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Differences in Labor Supply by Birthplace and Family Composition in Switzerland: the Role of Human Capital and Household Income

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Abstract

In Switzerland, mothers' involvement in paid work often occurs on a part-time basis. The mechanisms driving the decisions and opportunities to access part-time employment differ between native and immigrant populations. In this paper, we address the extent to which the employment behaviours of the female population differ by birthplace and family situation. Using data from the Swiss Labour Force Survey, we decompose the effect of human capital and household income on participation and the number of hours worked. Contrasting patterns of employment emerge among women born in Switzerland, within the EU, and outside the EU, especially in the presence of resident children. Women's education has a stronger positive effect on participation for natives, whereas household income is proved to have greater influence on the participation outcomes for the foreign-born population. Nevertheless, compared with immigrant women having the same level of education and household income, natives work the fewest number of hours.

Keywords: Immigrant women; Economic integration; Part-time employment; Opportunity-cost

Introduction

In many European countries, the shortfall in the working age population is central to national debates regarding the recruitment and integration of immigrants (Del Boca 2009, European Commission 2015). These debates are particularly relevant for Switzerland, which attracts an impressive number of immigrants – 160 000 in 2014 – and particularly highly qualified foreign workers (SFSO, Statweb 2018). In a recent evaluation of the impact of migration on the Swiss labour market, Wanner and colleagues (2016) concluded that migratory flows counterbalanced the erosion of the low- and average-skilled, working-age, non-migrating population, while contributing to fulfilling the economy's demand for highly

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skilled workers. However, immigration restrictions are continuously at the core of the political agenda, making it increasingly difficult for firms to recruit outside the European Union². Nevertheless, despite economic demand for (foreign) workers, on the one hand, and political claims for immigration restrictions, on the other hand, a large proportion of the female resident population remains on the margins of the labour market.

As in other OECD countries, women's educational qualifications and participation in the labour market have increased considerably in Switzerland in recent decades. However, family arrangements and attitudes towards female participation in the labour market remain highly gendered in the country (Bühler and Meier Kruker 2002; Levy and Widmer 2013). It is widely believed that children belong to the private sphere and should be their parents' (read: their mother) and relatives' responsibility (Viry et al., 2009). Institutional factors stand alongside these domestic constraints. Limited and costly external childcare (Buchmann et al. 2002), as well as the joint taxation system for spouses (Schwarz 2012), is often noted as an important hurdle to women's employment in Switzerland. Moreover, the labour market in Switzerland is characterized by an increasing number of part-time positions, particularly in low-skilled activities³. As a result, mothers' involvement in paid work often occurs on a part-time basis, and they must balance the costs and benefits of increasing their volume of paid work. Indeed, despite having one of the highest labour participation rates (75.5%, compared with the OECD average of 60.4%) (OECD, Labour Force Statistic Database 2018), more than half of the working female population in the country works part time, whereas only one man out of six does (SFSO 2018). When measuring the economic integration of foreign-born women, researchers often compare their labour market performance to that of native women. In Switzerland, mothers often work short part time – less than 50% – lowering the threshold of integration for immigrant mothers, whose participation is lower but is characterized by a higher incidence of full-time employment. This context makes it interesting to investigate the patterns of employment among native and immigrant women in Switzerland with different family situations by considering two indicators of labour market attachment: participation and the number of hours worked.

As noted by Bevelander and Groeneveld (2006) in relation to the Netherlands, part-time employment is not only central to the Swiss labour market but also perceived as a means for women's emancipation (i.e., the freedom to choose the amount of time devoted to paid and unpaid activities). However, the mechanisms driving the decisions for and

² For instance, in a February 2014 referendum, Swiss citizens approved the popular initiative "Stop Mass Migration", which aims to reintroduce an annual quota for EU and EFTA nationals.

