

The Changing Educational Gradient and Family Life in Europe and the North-America

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Sort Abstract

There is some indication that the traditional educational gradient for indicators related to family life may be changing, at least in some developed countries. Traditionally more highly educated women have been less likely to have children, more likely to get divorced, more likely to live alone, more likely to be cohabiting rather than married than women with lower levels of education. Any change in this gradient would have far-reaching implications for social change and social inequalities in the developed world and would pose important challenges for social policy. We know little about this process in much of the developed world. Explaining the gradient itself and the reasons for any change constitute an important challenge for social science research. Considering the persistently low fertility in the developed world, the relative instability of family life and the pace of aging, the stakes of this emerging issue are indeed high and have implications for the long-run sustainability of our welfare society. In this extended abstract we present preliminary results derived from an exploratory analysis of how the association between education and the probability of living alone and being married have evolved for the female population 40-64 between 1980-2010 in a number of European countries and in the US and Canada.

Extended Abstract

Relevance and background

There is some indication that the traditional educational gradient for indicators related to family life may be changing, at least in some European countries. By educational gradient, we mean the way education affects behavior, specifically behavior related to marriage, family formation and dissolution, and reproduction. Traditionally more highly educated women have been less likely to have children, more likely to get divorced, more likely to live alone, more likely to be cohabiting rather than married and more likely to remain childless than women with lower levels of education (Axinn & Bracer 2001; Blossfeld & Jaenichen, 1982). This gradient is present in multivariable studies of family life over much of the past six decades and appears to span the entire process of social modernization.

Over time, the more highly educated women were the first ones to embark on novel behavior patterns — almost invariably linked to the weakening of family ties, of marriage and of family formation. In this sense, they were the pioneers of social change, especially in an age when many of the standard values affecting family life were being questioned. By contrast, women with lower levels of education became the repositories of ‘traditional’ family values. This has led to a body of scientific research in which educational attainment became one of the key variables for any interpretation of social and demographic change. At the same time, in developed societies education was undergoing a veritable revolution, especially for women, in which the basic make-up of society changed thanks to increasing proportions of highly educated women and shrinking proportions of women with low levels of education (Boli et al. 1985; Hannum & Buchmann 2005; Meyer et al. 1977; Meyer et al. 1992). There are few in the social sciences who would object to placing education at the very core of any interpretation of social change in the developed world between the first half of the twentieth century and the present. This idea is present

either specifically or by implication in much of the literature related to family life, ranging from the work of Inglehart (1997) and others (Lesthaeghe 2011; van de Kaa, 1987) on values to empirical studies of fertility, divorce, childlessness and other aspects of family life (Härkönen & Dronkers 2006; Kalmijn 2013; Matysiak, Styrc & Vignoli 2014; Cheng 2016). In this literature, women and their education have been the relevant actors of most studies (Goldscheider, Bernhardt & Lappegård 2015). The existence of an educational gradient among men may also be important but it has received less attention (Kravdal and Rindfuss 2008).

Against this standard interpretation of social change based on the negative educational gradient, there is some indication that this gradient may be changing in certain developed societies, with more highly educated women beginning to spearhead a certain recovery of fertility, marital stability and family life. Scattered results for different indicators using data primarily covering the period after the turn of the millennium in the US, the Nordic countries and Japan have found evidence for a potentially new pattern of reduced and even a reversed association between female education and family outcomes. These studies indicate that in some contexts it is now rather low-educated women that are experiencing a higher probability of non-marriage, divorce, childlessness and living alone.

In contexts such as the US, Great Britain, the Nordic countries and Japan higher levels of education for women have been found to stabilize marriage during recent decades (Boertien & Härkönen, 2018; Härkönen & Dronkers, 2006; Martin, 2006; Matysiak, Styrc, & Vignoli, 2014; Raymo, Fukuda, & Iwasawa, 2013) and reduce the probability of childlessness in the Nordic countries (Jalovaara et al., 2018).

Parallel to these findings a number of more theoretical works predicting a reversal in the effect of female human capital on family outcomes as the changes related to the Second Demographic Transition mature have been put forward. McLanahan suggested a hypothesis of a ‘family bifurcation’ caused by the long-term trends associated with the Second Demographic transition (McLanahan, 2004). She argues that these trends have benefited highly educated women that in the long run have been able to capitalize on the shift towards increased female economic independence. High status women have therefore had better opportunities to establish more stable unions, based on more equal sharing of parental responsibilities than low educated women. In turn this has led to increased socioeconomic disparities in family outcomes between high and low educated women where the low educated increasingly have experienced difficulties in forming stable unions.

