Title: What factors are associated with divorce in Democratic Republic of Congo?

"It is better to marry a widowed rather a divorced woman"

"A rich woman without a husband is always troublesome"

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Abstract

This study contributes to the literature on divorce in sub-Saharan Africa using two Demographic and Health Surveys from Democratic Republic of Congo and multinomial logistic regressions in a context of complex survey design. Theoretically, it is expected that the likelihood of divorce is positively associated with gender female, age, and urban residence. In contrast, the risks of divorce are negatively associated with respondent's education. Findings showed that the likelihood of divorce increased with respondent's age and decreased with respondent's education measured in single years. There are also gender differences in risks of divorce. The risks of divorce were higher among women compared to men by age and education.

Introduction

While there is an abundant literature on families in many parts of the world, little is known about family (trans)-formations and family changes in sub-Saharan Africa (Reniers, 2003; Takyi, 2001; Takyi & Broughton, 2006; Tilson & Larsen, 2000). Divorce is a driving cause of family instability in developed countries and it has nourished a large body of research (Amato, 2010); however there is almost no indication about divorce in sub-Saharan Africa (SSA): its magnitude, causes, and consequences are not well documented. Previous research which addressed the topic in SSA is mostly child-oriented searching to understand the consequences of divorce on child well-being (Chae, 2011; Clark & Hamplová, 2013; McDaniel & Zulu, 1996; Posel & Devey, 2006; Thiombiano, LeGrand, & Kobiané, 2013). Additionally, most studies on divorce in SSA has treated divorce as a "women's issue" and neglected to analyze which factors are associated with divorce amongst men. Yet the decision to divorce likely involves the couple (Kalmijn & Poortman, 2006).

Methodologically, research on the determinants of divorce typically employs event-history analysis (it meant to treat divorce as an event) in which the dependent variable is the conditional odds of experiencing a divorce (Kalmijn & Poortman, 2006). This technique is appropriate when the dates of divorce are correctly reported; that is far the case for most countries in SSA. Alternatively other studies analyze divorce as a binary variable. Although informative, results from these studies are misleading because the determinants of divorce cannot be understood in isolation of the determinants of other marital statuses. In this paper, we present findings from a research program in sub-Saharan Africa about factors associated with divorce among men and women using Demographic and Health Surveys (DHS) from Democratic Republic of the Congo (DRC) and multinomial regressions in a context a complex survey design

to analyze the likelihood of divorce and its correlates. We found that the likelihood of divorce increased with respondent's age and decreased with respondent's education (measured in single years). We also found gender differences in risks of divorce. The risks of divorce were higher among women compared to men by age and education. The remainder of the paper is organized as follows. Section 2 introduces the theoretical foundations of research on divorce. Section 3 describes data and methods. Section 4 presents univariate and multivariate findings. Finally, Section 5 presents the discussion and main conclusions.

Theoretical background

Marriage is one of the oldest institutions around the world and it is the most socially acceptable outset to family formation; however not all marriages last long. These basics inspired Becker on his seminal contributions to develop the economic theory on marriage and divorce (Becker, 1973; Becker, 1974; Becker, 1981), which is supported empirically in developed countries (Becker, Landes, & Michael, 1977; Ferber & Sander, 1989; Hoffman & Duncan, 1995; Sander, 1985; Sweezy & Tiefenthaler, 1996) and developing countries like Ghana (Takyi, 2001; Takyi & Broughton, 2006). Becker's theory on divorce hypothesizes that an increase in female earnings explains partly the increase of divorce rates in developed countries such as the United States of America (Amato, 2010). In other words, this perspective challenges the traditional role of "breadwinner" originally devoted to men. As this role specialization erodes over time with the increase of female earnings which lower the specialization of spouses in economic and family production, the risks of divorce increase. Relatedly, this theory stresses that female labor force participation economic autonomy reduces the advantages of marriage due to women's employment and the increase in education (Mongeau, Neil, & Le Bourdais, 2001; Oppenheimer, 1994). This theory raised a number of criticisms. First, the links between women's employment

and family outcomes are complex and might have both positive and negative effects (Oppenheimer, 1994; Schoen, Astone, Rothert, Standish, & Kim, 2002). Scholars pinpoint that women's employment *per se* does not increase the risks of divorce, rather where marital dissatisfaction is high, women use employment as an alternative to break a harmful marriage (Oppenheimer, 1994; Spitze, 1988). Second, the role specialization can boost the interdependence of spouses; however it is not necessarily an enhancing factor of cohesion within the couple or family (Ruggles, 1997). Therefore, women's employment could be viewed as an alternate strategy for families to adapt to modern societies rather than a cause of marital instability (Oppenheimer, 1994; Sayer & Bianchi, 2000; Schoen et al., 2002).

Another body of research relied on sociological theory of marriage (Levinger, 1965; Udry, 1981). According to this theory, marital stability is a function of bonds and berries, and alternate solutions. Marital bonding results from love, economic resources, husband's earnings, and similarity on demographics (religion, education, age) while barriers include childbearing, social pressure, and religious values. Alternate solutions include women's work opportunities which may replace the loss from being in a marriage.