³ Among the reasons explaining the availability of part-time jobs, one can mention that employers' contributions to the social insurance system (2nd pillar) are not mandatory for annual wages less than 21 150 Swiss francs -- a level that approximately equal to one third of the average wage.

opportunities to access part-time employment differ for native and immigrant populations. Immigrants and natives do not integrate into the same segments of the labour market. For instance, part-time positions are more frequently in the administrative sector, where native women are overrepresented. Immigrants might also consider their stays in Switzerland to be provisional and thus decide to work full time to maximize their benefits before returning to their countries of origin. Additionally, native women can rely on better economic returns on their education. Native women are also more likely to be partnered with Swiss men, whose incomes are, on average, higher than those of immigrant men. Considering these conditions, some groups of low-qualified immigrants might have more financial incentive to maintain a high employment level, regardless of the presence of children. Accordingly, in this paper, we consider these specificities in pursuing two objectives.

First, we compare patterns of employment behaviour across a number of family situations between native and diverse groups of immigrant women. To go beyond the focus on women with pre-school children, we consider the differences in labour supply among four household structures: singles without children; couples without children; couples with children aged 0-5 years old; and couples with children aged 6-14 years old. In an empirical analysis, Zabel (1993) stated that, because of the fixed cost of participation and the constraints imposed by firms on the minimum number of hours, individuals have more power over their participation than over their decisions regarding the supply of working hours. These constraints are expected to be stronger for foreign-born women than for native women⁴. Second, to account for variability in opportunity costs and differences regarding household economic constraints among women from different origins, this analysis focuses in particular on the relative influence of women's educational attainment and their partners' earnings. For this part of the analysis, we distinguish between two groups of immigrants – women from EU countries and women originating from outside the EU – whom we compare to the native female population. Previous studies in Switzerland have confirmed that EU and non-EU immigrants differ greatly in terms of their educational structures, labour profiles and reasons for immigration (Migration-Mobility Indicators 2018). Using pooled annual data from the Swiss Labour Force Survey (SLFS hereafter) for the 2010-2014 period, we use a double-hurdle model to decompose the educational and income effects on two indicators of labour market attachment: (1) participation; and (2) working hours. This study adds to previous research, which has scarcely considered discrepancies in the numbers of hours worked by women of different national origins through distinct family situations. In these cases, levels of

⁴ One reason lies in the expected economic return on hiring a migrant. One might think that, given the higher cost of hiring a foreign-born worker (e.g., administrative procedures, time for adaptation to a new working environment and national norms), employers would favour full timers over part timers to assure that the benefits of hiring a foreign worker outweigh the investment.

part-time work have been aggregated and analysed using multinomial models. Instead, the double-hurdle model allows for the assessing of the contributions of the covariates to the two aforementioned components of labour force participation.

Theoretical perspectives and research hypotheses

Theoretical framework

In advanced countries, as long as they remain childless, young women today are on an almost equal plane with men in relation to education and employment (McDonald 2013). Once they become mothers, women often adapt their labour supply, usually diminishing the time spent on paid work or even withdrawing from the labour market. As stated by McDonald (2000), low gender equity is evidenced by the lack of support for women in combining paid employment and childrearing. It is not surprising, consequently, that many families follow gendered strategies to achieve conciliation solutions (OECD 2011). Highly educated women are more likely to remain employed and to work more hours when they become mothers than women with lower labour market-oriented skills (Becker 1991; Blau and Kahn 2007). According to human capital theory, this decision is due to their larger potential earnings and higher opportunity costs of abandoning the labour force (Becker 1991). Moreover, women's high education levels not only reflect their greater returns from the labour market and opportunities in achieving high professional status, but they also shape their attitudes and gender roles (Van de Kaa 1987).

Individuals in partnerships have greater margins of decision on their levels of labour market involvement since they can rely on the earnings of their spouses to meet family financial needs (Blau et al. 2006). The gender wage gap, as well as the traditional adoption of gender roles within families, is the main reason for the negative effect of husbands' wage rates on their wives' labour supply. In contrast, household budgetary constraints and husbands' unemployment or low earnings also affect women's decisions to enter or remain in the paid work force (Mincer and Polachek 1974). Despite this effect, authors such as Evertsson et al. (2009) and Esteve et al. (2016) have identified marital homogamy and greater female opportunity costs as competing factors of income effects in predicting women's labour supply. When analysing which of these two antagonistic processes predominates in explaining women's employment decisions, empirical research has generally indicated a stronger positive effect of women's own education than of their husbands' income (see Henz and Sundström 2001 for Sweden).