Similar arguments of a ‘return of the family’ among highly educated women have been proposed in the form of the so-called ‘U-shape hypothesis’ regarding the long-term impact of the Second Demographic Transition on family outcomes (McDonald, 2000; Goldscheider, Bernhardt, & Lappegård, 2015; Esping-Andersen, 2016; Esping-Andersen & Billari, 2015). This literature suggests, that the tendency for the highly educated to lead the shift towards more individualistic behavior during the initial stages of the Second Demographic Transition is a temporary state that changes when and if gender-egalitarian values achieve a ‘dominant normative status’ and institutions and men’s behavior in the family sphere adapt to the new economic roles of women. When a given society shifts towards institutional gender equality, these scholars argue that the association between women’s education and family behavior, such as parenting and partnering, follows an inverse U-shape, shifting from negative to positive. Although there are a number of studies that show signs of a decreased educational penalty for different family outcomes in some Western countries few take on a broader approach and assess the change over time in several indicators. The most extensive up to date is review of previous research in combination with analysis of aggregate data by Esping-Andersen from 2016. Our aim here is to make a more in-depth assessment of the potential change in the educational gradient 1980-2010 using a broader set of family outcomes using census microdata.

As long as education continues to be the pacesetter of social change (a plausible but not a guaranteed proposition), the potential importance of this type of shift is not difficult to assess in a world of below-replacement fertility and of on-going chinks in the fabric of family life. The emerging body of empirical studies of different aspects of family life that is bringing to light the existence of a changing educational gradient focuses almost exclusively on the societies of Northern Europe and in the non-European English-speaking developed world (see, for example, Kravdal and Rindfuss 2008; Sandström 2014; Sandström & Marklund 2018). Very little is known in other parts of the developed world, specifically in the traditionally strong-family regions of Europe (Garriga & Cortina 2017), though there is some indication that in Spain, for example, some aspects of this gradient have already begun to change, though the reversal continues to be incomplete. What we know about the gradient has been emerging in bits and pieces as the result of multivariable studies of specific variables such as fertility or divorce. The changing gradient itself, however, remains unstudied, at least specifically. Until a credible overview of the temporal change in the educational gradient itself in a wider range of developed countries exists, these results will be enticing but piecemeal contributions to our understanding of this key dimension of social change.

In this area of research, there is a relevant need for deepening our understanding of the educational gradient and the way it is changing. Building knowledge based on detailed individual studies of specific societies and variables is unquestionably important. However, it is equally important to understand the gradient itself, independent of specific analytical contexts. When, how and why does it change? This is best be done from a comparative perspective centered on education and the way it affects society.

Data and Methods

To accomplish this, we use census data from the IPUMS international for the countries and indicators where the necessary data is available. Selected countries from IPUMS include: France, Austria, Hungary, Greece, Portugal, Spain, Canada and the United States of America. Additionally, we supplement this data by constructing comparable dataset from Swedish register data.

Indicators of the educational gradient

A basic characteristic of educational attainment in developed societies over the past half century or longer is that at the outset, the vast majority of the population has very low levels of education and by now, quite the opposite holds. This makes hitting on the correct indicator a thorny task. No strategy yields entirely satisfactory results. An obvious possibility is using simple ratios between educational levels, although the election of numerators and denominators is not straightforward. Other alternative is to use the relative index of inequality (RII) (Mackenbach & Kunst 1997; Sergeant & Firth 2006), intended to simultaneously control for the expansion of levels and the distance between them. In any event, preliminary results presented in this paper show simple series of change over time of three basic levels (primary or less, secondary, and tertiary),

Indicators of family life

The existing data enable us to generate a series of indicators of family life. While not perfect, they enable us to assess many different aspects of the family. At the moment, only female population 40-64 and 1980 and 2010 years are included in the preliminary analysis. We present data for 9 different countries.

- Living alone.
- Childlessness (only available for 3 countries).
- Never-married women.
- Separation and divorce.
- Married women.

Later on, others indicators will be added to the analysis; among them: living with a partner (cohabitation); children ever born; children residing in the parental household; and total household size.

We differentiate between primary, secondary and tertiary educated women aged 40-64 in the corresponding census year thereby covering women born 1916-1980.

