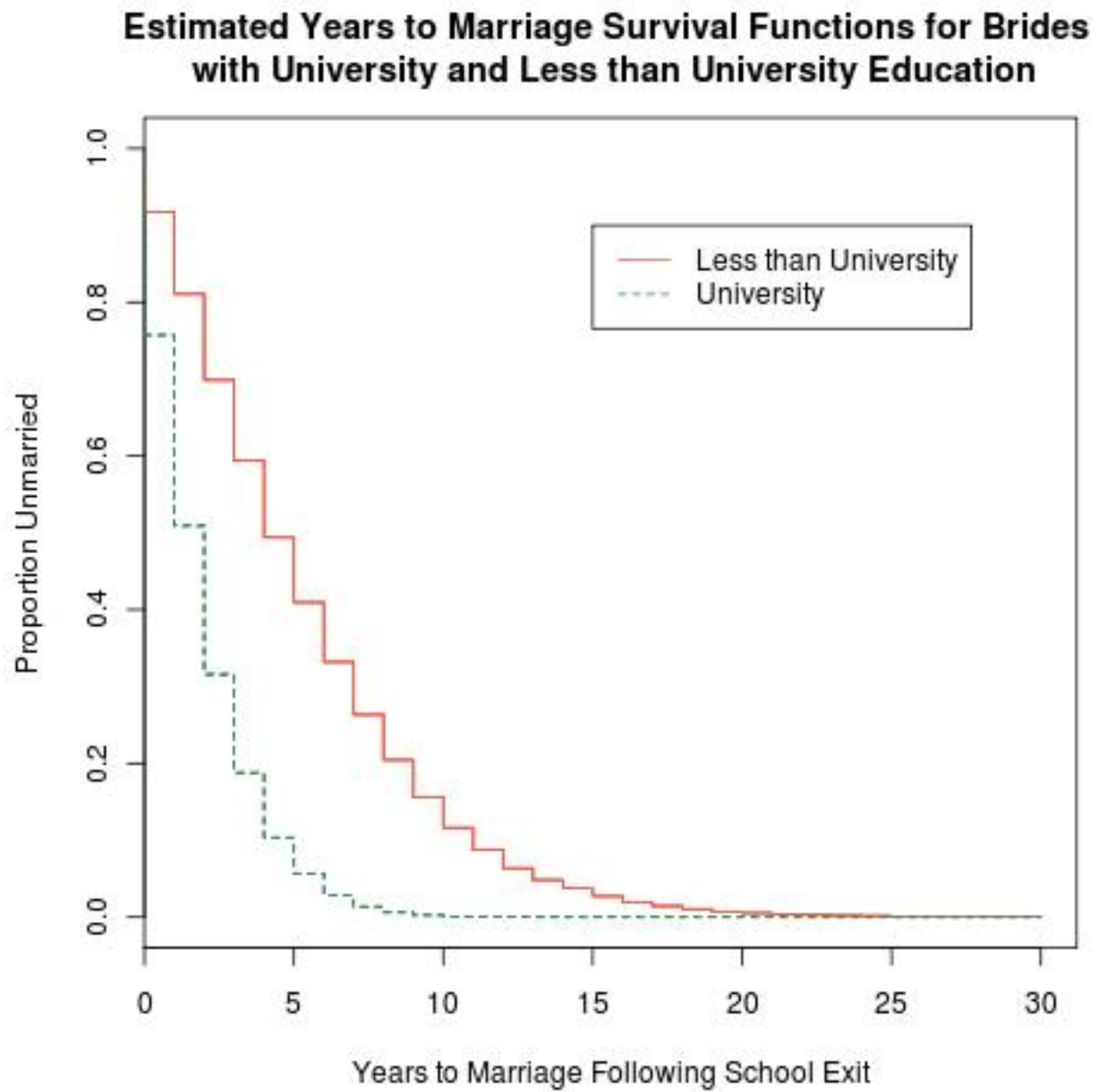


Figure 4