Moreover, the existing literature has often highlighted the specificities of the migration experience affecting the labour performance of immigrant women in the host country. These factors should be considered when interpreting their labour market involvement, compared

with that of native women. Apart from being selectively linked to endogenous migration decisions (Borjas 1987), institutional factors such as immigration policies limiting the labour market participation for family migrants or entry requirements (e.g., holding an employment contract) are important for certain national groups. Other characteristics have been considered powerful explanations for the post-migration behaviour of immigrant women. Among others, the reason for migration (i.e., family or economically motivated), the temporal sequence of migration and key family life-cycle events (González-Ferrer 2011), as well as being married to a foreign-born or a native partner (Blau et al 2011), have been recognized as relevant aspects. Additionally, segmentation and discrimination processes (see, for instance, Lang and Lehmann 2012), especially towards immigrant women from countries with greater cultural divergence from the host country, might favour natives in obtaining employment. These processes decrease the labour and economic returns on human capital for immigrants (e.g., Constant and Massey 2005 for Germany; Bevelander 2005 for Sweden). This preconception accentuates the barriers that immigrants encounter in the recognition of their skills in the host country (Adsera and Chiswick 2007). Finally, the “cultural approach” (Reimers 1985; Antecol 2000), developed in the US, emphasizes the presupposed cultural differences in terms of gender roles (approximated by the gender gap in labour force participation rates across countries of origin) when interpreting the deficient structural integration of ethnic minority women. However, specifically examining economic immigrants to Canada, Lacroix and colleagues (2017) concluded that, even among work-oriented immigrants, women from non-western regions are doubly disadvantaged in access to first (qualified) employment, due both to their origins and to their gender. Many researchers have analysed the differences in employment participation patterns between native and immigrant women in different countries. In Germany, Dustmann and Schmidt (2000) found that migrants’ labour market participation reacts less elastically than that of natives to the number of children. Moreover, these authors found that elasticity is similar to other household income in terms of part-time employment, and it is greater for full-time work schedules. They explained the major effect of education on participation probabilities for natives being greater than for immigrants as being the effect of the difficulties of the second group in terms of transferability of educational credentials into the host labour market. Also for Germany, Constant and Massey (2005) detected that the longer work schedules adopted for immigrant women compared to natives pay off for their adverse occupational positions, reducing wage divergences between natives and immigrants. For the US, Stier and Tienda (1992) proved that the labour supply of Hispanic immigrant wives is greatly affected by their earning potential. Their results indicate that, compared with that of US-born white wives, the employment behaviour of immigrants is less affected by motherhood (due to the higher incidence among immigrants of extended households) and less negatively correlated with

husbands' salaries. Also for the US, Blau et al. (2011) pointed out that the working time of immigrant wives assimilates to that of US natives, in parallel with the length of residence in the country. Finally, for the Netherlands, Bevelander and Groeneveld (2006) reported that higher educational returns for native women might explain their higher levels of part-time employment, compared with immigrant women. Other authors have restricted their analyses to the different impacts of childbearing events on the labour market withdrawal or reduction of working hours for native and immigrant women. For the US, Taniguchi and Rosenfeld (2000) found a greater risk of exiting the labour market for black women after fertility. For the Netherlands, Kil et al. (2017) investigated the effect of the arrival of a baby on the labour attachment of certain groups of first- and second-generation migrant women. They explained the lower employment attachment after fertility as tied to migration and traditional cultural norms for the first-generation immigrants, whereas labour market penalties constituted the main explanation for the low labour attainment among the second generation after fertility.