We estimate logistic regression models adjusting for period and age in five year increments and their interactions with education to assess how the probability of being in different states varies with education in 1980 compared to 2010. Using the derived models, predicted probabilities are then calculated based on the interaction effect for 2010 compared to 1980 and presented as marginal effects (e.g., predicted probabilities of e.g. living in a one-person household in 1980 vs. 2010). Models are all run on a random sample of 400,000 individuals from each country.

Preliminary Results

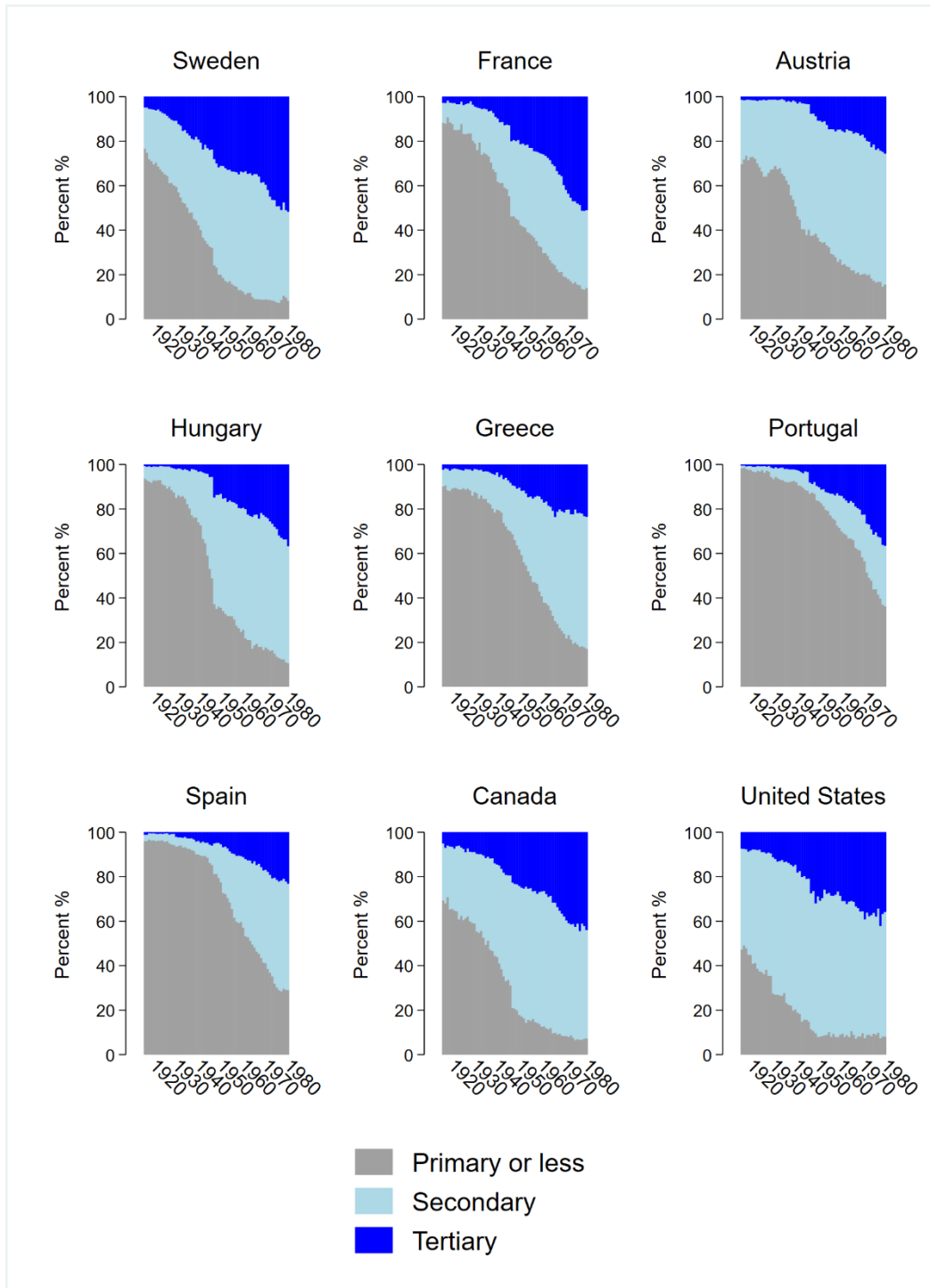
Preliminary results are presented below, showing the expansion of education across female cohorts born between 1916 and 1980 in selected countries (Figure 1), as well as probabilities of selected family behaviors according to educational achievement (Figures 2 to 6). We find that the negative effect of female human capital on family outcomes indeed has decreased and even reversed in some Western countries since the 1980s. The change in the association is however primarily found in the Northern European countries and the US. In comparison the countries in Southern Europe that experienced the changes associated with the Second Demographic transition later than Northern-Europe and North America show little signs of a change in the effect of female education. If anything, there is even a larger educational penalty on family outcomes for a number of indicators in these traditionally strong family countries.

