**Educational Assortative Mating and Union Stability:
A Prospective Analysis Using Belgian Census and Register Data**

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Introduction

In the past decades, the rates of female labour force participation and of women's enrolment in higher education have substantially increased. This raised the interest of scholars in how the socioeconomic resources of both spouses are related to union stability. Studies in Europe and the US have reported a positive effect of the husband's and the couple's socioeconomic resources on union stability. In contrast, there is less consensus regarding the effects of the wife's resources and her socioeconomic status relative to her husband (Jalovaara, 2003, 2013; Lyngstad & Jalovaara, 2010). While several studies found that unions in which women are higher educated than their husband are more likely to dissolve, other studies did not find such effect (Bumpass, Castro Martin, & Sweet, 1991; Jalovaara, 2003; Schwartz & Han, 2014; Teachmann, 2002; Tzeng, 1992). A recent study has shown that the latter effect disappeared in the US among marriages formed after 1990 (Schwartz & Han, 2014). This change in association occurred in a period in which women started to outnumber men in higher education (the so-called reversal of the gender gap in education). So perhaps the inconsistencies in the literature can be attributed to differences in the legal, social, and economic costs of divorce across time, and between and within countries (Härkönen & Dronkers, 2006). Beyond this, the different selection patterns in higher education and marriage may play a role.

In this paper, we use uniquely linked census and register data that cover the whole population of Belgium. We investigate the relationship between the pattern of educational assortative mating observed at the census and the subsequent risk of union dissolution. We contribute to the literature in two ways. First, we consider individual, as well as contextual effects by taking into account the prevalence of educational heterogamous unions in a couple's neighbourhood. Second, we aim to disentangle the effect of individual education ("absolute effect of education") from the effect of educational differences between partners ("relative effect of education") on the stability of both marital and non-marital consensual unions.

The French-speaking (Brussels and Wallonia) and Dutch-speaking (Flanders) parts of Belgium present an interesting case to examine spatial variation in union stability, a research topic to which more attention should be paid (Kulu, 2012). Belgium's high divorce rates can primarily be attributed to the high divorce figures of the French-speaking parts. This disparity has already been associated to the more religious tradition in the Flemish region (Mortelmans Snoeckx, & Dronkers, 2009). However, there are other contextual factors, like the socio-economic structure, that might also influence union stability (Kulu, 2012; Lyngstad, 2011). To address this issue, we employ multilevel hazard models.

Theoretical background

In general, people tend to choose romantic partners who are similar to themselves on some features, for instance in terms of educational attainment (Blossfeld, 2009). Heterogamous couples are expected to have more conflict and subsequently a higher likelihood of union dissolution, perhaps as a consequence of frustrations and tensions related to dissimilarity (Kalmijn, 1998). The disappearance of this effect among younger marriage cohorts, as reported by Schwartz and Han (2014), might be explained by contextual effects. In the perspective of the diffusion theory of innovation, deviant union behaviour (such as unions with a higher educated woman) can be seen as an innovation to market constraints ('not enough highly educated men on the mating market')

(Schwartz & Han, 2014). Subsequently, the separation risk of unions in which the woman is higher educated than the man may be lower in regions where such unions are more common and accepted (Schwartz & Han, 2014).

According to Oppenheimer (1997), relative resources within a couple have to be related to the absolute levels of resources. Partners' relative educational attainment might influence their union stability, but this effect can depend on their absolute attainments (Schwartz & Han, 2014). A homogamous union, for example, may be more stable for the higher educated than for the lower educated, due to the fact that the former union will dispose of more resources than the latter union.

There are few theoretical arguments or empirical indications of whether the effects of absolute and relative education might be different or similar among married and unmarried cohabiters (Jalovaara, 2013). However, one recent Finish study by Jalovaara (2013) found that a high educational attainment of each partner stabilized both union types, but the stabilizing effects were stronger in marriages than in cohabitations. So, it appears that the economic underpinnings of a couple are more significant for marriage than for cohabitation, not just when it comes to its establishment but also when it comes to its dissolution.