Recently, scholars suggested it is important to integrate the social context if one might expect a thorough understanding of factors associated with divorce (Cooke, 2006; Cooke & Gash, 2010). Put in context, both economic and sociological raise a number of questions that scholars need to integrate conceptually and empirically. This paper considers economic and sociological perspective to be complimentary. Therefore, the contingencies discussed here are drawn from the two perspectives. In Becker's theory, empirical research in developed countries emphasized spouses' earnings that Becker considers a key factor of marital stability (Schoen et al., 2002). In sub-Saharan countries, female earnings which are a function of women's labour force participation do not guarantee women's autonomy or financial independence. In the case of

DRC, many women on the labor market work for the private sector where salaries are not high enough to reach the financial independence. Women working the public sector are even ill-paid compared to private sector. Therefore the economic perspective which states that women's employment, and related female earnings, increases the risks of divorce is debatable even though we understand the lack of control over public sector and the high level of corruption in the country can provide women in powerful position in the public sector enough money leading to women's autonomy.

Previous research stresses that urbanization eroded traditional ties in SSA (Takyi & Broughton, 2006); however social pressures still regulate both marriages and divorce under pregnant social norms in the countries, provinces, or ethnic groups. For instance, in many African settings, arranged marriages are still common (Mensch, Grant, & Blanc, 2006). This kind of marriages challenges the sociological perspective about bonding. In these marriages, there is no love at all and matching is questionable. Consequently, these marriages can end in divorce at any time, or specifically women can escape unhappy marriages. Due to high level of polygyny in SSA, current levels of divorce are misleading. In fact, when it is not clearly stated which marriage they are interviewed for, the levels of divorce are underestimated. These few elements highlight the limitations of current theoretical approaches and advocate for an integrative approaches to feed the debate about the determinants of divorce in SSA.

Finally, previous research underscored the importance of genetic factors on the risks of divorce (Amato & Cheadle, 2005; Bouchard & Loehlin, 2001; Harris, 1995; Jaffee & Price, 2007; Jockin, McGue, & Lykken, 1996; McGue & Lykken, 1992; Rutter & Silberg, 2002). To the best of our knowledge, there is no study in SSA which addressed genetic influences on the risks of divorce. Using twin data, previous research from developed countries found that genetic factors can mediate the risks of divorce were mediated by genetic factors (McGue & Lykken,

1992). For instance, concordance for divorce was significantly higher in monozygotic (*MZ*) than dizygotic (*DZ*) twins for both females and males. Those studies assume that inherited personality traits from parents reflect a tendency to engage in hostile or antisocial behavior. Likewise the inherited personality traits can explain why people have difficulties to commit in close emotional relationships (Amato & Cheadle, 2005).

This study contributes to the literature about the correlates of divorce in SSA using two DHSs from Democratic Republic of Congo. Theoretically, we expect the likelihood of divorce to be positively associated with gender female and urban residence while it is negatively associated with respondent's age and education.

Data and Methods

Data and variables measurement

We use 2007 and 2013 Demographic Health Surveys (DHS) data collected from a nationally representative sample in Democratic Republic of the Congo (DRC). The DHSs are standardized and comparable across countries which provide the opportunity to search the similarities and differences of relevant demographics on the risks of divorce in sub-Saharan Africa. This paper utilizes the module of household members. This choice has the advantage to move beyond people interviewed in detailed questionnaires (We meant the male and female questionnaires). However, we restrict the analyses to men and women in their reproductive ages (15-59 years), resulting in a sub-sample of 23,221 and 47,217 females and males in 2007 and 2013, respectively. At this point, it is important to note that DHS uses a complex survey design (a two-stage probabilistic sampling technique) in which selected clusters or census enumeration areas (also called Primary Sampling Unit, PSU) are sampled at the first stage, and households in PSU are selected at the second stage. DHSs provide the information about the strata (PSU) and a final weight for each

type of files. In our case, we use the final weight in the household file. Methodologically, using the sub-sample restriction for analyses can provide biased estimates. All individuals were included in the file to keep the sampling design unaltered. This approach has the advantage to provide valid estimates and appropriate standard errors.

Variables of interest

Dependent variable. Unlike previous research which treats divorce as an isolated event, we are interested in the "**current marital status**". This is a polytomous variable coded *1* = Single; *2* = Married (Reference category); *3* = Widowed, and *4* = Divorced.

Independent variables. From the above literature, it is obvious that many variables were identified to correlate with the risk of divorce. It is also important to note that DHSs were not intended to study "divorce" and its correlates. We rely here on the available information about demographics. Due to the cross-sectional nature of the data, we refer instead to factors/correlates (rather than determinants which require the time-order of the sequence of the events) associated with the likelihood of divorce in DRC. These include gender (coded *0* = Male; *1* = Female), respondent's age (in years), urban residence (coded *0* = Rural; *1* = Urban), and education (in single years) as a proxy of economic status.