The relevance of the results shown below is limited by the fact that our initial perusal of the data only makes use of a single age group (40-64) that, in fact, lumps together results for women from very different birth cohorts and stages of life. For the final EPC paper, the age/cohort component of the results will be refined so as to identify the process of change more clearly. This type of approach exists for Spain (not shown below) and the results have been promising and have shown an important pattern of change for a number of variables among relatively young women, but not among older ones. This is precisely the type of result we might expect for a country that was a latecomer to numerous aspects of modernization, unlike countries like Sweden, the USA or France that were pioneers of this same process (Reher 2019).

Final remarks

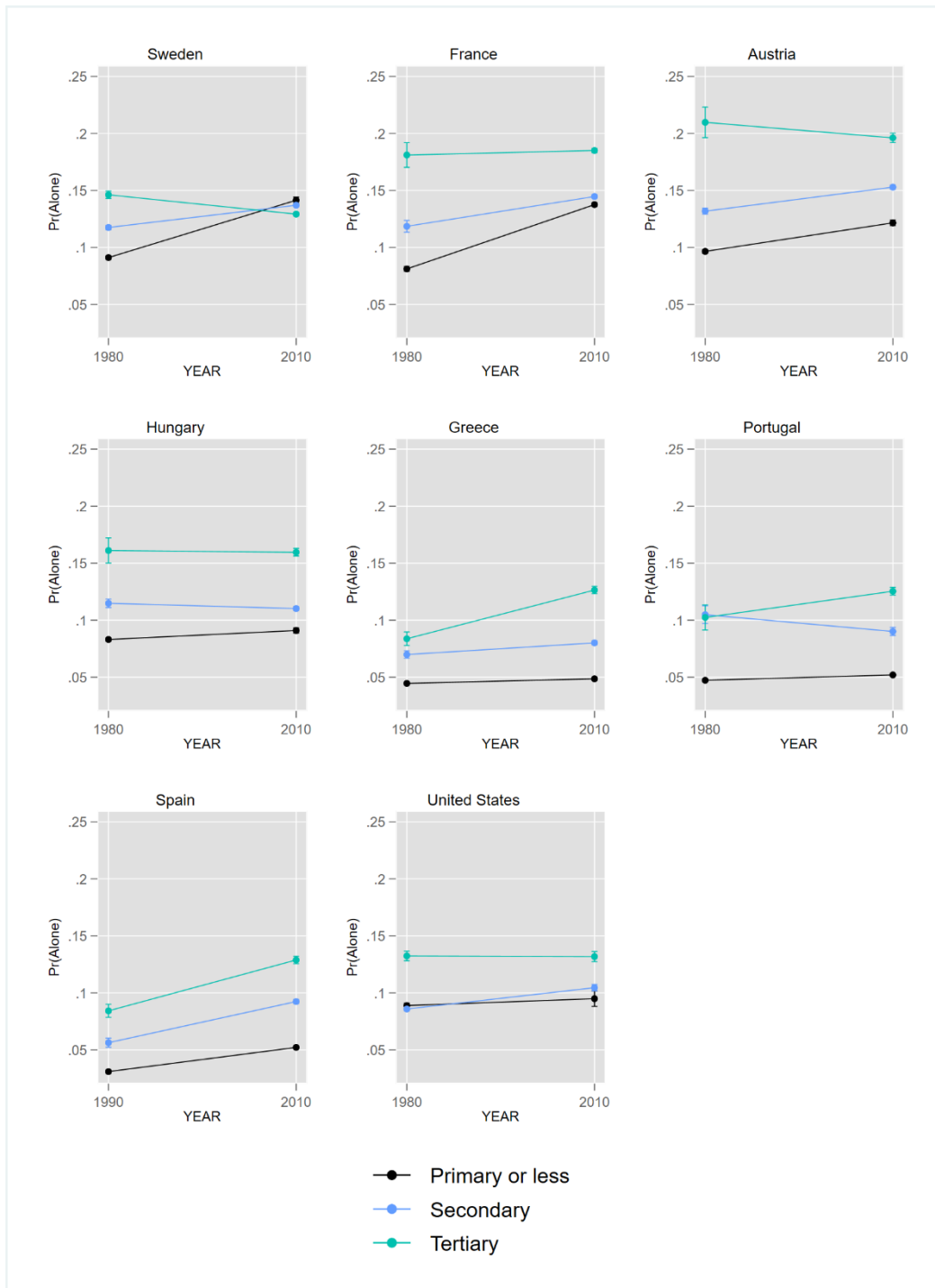
This paper deals with an emerging issue that until now has attracted relatively little attention among social scientists. Its social relevance is assured not only because of the importance of the family and family life, of reproduction and of social stability for the sustainability of modern societies, but also because of the way education conditions the dynamics of social change. Should the educational gradient for family life become positive (instead of negative) in a society with increasing levels of highly educated women and men it could have important implications for the medium and long-term sustainability of society. At present, this is but a premise —or a promise for the future—, though the shift, if consolidated, would have important implications for social policy.