Data
We use a unique data source that was generated by linking on the individual level the Belgian census of 2001 with the Belgian National Register approximately 5 years later. The identification of couples is based on the relationship of every person in the household to the head of the household. By comparing household compositions in 2001 and 2006, changes in union status are determined. The time of union dissolution is calculated by comparing the dates and destinations of residential migration of both partners. The demographic and socioeconomic covariates of both partners are measured at the time of census.

Our preliminary results are based on a subsample of 472,945 marriages formed between 30/09/1986 and 30/09/2001 while the wife was 18 to 49 years old and in which, at the beginning of the follow-up period, both spouses had the Belgian nationality and were no longer enrolled in school. We are in the process of adding people in unmarried cohabitation.

Analytical approach
Using discrete-time event history analyses, we model a couple's risk of separation, given that they are still living together in the previous month. We test the impact of partners' relative education on separation in the context of their absolute education by estimating dissolution risks for low (up to lower secondary education), medium (up to higher secondary education) and highly educated (tertiary education) women separately and taking the absolute educational level of the man as an independent variable.

In order to address the issue of the role played by marriage market constraints and opportunities, we calculate the proportion of homogamous (man and woman equally educated), hypergamous (man more educated) and hypogamous (woman more educated) relationships by Belgian municipality. In this way, we are able to test whether hypogamous couples are more stable in regions where these relationships are more common. We will apply multilevel modelling to address the contextual effects.

Preliminary results
Our estimated proportions confirm the strong tendency to educational homogamy (58,3% of all marriages). Yet, educational hypogamy has become more prevalent than educational hypergamy (26,6% vs. 15,2%). Figure 1 shows the proportions of hypogamous couples by Belgian municipality. Especially in the rural municipalities of South-Belgium, approximately 40% of all couples were hypogamous couples. Educational homogamy is much more common in urban municipalities (map not shown).

One-level discrete-time event history models for low educated women (Figure 2) show that dissolution risks does not differ that much by the educational level of the husband. In contrast, medium (Figure 3) and highly (Figure 4) educated women have a significantly lower dissolution

risk if they are married with a medium or highly educated man than with a low educated man. For medium educated women this means that marrying upwards lowers the chance of divorce, while marrying downwards increases the risk of divorce. Highly educated women's divorce risks are the highest if they are married with a man lower educated than themselves.

Interaction-effects between the educational level of the man and the proportion of hypogamous couples in a couple's place of residence indicate that the risk of divorce of downward married women decreases if they live in a municipality where hypogamous couples are more common (results not shown). However, multilevel models need to be estimated to give more certainty.