Analytical strategy

Previous studies treating divorce as an isolated event; we consider that divorce and its correlates cannot be understood without any reference to other marital strategies within a specific society. All marital statuses are linked: single $\longrightarrow$ married $\longrightarrow$ divorced (or widowed). Therefore we use multinomial (rather than binary logistic) logistic regressions. In multinomial logistic regression, we observe vectors $Y = (y_1, y_2, ..., y_{k+1})^T$, with $y_i = 0$ for all i besides one j with $y_j = 1$ and corresponding probability p_j, implying

$$EY = p, \; Cov \; Y = \Lambda_p - pp^T, \quad \Lambda_p = \begin{pmatrix} p1 & \cdots & 0 \\ \vdots & & \vdots \\ 0 & \cdots & pk+1 \end{pmatrix} \tag{1}$$

The multinomial logistic regression is given by

$$pi = \frac{\exp(\pi^{(i)T}x)}{1+\sum_{j=1}^{k}\exp(\pi^{(i)T}x)} \quad \text{for i} = 1, \ldots, k \tag{2}$$

$$pk+1 = \frac{1}{1+\sum_{j=1}^{k}\exp(\pi^{(i)T}x)} \tag{3}$$

where $x = (x_1, x_2, \ldots, x_m)^T$ is the vector of covariates, and $\pi^{(i)}$ is the parameter vector corresponding to the *i*-th response category. In Equation (3), the parameters are set to zero and allows computing the probability for the base category in the multinomial logistic regression. Because of the normalization condition

$$\sum_{j=1}^{k} P(y^{(j)} = 1 \,|x, \pi) = 1, \tag{4}$$

the weight vector of one of the classes need not to be estimated without loss of generality, in this case the *(j+1)*-th category. To perform maximum likelihood (ML), one simply maximizes the log-likelihood function using Equation (5),

$$log \; \prod_{j=1}^{k+1} p_j^{y_j} = \sum_{j=1}^{k} y_j \pi^{(i)T}x - log\left[1 + \sum_{j=1}^{k}\exp(\pi^{(i)T}x)\right] \tag{5}$$

The literature indicates that multinomial logistic regression (MNL) is an attractive technique because it does not assume normality, linearity, or homoscedasticity. However, MNL does have its assumptions, such as the assumption of independence of irrelevant alternatives (IIA) which is debatable in social research (Alvarez & Nalgler, 1995; Cheng & Long, 2007; Dow & Endersby, 2004; Fry & Harris, 1996; Fry & Harris, 1998). This assumption states that, *ceteris paribus*, a person's choice between two alternative outcomes is unaffected by what other choices are available (Cheng & Long, 2007). The IIA assumption can be tested with the Hausman-McFadden test. Because MNL reports many parameters, it is somehow difficult to interpret properly. Indeed

it compares the coefficients of a category of the outcome relative to the reference category and forces all its coefficients to be zero. One way to interpret this model is to ask for the marginal rate of the log odds for any category i with respect to any one of the independent variables X_j. In this paper, we present both estimated coefficients and marginal effects; however we rely on marginal effects to interpret the effects of the independent variables on the risks of divorce.

Results

Descriptive results

The 2007 sample consists of 32.8% of singles, 59.1% of married, 3.2% of widowed, and 4.9 % of divorced. The corresponding figures for 2013 are 26.9% singles, 61% married, 6.4% widowed, and 5.7 married. Table 1 presents descriptive results stratified by marital status (therefore, it is read by row) for the key independent variables included in the analyses: gender, age, urban residence and education. This approach has the advantage to show the composition of each category. Singles are mostly men (62% in 2007 and 59% in 2013), young: on average they are aged of 21 years in 2007 and 20 years in 2013, live in urban areas (55% in 2007 and 50% in 2013), and they are highly educated: on average they have 7 and 8 years of education in 2007 and 2013, respectively. Unlike singles, findings indicate more females among married (55% in the two surveys), widowed (86% in 2007 and 88% in 2013), and divorced (78% in 2007 and 75% in 2013). A person in the last three marital statuses was older then singles: on average, married, widowed, and divorced are aged 35 years and above in 2007 and 2013. Compared to singles, they live mostly in rural areas and are less educated.

Of interest in this paper are the effects of age and education because the risks of divorce are associated with age and educational attainment. Figures 1 & 2 present the fitted probabilities of "divorce" with respect to age and education for the entire sample, and by gender in 2007 and

2013. Figures 1.a & 2.a indicate that the risk of divorce increases with respondent's age for both males; however the pace is higher for females. Figures 1.b & 2.b show that the risks of divorces decrease with the increase of respondent's education for both females and males in 2007 and 2013.

Multivariate results

Tables 2 & 3 present the findings from the multinomial logistic regression of the effects of gender, respondent's age and education, and urban residence. Specifically, Table 2 present the estimated coefficients from the multinomial logistic regression using "married" as the reference category. Table 3 present the marginal effects of those factors on the risks of divorce. Findings are consistent across surveys. Indeed, gender female and respondent's age significantly increase the risks of divorce. For instance, gender female increases the risks of divorce by 2.8% and 2.4% in 2007 and 2013, respectively. Likewise, an additional year of respondent's age increases the risks of divorce by 0.01% in both surveys. Conversely, respondent's education decreases the risks of divorce by 0.01% in both surveys; however the effect is statistically more significant in 2013 than 2007.

Discussion

Summary of findings

This study examined the effects of gender female, age, education, and urban residence on the likelihood of divorce using two DHSs from Democratic Republic of the Congo and multinomial logistic regression among females and males aged 15-59 years. Descriptive findings showed in the two surveys that most married, widowed, and divorced are females while mots singles are males. Multivariate results showed that i) gender female and age are significantly and positively associated with risks of divorce; ii) education significantly and negatively decreased the risks of

divorce. In the following, we offer some plausible explanations/interpretations of the main findings.