Figure 1: Education by birthyear for included women aged 40-64 in 1980 and 2010



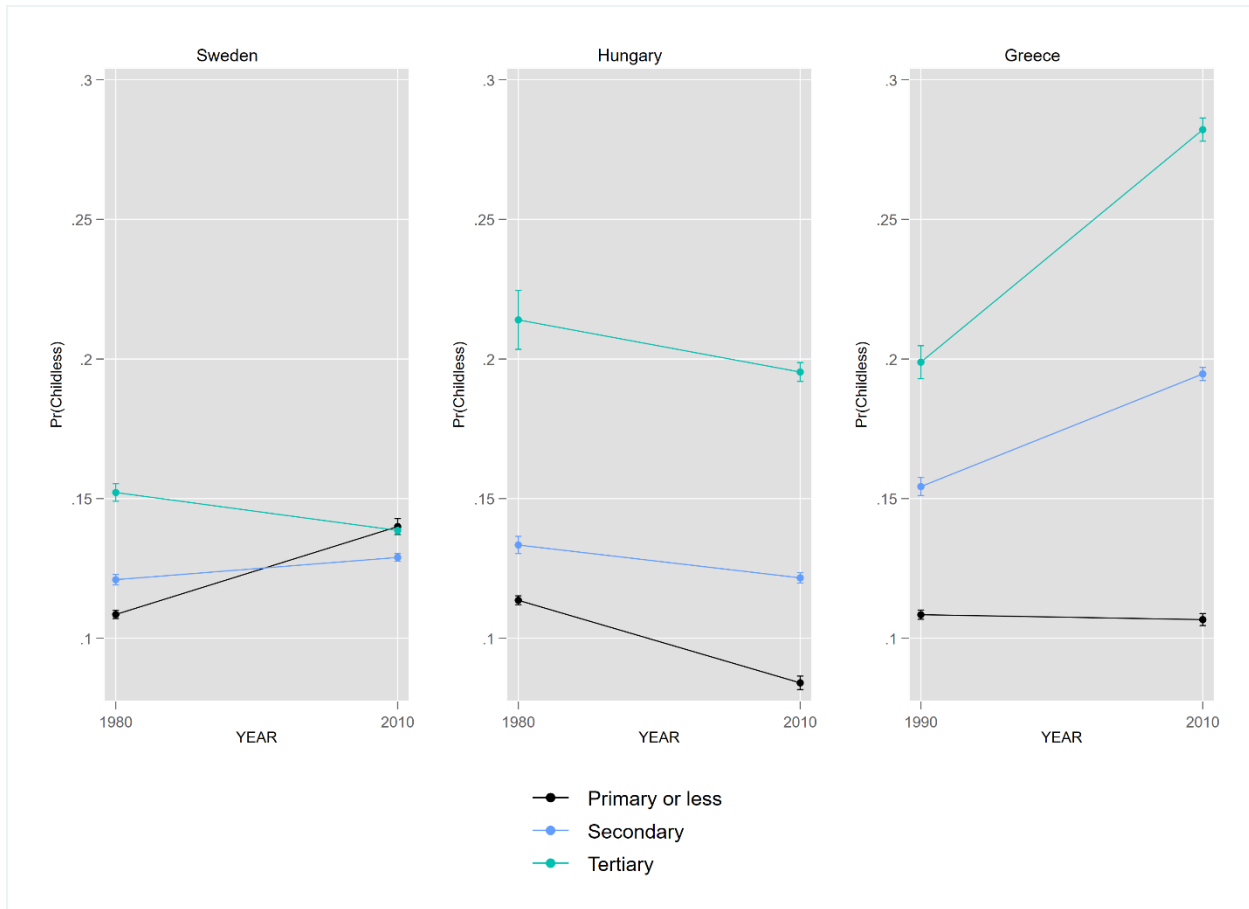
Source: Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 7.2 [dataset]. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/D020.V7.2>, Statistics Sweden, Population and Housing Census of 1980, Statistics Sweden Census 2011.