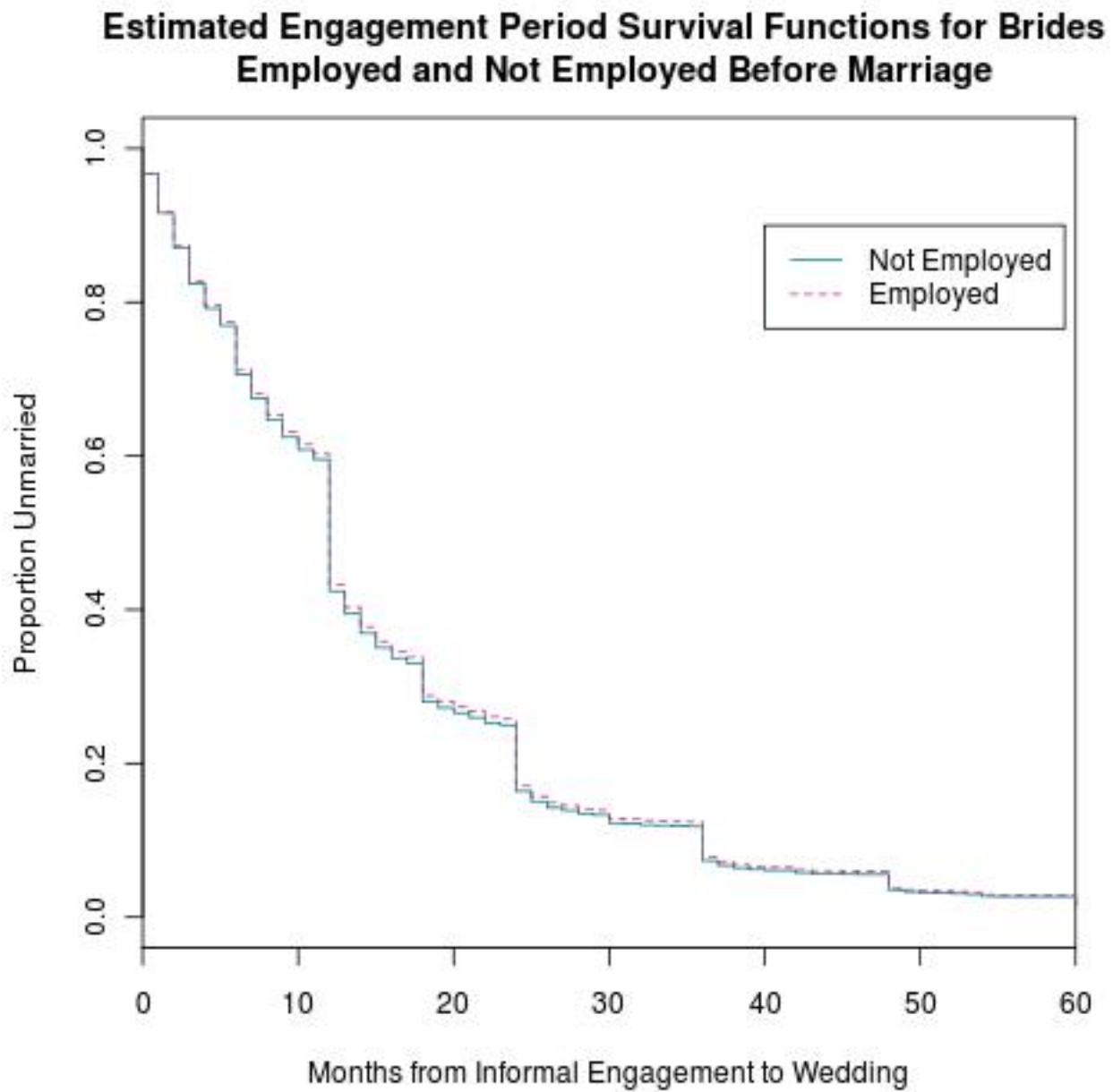


Figure 5