For Switzerland, many researchers have emphasized the disadvantaged labour market positions of immigrant women, compared with Swiss-born women. Golder (1999) stressed the higher risk of unemployment for immigrant women. For women who acceded to employment, Merz-Krobana (1993) pointed to differences in terms of occupation and economic sector, whereas Pecoraro (2011) showed higher levels of overqualification. Few studies have focused on the differences between native and immigrant women regarding their participation in employment and arrangements for full-time or part-time work. Using data from the 2000 Swiss census, Wanner et al. (2005) stressed the heterogeneity between immigrant groups regarding employment trends. When differentiating among diverse family scenarios, the analysis showed that the presence of young children in the household affected in particular the supply of Swiss women for employment; these women were less likely than immigrant women (with the exception of those from Germany and North America) to participate in the work force. However, the analysis was restricted only to participation, omitting the diverse patterns of market time. Liebig et al. (2012) focused on the interaction between origin and having children, controlling for educational attainment. Their main conclusion was that the presence of children is associated with a higher probability of part-time work, especially for native-born women. Nevertheless, the household dimension was neglected since they did not include partner characteristics. Restricting the analysis to one year following childbirth, Vidal-Coso (2018) found that the probability of leaving employment after fertility is higher for immigrant women, whereas if they continue working for the first year after childbirth, they work more hours than Swiss-born women. The main conclusion of the analysis was that differences in terms of post-fertility labour supply are mainly explained by previous occupational characteristics. Lower employment continuation after maternity for immigrant women is mainly explained by their disadvantaged position in the labour market.

Nevertheless, the period covered in this analysis was not sufficiently long to assess whether the adaptation of women's labour supply after childbirth is only a temporary conciliatory strategy in compensation for the short period of paid maternity leave in the country.

Swiss context

As stated by Piguet (2004), Switzerland is characterized by its long trajectory as a country of immigration. The profile of the female foreign-born population in the country has evolved in parallel with the country's economic development and the evolution of its migration policies. After the Second World War, large and successive unskilled immigration flows entered Switzerland -- among which a majority was female⁵. The main flows from the 1950s to the 1970s arrived mainly from Italy and to a smaller extent from Spain. They were followed by Portuguese nationals arriving during the 1980s and by former Yugoslavian and Turkish refugees entering during the 1980s and 1990s. A bilateral agreement on the free movement of persons between Switzerland and the EU was signed in 2002. Since then, the Swiss frontiers have been very restrictive to the entrance of non-European unskilled migrants, whereas new legislation has favoured highly skilled workers (Haug 2005). Some authors (Pecoraro, 2011; Favre 2011) have identified, in the beginning of the 2000s, a shift in the occupational profile of the foreign labour force in Switzerland and the overrepresentation at the top of the occupational structure (Favre, 2011) with the recent arrival of highly skilled immigrants, mainly from Western Europe and North America. Nevertheless, the authors reported the continuation of the entrance of low-skilled immigrants, explaining the polarized educational profiles of recent migration and the significant presence of immigrants in more disadvantaged occupational positions. Indeed, the analysis of Vidal-Coso and Ortega-Rivera (2017) showed for Switzerland that immigrant women coming from Portugal, the former Yugoslavia, Turkey, Latin America, Africa and Asia present a lower likelihood of obtaining salaried positions, compared with Swiss and EU/EFTA nationals. In parallel with the evolution of the origins and skill composition of the successive immigrant flows, the reasons for migration have also changed: although professional motives are still dominant today, fewer people are migrating for work purposes (58% among Europeans and 12% for all other regions combined), and more are migrating for family reunification (30% and 42%, respectively), education (30% and 24%) or asylum (0.4% and 14%) (State Secretariat for Migration, SYMIC register 2011-2015). In total, Switzerland registered approximately 750 000 entries of foreigners between 2011 and 2015, with a large majority (approximately 80%) of immigrants coming from Europe (State Secretariat for Migration, SYMIC register 2011-

⁵ For a short period following the Second World War, female labour immigration exceeded male immigration for both demographic and economic reasons (e.g., demand for female workers in the textile industry) (Wanner et al. 2009).

2015). As a result of the settlement process, Switzerland is now among the countries worldwide with the highest and most heterogeneous proportion of foreigners. Indeed, according to our data, almost 30% of the Swiss female labour force was foreign born in 2014.

In terms of conciliatory policies, Switzerland is characterized by scarce and expensive provision of external childcare, which encourages mothers either to withdraw from employment or to work on part time basis (Buchmann et al. 2002; Stadelmann-Steffen 2007; Dutu 2014). Effectively, the most prevalent model in Switzerland is the “one-and-a-half-earner” model, which restructures women’s time while leaving men’s untouched (Stadelmann-Steffen 2007). The prevalence of this model varies by region. In German-speaking cantons, the actual and potential demand for public conciliatory policies is lower, whereas in the French- and Italian-speaking parts of the country, access to day care is easier and the school schedules more suitable for conciliatory purposes (Bühler and Meier Kruker 2002; Stadelmann-Steffen 2007). These authors mentioned the negative impacts of the shortage and high cost of childcare services on the female labour supply (Bütler 2011). Banfi et al. (2009) suggested that immigrant families are more likely to benefit from external childcare services because they cannot rely on the transference of care to extended family members. However, Schlanser (2011) concluded that, while French and German citizens living in Switzerland used external childcare solutions, other groups, especially less qualified ones, were much less likely to benefit from these services for economic reasons.