Figure 2: Probability to live alone for women with different levels of education aged 40-64 in 1980 and 2010



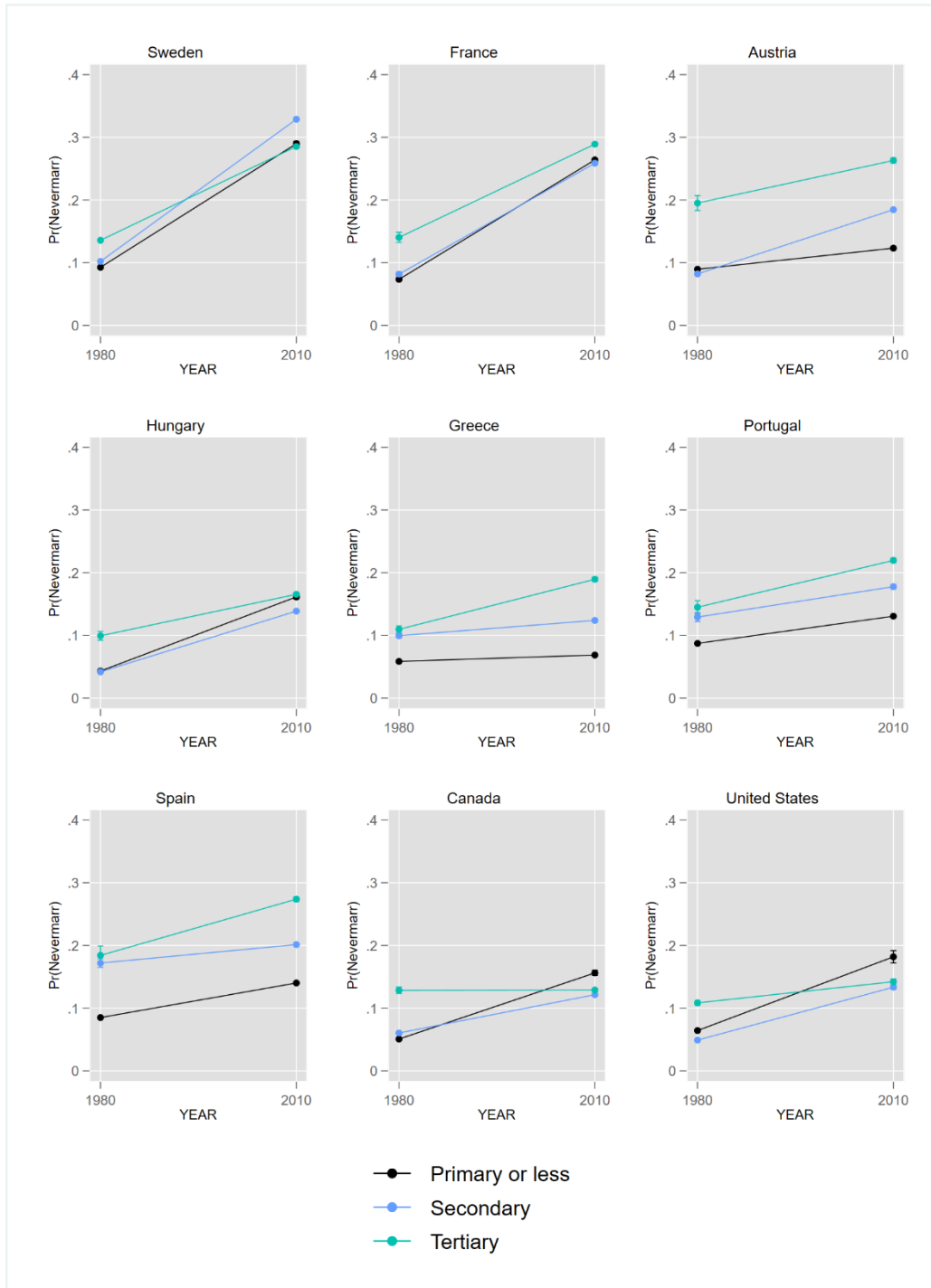
Source: Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 7.2 [dataset]. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/D020.V7.2>, Statistics Sweden, Population and Housing Census of 1980, Statistics Sweden Census 2011