With regard to gender female and in the absence of data about the reasons for divorce (Kalmijn & Poortman, 2006), it is not possible to understand if females are disadvantaged in the process of marital dissolution in DRC. In a context of economic hardship and inequalities, it is likely that males, who still are in the "breadwinner" position, do treat their wife equally and respectfully. Therefore, females may feel less satisfied with their marriages and may choose to break instead of living in unhappy marriages. In fact, DRC country reports indicate that a considerable proportion of men have extraconjugal sex in both surveys: 19% and 28% in 2007 and 2013, respectfully. The corresponding proportions for females are very low: 2% in the two surveys.

Although plausible, this interpretation of the effects of gender female on the risks of divorce is challenged by the social pressures the national context exerts on marriage and divorce. There are social stereotypes about divorce which can prevent females to divorce unfaithful husbands. For instance, it is admitted in the DRC's context that an *unmarried rich woman is always troublesome*. Indeed, people do not attach a value to the richness of an unmarried woman; instead her marital status has the utmost importance in the society. Additionally, negative image about "divorce", especially for women can also prevent it. People usually think about this negative image of divorce that they admit "*it is better to marry a widow than a divorced woman*" who can compare to "*evil*".

The effects of education on the risks of divorce is in lines with previous research in developed countries such as Japan and Korea, which is referred to as the "education gradient" of divorce (Park & Raymo, 2013; Raymo, Fukuda, & Iwasawa, 2013). In these studies, less educated people have the worst marriages ending with divorce. In SSA, this finding operates in

opposite direction from results reported in Ghana (Takyi, 2001; Takyi & Broughton, 2006). In these studies, educational attainment increased significantly the risks of divorce. More specifically, respondents with secondary school or more were 2.3 times more likely to experience a divorce compared to females with no education. Likewise, females with elementary education were almost 2.0 times more likely to experience divorce. It is possible the methodology and sampling may explain these discrepancies. In fact, studies from Ghana were based on females' samples and used logistic regression. In the present study, we consider all categories of marital status instead, and the samples consisted of females and males.

An alternative explanation of the negative effects of education on the risks of divorce in DRC is that high education coincides with maturation. In fact, more educated people spent more time at school. In a context where it is not yet possible to conciliate work and studies, undergraduates are potentially unemployed. Consequently, age at marriage is much higher among more educated people who enter marriage with more maturity and responsibility than do less educated people. Together, these factors constitute a basis of marital stability and partly explain why education is negatively associated with the risks of divorce.

Limitations

Previous research identified a number of factors which are associated with the risks of divorce in both developed and developing countries (South & Spitze, 1986; Spitze, 1988; Stevenson & Wolfers, 2007; Takyi, 2001; Takyi & Broughton, 2006). They include gender, early age at marriage, respondents' age, less education and lower incomes, premarital cohabitation, religious affiliation, parents' divorce, and urban residence. This current study used a few of these variables. As we mentioned before, DHSs do not intend to study extensively divorce; therefore the number of explanatory factors available in the DHSs are limited. Another limitation of this study is the cross-sectional nature of the data. What we can observe represents only

association/correlation; there is no way to think about causality which requires temporality in the sequence of the events.

Conclusion

This study suggests that gender female and respondent's age have positive and significant effects on the risks of divorce in DRC. Extramarital sex, which is 9.5 times higher among men, may explain the dissatisfaction on marriages among women who thereafter choose to break. Also, as people age, the risks of divorce increase. This is evident because the number of married people augments as people get older. Because divorce is subsequent to marriage, this explains the fact that divorce increases with age. Finally, respondents' education is negatively and significantly associated with the risks of divorce. This result is opposite to the findings in other African countries (Takyi, 2001; Takyi & Broughton, 2006) which reported that women's education increased the risks of divorce in Ghana. From previous research in developed countries, the impact of education on the risks of divorce is mixed. There is no consensus about the strength and the direction of its effect (Härkönen & Dronkers, 2006; Park & Raymo, 2013; Raymo et al., 2013). Studies reported negative (South & Spitze, 1986), positive (Takyi & Broughton, 2006) or varying effect over time (Härkönen & Dronkers, 2006). Therefore, research on factors associated with divorce in sub-Saharan Africa is of top priority due to its social and health consequences on parents and children.

References

Alvarez, R. M., & Nalgler, J. (1995). Economics, Issues and the Perot Candidacy: Voter Choice in the 1992 Presidential Election. *American Journal of Political Science, 39*(3), 714-744.

Amato, P. R. (2010). Research on divorce: Continuing trends and new developments. *Journal of Marriage and Family, 72*(3), 650-666.

Amato, P. R., & Cheadle, J. (2005). The Long Reach of Divorce: Divorce and Child Well-Being Across Three Generations. *Journal of Marriage and the Family, 67*(1), 191-206.

Becker, G. S. (1973). A Theory of Marriage: Part I. *Journal of Political Economy, 81*(4), 813-846.

Becker, G. S. (1974). A Theory of Marriage: Part II. *Journal of Political Economy, 82*(2), S11-S26.

Becker, G. S. (1981). *A Treatise on the Family*. Cambridge: Harvard University Press.

Becker, G. S., Landes, E. M., & Michael, R. T. (1977). An economic analysis of marital instability. *Journal of Political Economy, 85*(6), 1141-1187.