Hypotheses

Overall, our premise is that the “one-and-a-half-earner” model is more prevalent among native than immigrant families, especially in the presence of young children. While foreign-born women are expected to have lower participation rates, Swiss-born women are expected to have negative outcomes regarding the number of hours if employed. However, key determinants, such as educational level and household income, vary according to birthplace.

First, we expect strong, positive relationships between women’s education and both their labour participation and the number of hours that they work. However, native, EU, and non-EU women differ significantly in terms of their education structures and expected returns on their levels of education. Based on human capital theory, native women should be more responsive to their level of education due to higher educational economic returns. In contrast, because of the difficulties encountered by non-EU migrants in transferring their human capital to the host labour market, we expect a weaker correlation between educational level and the probability of employment for these women. However, they would need to counterbalance their lower educational returns in the labour market with a greater number of hours in employment. In contrast, EU women are privileged in the Swiss labour market owing

to the Swiss migration policy, which favours EU citizens and facilitates their labour insertion and the transferability of their skills. As a consequence, we hypothesize that both highly educated and minimally educated EU women will be positively represented in employment while maintaining an elevated number of working hours. On the one hand, the highly educated receive important returns on their level of education, and on the other hand, the migration of the less educated workers to Switzerland is often motivated by the advantageous labour conditions in the country. Therefore, EU migrants should be more work oriented than native and non-EU immigrant women, regardless of their family composition.

Second, we predict a negative relationship between partners' income and the two indicators of labour market attachment. Following a neoclassical theoretical framework, individuals' incentives to work are negatively correlated with spouses' wages. More concretely, we hypothesize that a native's time devoted to paid work will be more conditioned on her partner's income. In contrast, we expect the two collectives of immigrants to be more responsive through their participation levels. Again, we expect the employment gap to be stronger for non-EU women. When only one or one and a half salaries are sufficient to meet household needs, partners have a greater margin to decide how many hours they dedicate to paid and unpaid work. Moreover, we argue that immigrants, especially lower-qualified ones, have a smaller margin to negotiate their working schedules. Fewer part-time opportunities could lead to increased dropouts when economic resources are sufficient and, conversely, to more full-time employment for less affluent households. Additionally, immigrants, especially those from non-EU countries, are more represented in less prestigious sectors of employment and might have to compensate with an extended schedule to achieve a sufficient household income.

Methodology

Data

The data used in this investigation are from the SLFS (2010-2014), which is a representative household survey conducted by the Swiss Federal Statistical Office. It gathers information on the labour behaviours, socio-economic characteristics and household compositions of the permanent resident population aged 15 and older. This dataset also benefits from oversampling of the foreign-born population, allowing us to consider the diversity among the most numerous national groups in the country. We restrict our sample to women aged 20 to 49 years old. We exclude individuals currently in school, as well as independent workers. Additionally, we exclude same-sex couples and single mothers to address the heterogeneous forms of employment of immigrants and natives in similar household configurations, rather than reflecting the diversity of family types. Overall, the

sample is composed of 39 869 women, among whom 21 962 were born in Switzerland, 9 792 in the European Union, and 8 115 outside of the EU.

Whereas employment rates and the number of working hours are almost identical across family types for men (Appendix 1), there is significant variability for women. Consequently, we distinguish in our empirical analysis the employment patterns of women living in any of the following four household structures: (1) singles without children; (2) couples without children; (3) couples whose youngest child is aged 0 to 5 years; and (4) couples whose youngest child is aged 6 to 14 years.