Figure 3: Probability of childlessness for women with different levels of education aged 40-64 in 1980 and 2010



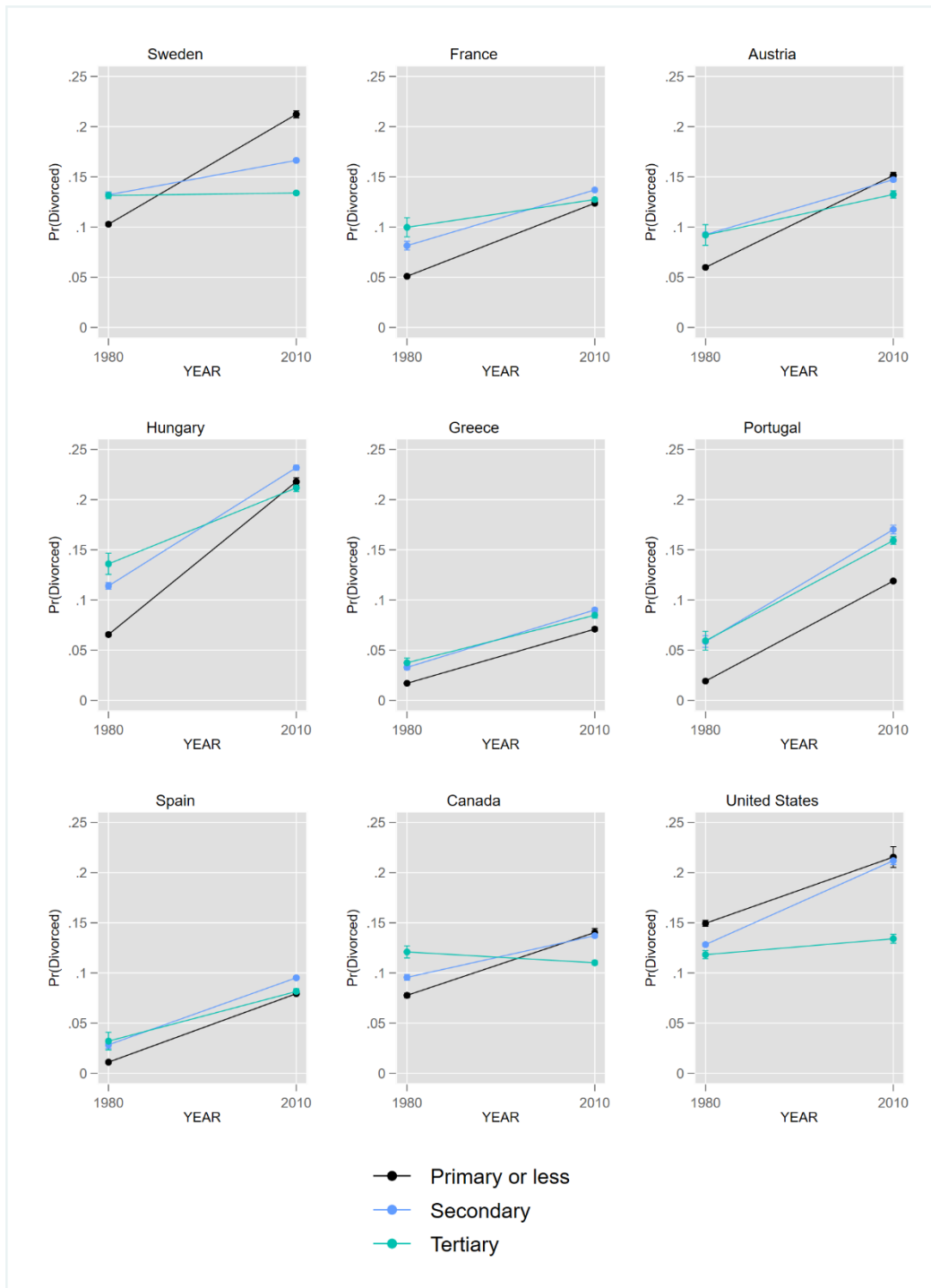
Source: Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 7.2 [dataset]. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/D020.V7.2>, Statistics Sweden, Population and Housing Census of 1980, Statistics Sweden Census 2011

Figure 4: Probability to of being never married for women with different levels of education aged 40-64 in 1980 and 2010