Bouchard, J.,Thomas J., & Loehlin, J. C. (2001). Genes, Evolution, and Personality. *Behavior Genetics, 31*(3), 243-273.

Chae, S. (2011). *Divorce, remarriage, and children's outcomes in rural Malawi*

Cheng, S., & Long, J. S. (2007). Testing for IIA in the Multinomial Logit Model. *Sociological Methods and Research, 35*(4), 583-600.

Clark, S., & Hamplová, D. (2013). Single motherhood and child mortality in sub- Saharan Africa: A life course perspective. *Demography, 50*(5), 1521-1549.

Cooke, L. P. (2006). "Doing" gender in context: Household bargaining and risk of divorce in Germany and the United States. *American Journal of Sociology, 112*(2), 442-472.

Cooke, L. P., & Gash, V. (2010). Wives' Part-time Employment and Marital Stability in Great Britain, West Germany and the United States. *Sociology, 44*(6), 1091-1108.

Dow, J. K., & Endersby, J. W. (2004). Multinomial Probit and Multinomial Logit: A Comparison of Choice Models for Voting Research. *Electoral Studies, 23*(1), 107-122.

Ferber, M. A., & Sander, W. (1989). Of women, men, and divorce: not by economics alone. *Review of Social Economy, 47*(1), 15-26.

Fry, T. R. L., & Harris, M. N. (1996). A Monte Carlo Study of Tests for the Independence of Irrelevant Alternatives Property. *Transportation Research Part B: Methodological, 30*, 19-30.

Fry, T. R. L., & Harris, M. N. (1998). Testing for Independence of Irrelevant Alternatives. Some Empirical Results. *Sociological Methods and Research, 26*(3), 401-423.

Härkönen, J., & Dronkers, J. (2006). Stability and Change in the Educational Gradient of Divorce. A Comparison of Seventeen Countries. *European Sociological Review, 22*(5), 501-517. doi:10.1093/esr/jcl011

Harris, J. R. (1995). Where Is the Child's Environment? A Group Socialization Theory of Development. *Psychological Review, 102*(3), 458-489.

Hoffman, S. D., & Duncan, G. J. (1995). The effect of incomes, wages, and AFDC benefits on marital disruption. *The Journal of Human Resources, 30*(1), 19-41.

Jaffee, S. R., & Price, T. S. (2007). Gene–environment correlations: a review of the evidence and implications for prevention of mental illness. *Molecular Psychiatry, 12*, 432-442.

Jockin, V., McGue, M., & Lykken, D. T. (1996). Personality and Divorce: A Genetic Analysis. *Journal of Personality and Social Psychology, 71*(2), 288-299.

Kalmijn, M., & Poortman, A. (2006). His or Her Divorce? The Gendered Nature of Divorce and its Determinants. *European Sociological Review, 22*(2), 201-214. doi:10.1093/esr/jci052

Levinger, G. (1965). Marital Cohesiveness and Dissolution: An Integrative Review. *Journal of Marriage and Family, 27*(1), 19-28.

McDaniel, A., & Zulu, E. (1996). Mothers, fathers, and children: Regional patterns in child-parent residence in sub-Saharan Africa. *African Population Studies, 11*(1), 1-28.

McGue, M., & Lykken, D. T. (1992). Genetic influence on risk of divorce. *Psychological Science, 3*(6), 368-373.

Mensch, B. S., Grant, M. J., & Blanc, A. K. (2006). The changing context of sexual initiation in sub-Saharan Africa. *Population and Development Review, 32*(4), 699-724.

Mongeau, G., Neil, G., & Le Bourdais, C. (2001). Effet de la précarité économique sur la formation d'une première union au Canada. *Cahier Québécois de démographie, 30*(1), 3-29.

Oppenheimer, V. K. (1994). Women's rising employment and the future of the family in industrial societies. *Population and Development Review, 20*(2), 293-349.

Park, H., & Raymo, J. M. (2013). Divorce in Korea: Trends and Educational Differentials. *Journal of Marriage and the Family, 75*(1), 110-126.

Posel, D., & Devey, R. (2006). The demographics of fathers in South Africa: An analysis of survey data, 1993–2002. In R. Morrell, & L. Richter (Eds.), *Baba: Men and fatherhood in South Africa* (pp. 38-52). Cape Town, South Africa: Human Sciences Research Council Press.

Raymo, J. M., Fukuda, S., & Iwasawa, M. (2013). Educational Differences in Divorce in Japan. *Demographic Research, 28*(6), 177-206.

Reniers, G. (2003). Divorce and remarriage in rural Malawi. *Demographic Research, Special Collection 1*(6), 175-206. doi:10.4054/DemRes.2003.S1.6

Ruggles, S. (1997). The reply to Oppenheimer and Preston. *Demography, 34*(4), 475-479.

Rutter, M., & Silberg, J. (2002). Gene-Environment interplay in relation to emotional and behavioral disturbance. *Annual Review of Psychology, 53*, 463-490.

Sander, W. (1985). Women, work, and divorce. *American Economic Review, 75*(3), 519-532.

Sayer, L. C., & Bianchi, S. M. (2000). Women's economic independence and the probability of divorce: A review and reexamination. *Journal of Family Issues, 21*(7), 906-943.

Schoen, R., Astone, N. M., Rothert, K., Standish, N. J., & Kim, Y. J. (2002). Women's employment, marital happiness, and divorce. *Social Forces, 81*(2), 643-662.