Variables

The dependent variables capture two indicators of labour market attachment. First, we consider participation (binary variable), and second, we consider the number of hours worked per week given participation in employment (continuous variable). The main explanatory factor is the women's birthplace. When the sample sizes are sufficient, women's origins are considered separately; otherwise, they are grouped by region. In the first step of the analysis, we consider the following 15 groups according to birthplace: Switzerland, Italy, France, Portugal, Spain, Germany, Austria, other EU member states, other European countries, former Yugoslavia⁶, Turkey, EFTA countries with North America and Oceania, Latin America, Africa, and Asia. In the second step of the analysis, we pay special attention to the interactive effects of women's education levels and household income to assess the specific influence of these characteristics on the employment patterns of women according to their origins. Information on household income is obtained by subtracting women's income from the total household income. Thus, the remaining income included in the analysis refers to the partner's income plus other sources of income from members living in the same dwelling. For interpretation convenience and according to similarities between regions, immigrant women are then grouped according to their birthplaces.

In addition to these key determinants, other control variables that pertain to women's specific characteristics and household and contextual factors are included in the model specification. The individual variables are age, marital status (married or not), the number of additional resident children younger than 15 years old, the length of stay in the country, and citizenship status (whether the person holds Swiss nationality⁷). We include two additional controls to consider the role of the partner's profile. First, we consider educational homogamy within couples, distinguishing whether the woman has the same level of education as her partner or is more or less educated. Second, we add the partner's nationality (Swiss or not) to acknowledge the potential role of mixed marriage (or mixed partnership) on the

⁶ With the exception of Slovenia, which is grouped with other EU member states.

⁷ Switzerland grants citizenship on a *jus sanguinis* basis. This means that second- or third-generation *immigrants* do not automatically hold Swiss nationality.

employment convergence of these couples with Swiss standards. Finally, we consider specific environmental characteristics by distinguishing between women living in rural and urban areas and distinguishing among those living in German-, French- and Italian-speaking regions. However, information on language proficiency and on “primary” or “tied” family migration status is not available in this dataset. These limitations should be borne in mind when interpreting the results for foreign-born women since they were shown to be important determinants of their occupational integration processes.

Methods

Studies have employed different methods to model two dimensions of labour supply, i.e., hours worked and participation. The tobit model assumes that a single mechanism drives the participation and decisions regarding the amount of time spent working. To overcome this limitation, we use the double-hurdle model proposed by Cragg (1971), which, in contrast to the tobit model, includes a two-stage procedure. Generally, a hurdle model addresses genuine zeros, in which individuals make choices in the presence of certain constraints (Humphrey 2013). Cragg (1971) suggested that two independent hurdles must be passed to observe a positive value: individuals choose whether to participate in the labour market; and they also make decisions regarding how much to work. The first stage estimates the probability of reporting a positive outcome using a probit model, and the second stage models the amount of the decision conditional on participation, using a truncated equation. We report marginal effects for interpretation convenience. These effects are evaluated at the sample mean, with the exception of the length of stay in Switzerland, which is fixed at more than eight years⁸. As Burke (2009) noted, independence in estimation (two-stage procedure) does not mean independence in interpretation. Following McDonald and Moffitt's (1980) decomposition procedure, the total marginal effect (or unconditional effect) is disaggregated into two parts: a partial effect for the participation outcome, which is weighted by the expected value of market work, and a partial effect for the number of hours given participation, which is also weighted by the probability of being observed in the labour market (Robles 2012). Given this methodological design, we identify employment patterns across origins in four family compositions. One important drawback of this model is that it does not account for self-selection into groups of childless women and mothers according to the women's employment preferences; e.g., work-oriented women who anticipate a longer career might be less inclined to have a child (see Heckman 1979). In such cases, the effect of childbirth on employment would not be counterfactual. Instead, our objective is to emphasize the different employment trends across origins within each family composition. In a second

⁸ This except is made to account for our inability to attribute the mean value of the length of stay for the Swiss-born population.

step, we extend this model by including interaction effects, and we account for the specific effects of the education and household income of foreign-born and native women.

Results

Descriptive results

Table 1 presents the socio-demographic and family characteristics of the subsample of Swiss-born and foreign-born women included in our analysis. Few differences are observed regarding the median age. With respect to the household structure, the Swiss-born group contains the highest percentage of single and childless women, along with the groups from neighbouring countries and Spain. In contrast, the groups with larger percentages of children aged 0-14 are those from Portugal, the former Yugoslavia, Turkey, and Asia. However, insignificant differences in the number of children are found across groups if we consider only women who have children.