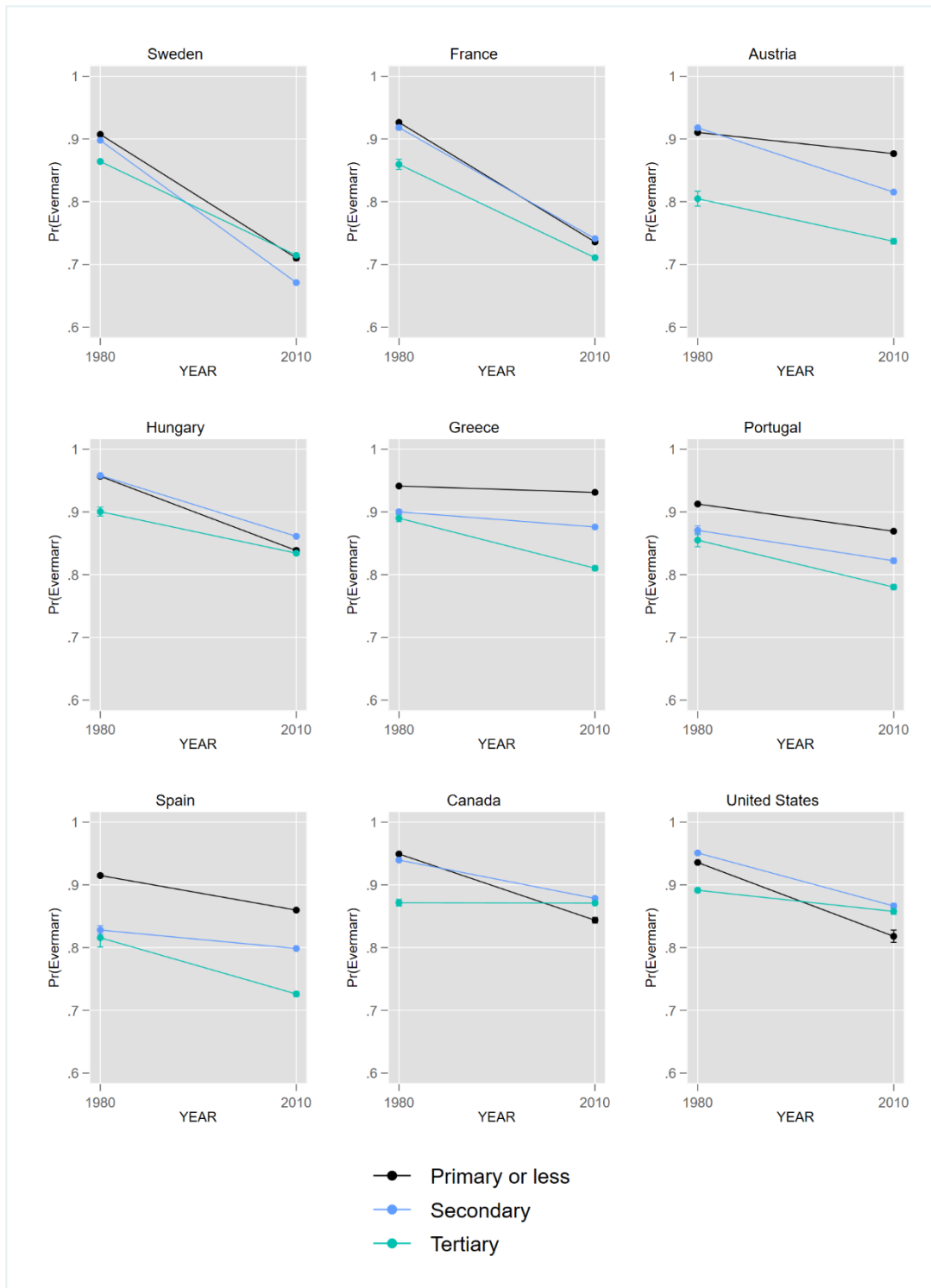
Source: Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 7.2 [dataset]. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/D020.V7.2>, Statistics Sweden, Population and Housing Census of 1980, Statistics Sweden Census 2011

Figure 5: Probability to be divorced for women with different levels of education aged 40-64 in 1980 and 2010



Source: Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 7.2 [dataset]. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/D020.V7.2>, Statistics Sweden, Population and Housing Census of 1980, Statistics Sweden Census 2011

Figure 6: Probability to be in a marriage for women with different levels of education aged 40-64 in 1980 and 2010



Source: Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 7.2 [dataset]. Minneapolis, MN: IPUMS, 2019. <https://doi.org/10.18128/D020.V7.2>, Statistics Sweden, Population and Housing Census of 1980, Statistics Sweden Census 2011.

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