South, S. J., & Spitze, G. (1986). Determinants of divorce over the marital life course. *American Sociological Review, 51*(4), 583-590.

Spitze, G. (1988). Women's Employment and Family Relations: A Review. *Journal of Marriage and the Family, 50*(3), 595-618.

Stevenson, B., & Wolfers, J. (2007). Marriage and divorce: Changes and their driving forces. *Journal of Economic Perspectives, 21*(2), 27-52.

Sweezy, K., & Tiefenthaler, J. (1996). Do state-level variables affect divorce rates? *Review of Social Economy, 54*(1), 47-65.

Takyi, B. K. (2001). Marital instability in an African society: Exploring the factors that influence divorce processes in Ghana. *Sociological Focus, 34*(1), 77-96. doi:10.1080/00380237.2001.10571184

Takyi, B. K., & Broughton, C. L. (2006). Marital stability in sub-Saharan Africa: Do women's autonomy and socioeconomic situation matter? *Journal of Family and Economic Issues, 27*(1), 113-132.

Thiombiano, B. G., LeGrand, T. K., & Kobiané, J. (2013). Effects of parental union dissolution on child mortality and schooling in Burkina Faso. *Demographic Research, 29*, 797-816.

Tilson, D., & Larsen, U. (2000). Divorce in Ethiopia: The Impact of Early Marriage and Childlessness. *Journal of Biosocial Science, 32*(3), 355-372.

Udry, J. R. (1981). Marital alternatives and marital disruption. *Journal of Marriage and the Family, 43*(4), 889-897.

Factors associated with divorce in Democratic Republic of the Congo

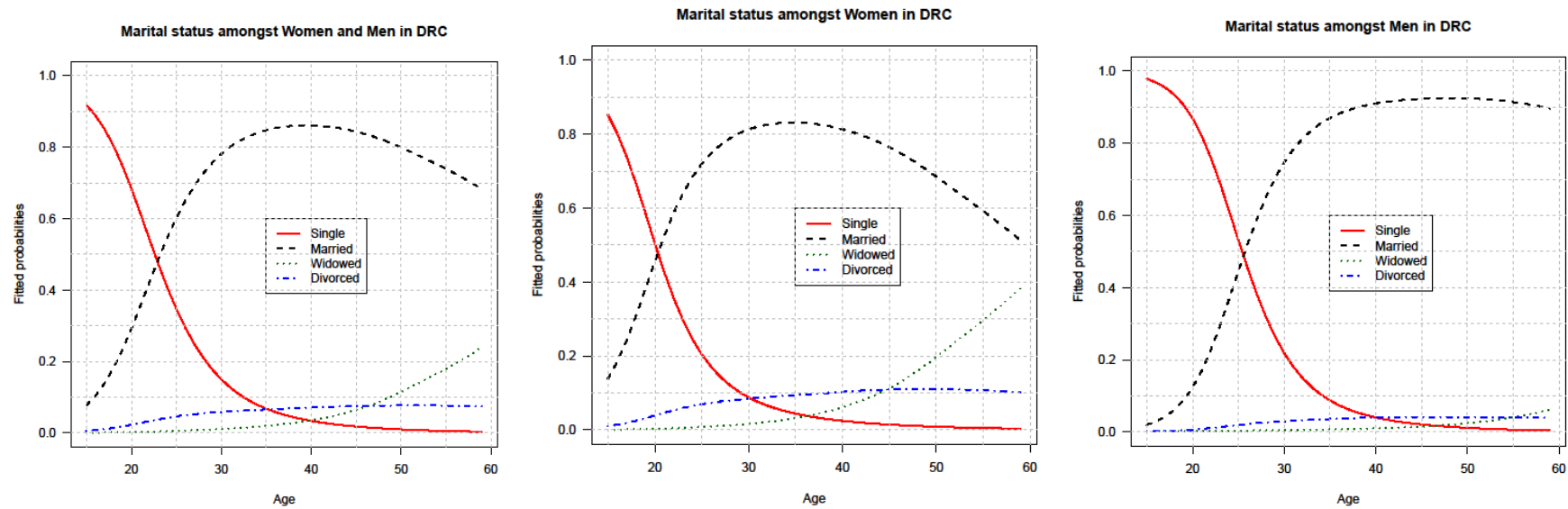**Figure 1.a: Respondent's Age and Probability of divorce (DHS-2007)**

Figure 1.b: Respondent's Education and Probability of divorce (DHS-2007)