Figure 1: Percentage of hypogamous couples in 2001, by Belgian municipality
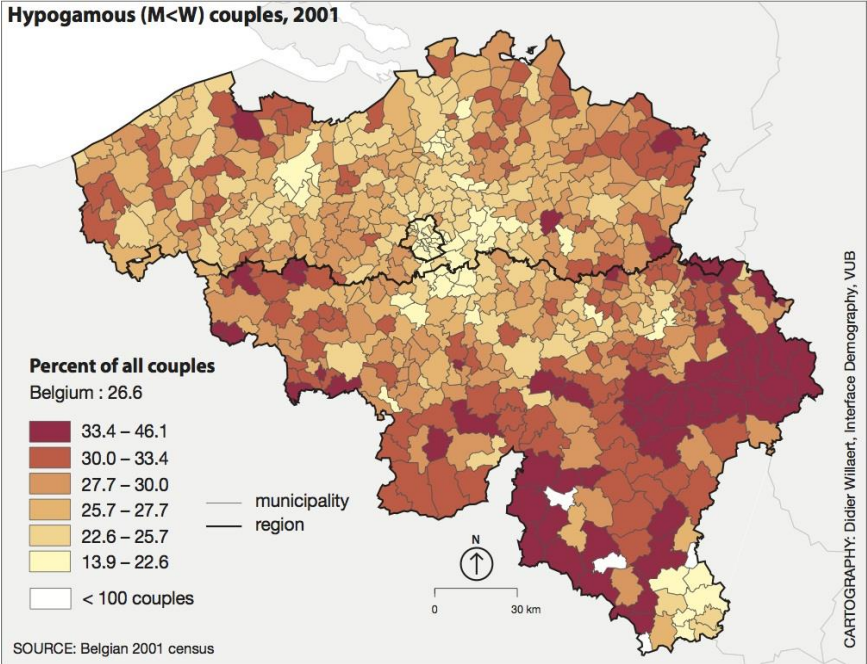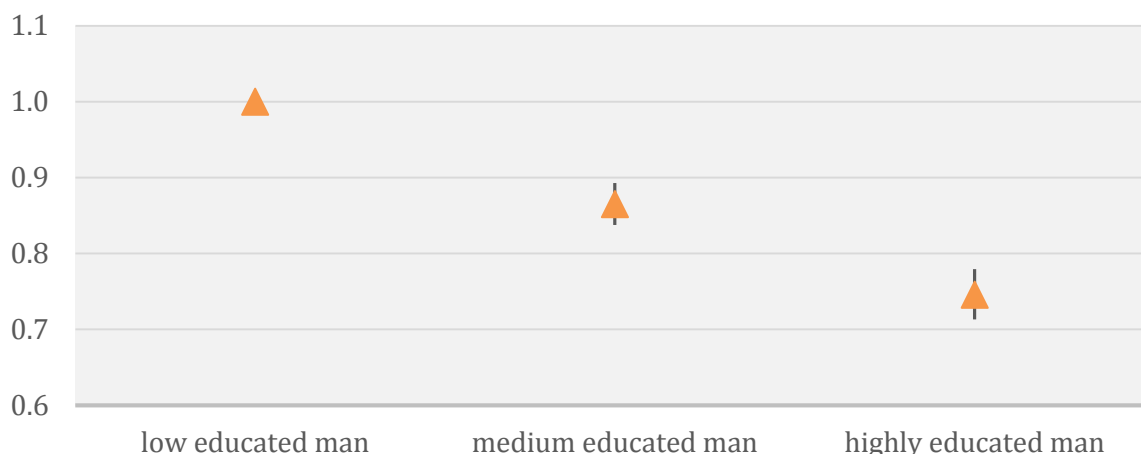

Figure 2: Hazard ratios of man's educational attainment for low educated women
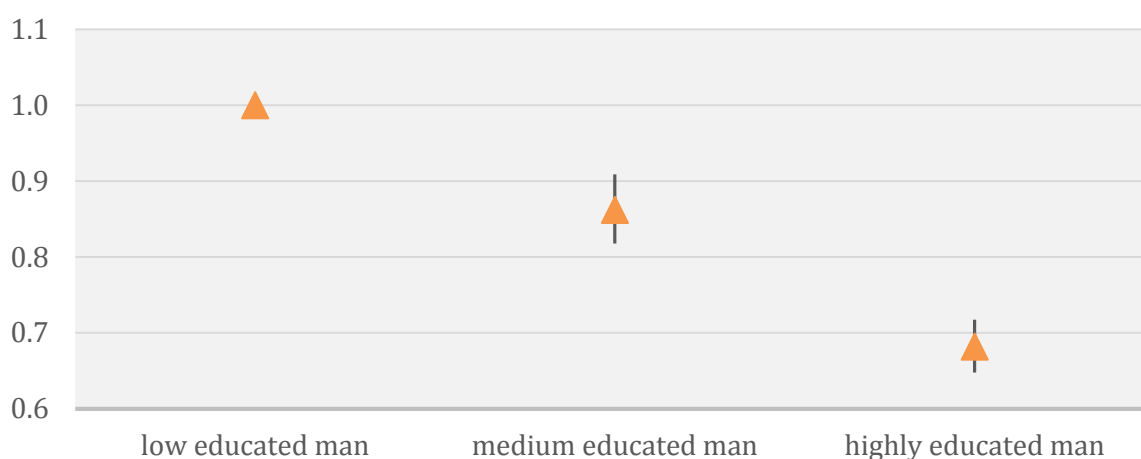