Factors associated with divorce in Democratic Republic of the Congo

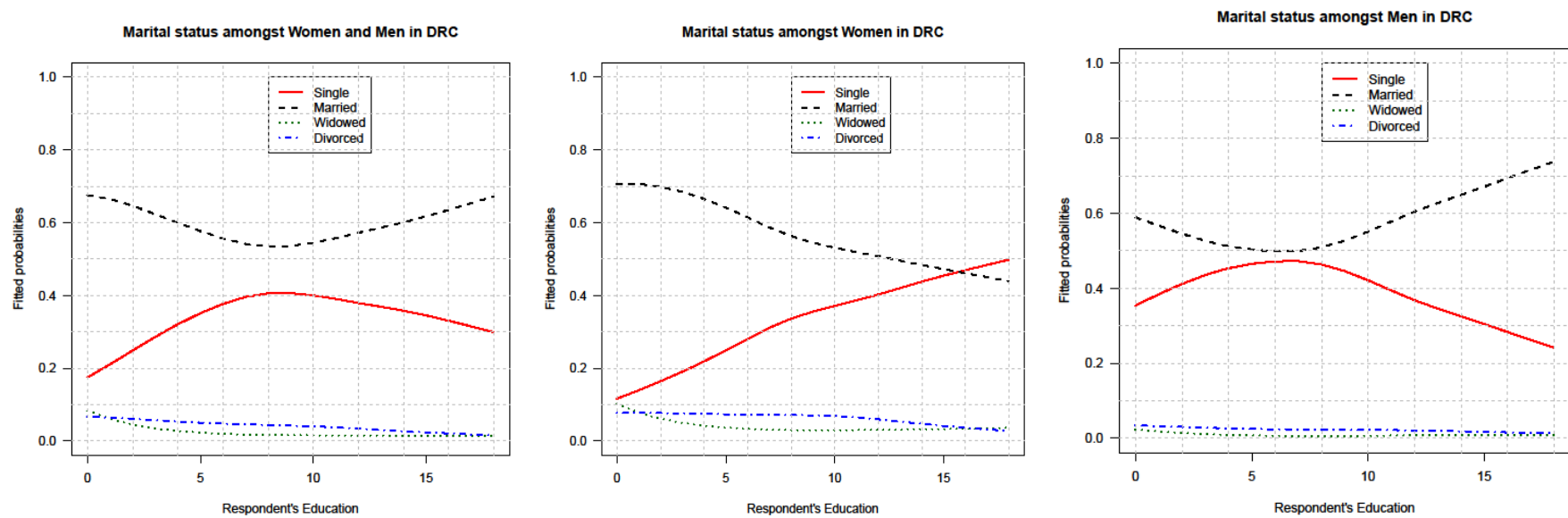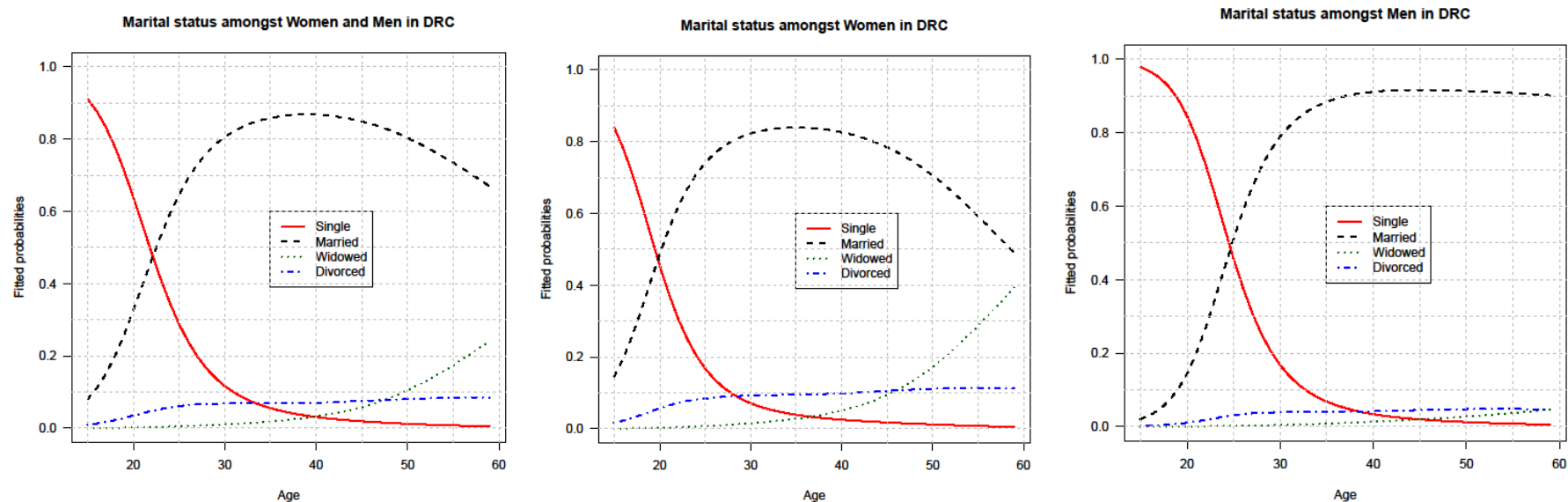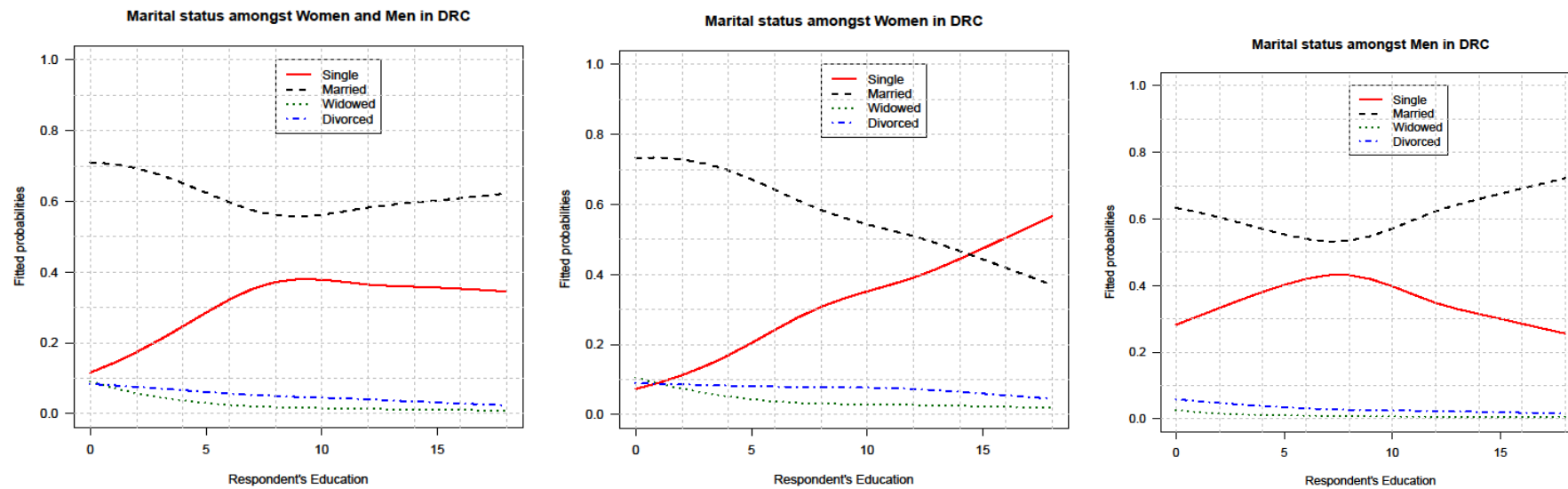**Figure 2.a: Respondent's Age and Probability of divorce (DHS-2013)**

Figure 2.b: Respondent's Education and Probability of divorce (DHS-2013)

Factors associated with divorce in Democratic Republic of the Congo

Table 1: Description of the sample

Marital Status	Gender Female	S.E.	Age	S.E.	Urban residence	S.E.	Education (in single years)	S.E.	*N*	% out of the total sample(*)
Panel A: DHS 2007										
Single	0.38	0.10	20.6	0.14	0.55	0.03	7.06	0.19	7,615	32.8
Married	0.55	0.03	35.5	0.23	0.40	0.03	6.09	0.18	13,727	59.1
Widowed	0.86	0.02	47.4	0.49	0.43	0.03	3.44	0.24	749	3.2
Divorced	0.78	0.02	36.1	0.66	0.42	0.04	5.15	0.26	1,130	4.9
Panel B: DHS 2013										
Single	0.41	0.01	20.4	0.09	0.50	0.02	8.15	0.09	12,697	26.9
Married	0.55	0.02	35.6	0.12	0.32	0.02	6.77	0.11	28,792	61.0
Widowed	0.88	0.01	48.5	0.36	0.31	0.02	4.14	0.20	3,043	6.4
Divorced	0.75	0.02	35.8	0.37	0.35	0.03	5.76	0.15	2,685	5.7

Note: Results are weighted and take into account the complex survey design (CSD)
(*) Unweighted counts for the column

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Table 2: Results from Multinomial Logistic Regression

VARIABLES	Single DHS-2007	DHS-2013	Married (Reference Category)	Widowed DHS-2007	DHS-2013	Divorced DHS-2007	DHS-2013
Gender Female	-1.438***	-1.268***		1.704***	1.811***	1.068***	0.798***
	(0.075)	(0.059)		(0.183)	(0.135)	(0.128)	(0.101)
Age	-0.300***	-0.280***		0.110***	0.117***	0.013**	0.005
	(0.009)	(0.008)		(0.007)	(0.004)	(0.006)	(0.003)
Urban residence	0.791***	1.069***		0.296**	0.173	0.119	0.302***
	(0.134)	(0.078)		(0.117)	(0.132)	(0.131)	(0.108)
Education (in single years)	0.106***	0.078***		-0.069***	-0.058***	-0.015	-0.0373***
	(0.014)	(0.008)		(0.019)	(0.017)	(0.012)	(0.010)
Intercept	6.718***	6.127***		-8.584***	-8.973***	-3.650***	-2.931***
	(0.252)	(0.193)		(0.433)	(0.256)	(0.315)	(0.182)

Standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Note: Results are weighted and take into account the complex survey design (CSD)

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Table 3: Marginal effects from Multinomial Logistic Regression

VARIABLES	Respondent's Current Marital Status							
	Single		Married		Widowed		Divorced	
	DHS-2007	DHS-2013	DHS-2007	DHS-2013	DHS-2007	DHS-2013	DHS-2007	DHS-2013
Gender Female	-0.091***	-0.081***	0.031***	0.023***	0.031***	0.034***	0.028***	0.024***
	(0.004)	(0.003)	(0.005)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)
Age	-0.018***	-0.017***	0.015***	0.013***	0.002***	0.002***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Urban Residence	0.047***	0.063***	-0.051***	-0.068***	0.005*	0.002	-0.001	0.003
	(0.008)	(0.005)	(0.009)	(0.006)	(0.002)	(0.003)	(0.003)	(0.003)
Education (in single years)	0.006***	0.005***	-0.004***	-0.003***	-0.001***	-0.001***	-0.001*	-0.001***
	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)

Note: Standard errors are in parentheses