Note: Controlled for marriage duration (baseline), marriage order, female age at marriage, relative age, parity and age youngest child, male income, relative income, ownership of residence, comfort level of residence, region, degree of urbanization and percentage of hypogamous couples in municipality.

Figure 3: Hazard ratios of man's educational attainment for medium educated women

Note: Controlled for marriage duration (baseline), marriage order, female age at marriage, relative age, parity and age youngest child, male income, relative income, ownership of residence, comfort level of residence, region, degree of urbanization and percentage of hypogamous couples in municipality.

Figure 4: Hazard ratios of man's educational attainment for highly educated women

Note: Controlled for marriage duration (baseline), marriage order, female age at marriage, relative age, parity and age youngest child, male income, relative income, ownership of residence, comfort level of residence, region, degree of urbanization and percentage of hypogamous couples in municipality.

References

Blossfeld, H.-P. (2009). Educational assortative marriage in comparative perspective. *Annual Review of Sociology*, *35*(1), 513–530. doi:10.1146/annurev-soc-070308-115913

Bumpass, L. L., Castro Martin, T., & Sweet, J. A. (1991). The impact of family background and early marital disruption. *Journal of Family Issues*, *12*, 22–42.

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

Jalovaara, M. (2003). The joint effects of marriage partners' socioeconomic positions on the risk of divorce. *Demography*, *40*(1), 67–81. doi:10.1353/dem.2003.0004

Jalovaara, M. (2013). Socioeconomic resources and the dissolution of cohabitations and marriages. *European Journal of Population / Revue Européenne de Démographie*, *29*, 167–193. doi:10.1007/s10680-012-9280-3

Kalmijn, M. (1998). Intermarriage and homogamy: causes, patterns, trends. *Annual Review of Sociology*, *24*, 395–421. doi:10.1146/annurev.soc.24.1.395

Kulu, H. (2012). Spatial Variation in Divorce and Separation: Compositional or Contextual Effects? *Population, Space and Place*, *18*, 1–15. doi:10.1002/psp

Lyngstad, T. H. (2011). Does Community Context Have an Important Impact on Divorce Risk? A Fixed-Effects Study of Twenty Norwegian First-Marriage Cohorts. *European Journal of Population / Revue Europeenne de Demographie*, *27*(1), 57–77. doi:10.1007/s10680-010-9226-6

Lyngstad, T. H., & Jalovaara, M. (2010). A review of the antecedents of union dissolution. *Demographic Research*, *23*, 257–292. doi:10.4054/DemRes.2010.23.10

Mortelmans, D., Snoeckx, L., & Dronkers, J. (2009). Cross-Regional Divorce Risks in Belgium: Culture or Legislative System? *Journal of Divorce & Remarriage*, *50*(8), 541–563. doi:10.1080/10502550902970520

Oppenheimer, V. K. (1997). Women's employment and the gain to marriage: The specialization and trading model. *Annual Review of Sociology*, *23*, 431–453. doi:10.1146/annurev.soc.23.1.431

Schwartz, C. R., & Han, H. (2014). The Reversal of the Gender Gap in Education and Trends in Marital Dissolution. *American Sociological Review*, *79*(4), 605–629. doi:10.1177/0003122414539682

Teachman, J. D. (2002). Stability across cohorts in divorce risk factors. *Demography*, *39*(2), 331–51. doi:10.2307/3088342

Tzeng, M.-S. (1992). The effects of socioeconomic heterogamy and changes on marital dissolution for first marriages. *Journal of Marriage and Family*, *54*(3), 609–619. doi:10.2307/353246