Nevertheless, diverse patterns of external childcare are found among these women. The groups from Turkey (82.1%), the former Yugoslavia (76.1%), EFTA, North America and Oceania (73.7%), other European countries (71.2%) and Africa (71%) rely little on any type of childcare outside of household members, compared with the widespread use of these resources by Swiss-born women and women from neighbouring countries. It is relevant to emphasize the amount of care provided by extended family members in the Swiss-born group. This resource is scarce for immigrant women, who either do not use any type of external childcare or bring their children to formal childcare services.

Table 1: Socio-demographic and family characteristics, women aged 20–49

| | Switzerland | Italy | France | Portugal | Spain | Former Yugoslavia | Germany | Austria | Turkey | Other EU | EFTA & N. America & Oceania | Other Europe | Latin America | Africa | Asia |
|---|-------------|-------|--------|----------|-------|-------------------|---------|---------|--------|----------|-----------------------------|--------------|---------------|--------|------|
| <i>Median age</i> | 35,9 | 38,5 | 36 | 36,4 | 38,3 | 34 | 36,3 | 37,8 | 36,1 | 36,4 | 38,3 | 34,8 | 35,9 | 36,5 | 35,8 |
| Household type (%) | | | | | | | | | | | | | | | |
| <i>Single, childless</i> | 31,2 | 25,3 | 25,6 | 12,3 | 19,3 | 12,4 | 28,1 | 18,8 | 11,3 | 19 | 21,3 | 9,6 | 13,5 | 20,2 | 12,9 |
| <i>Childless couple</i> | 28,5 | 35,6 | 30,9 | 33,5 | 41,1 | 28,8 | 36,9 | 39,1 | 31,9 | 33 | 29,9 | 35,7 | 35,2 | 31 | 34 |
| <i>Couple with youngest children 0-5</i> | 22,6 | 19,8 | 27,9 | 25 | 17,7 | 32,6 | 22,5 | 22,7 | 31 | 30,2 | 26,4 | 33,9 | 32,1 | 30,3 | 31 |
| <i>Couple with youngest children 6-14</i> | 17,7 | 19,2 | 15,6 | 29,2 | 22 | 26,3 | 12,5 | 19,4 | 25,8 | 17,8 | 22,5 | 20,8 | 19,2 | 18,5 | 22 |
| Living with extended family (%) | 1,6 | 1,5 | 0,8 | 2,7 | 1,5 | 13,1 | 1,3 | 1,7 | 3,7 | 3,5 | 1,9 | 5,3 | 3,1 | 2,5 | 3,7 |
| Married (%) | 47,4 | 58,1 | 44 | 67,5 | 57,1 | 82,2 | 43,1 | 53,7 | 82,2 | 62,7 | 67,6 | 77,5 | 70,3 | 62,1 | 78,9 |
| Swiss national partner | | | | | | | | | | | | | | | |
| Children 0-14 | 88,5 | 30,6 | 40,3 | 13,6 | 35,7 | 33,7 | 39,7 | 63,3 | 41,4 | 42,8 | 47,9 | 51,9 | 64,5 | 50,6 | 58,5 |
| <i>Mean (with partner and children 0-14)</i> | 1,8 | 1,6 | 1,7 | 1,4 | 1,6 | 1,7 | 1,6 | 1,7 | 1,6 | 1,7 | 1,9 | 1,5 | 1,6 | 1,8 | 1,6 |
| <i>0</i> | 56,1 | 58,3 | 53,6 | 42,1 | 57 | 38,8 | 62,6 | 56,1 | 40,5 | 49,3 | 49 | 43,5 | 44,7 | 43,9 | 44,9 |
| <i>1</i> | 18,5 | 21,7 | 22,7 | 36,4 | 22,3 | 27,6 | 19,7 | 20,9 | 31 | 25,3 | 19,3 | 32,5 | 30,8 | 26,9 | 27,1 |
| <i>2</i> | 19,6 | 17,8 | 18,5 | 19,2 | 17,7 | 25,7 | 14,1 | 18,1 | 22,4 | 20,2 | 21,2 | 20,3 | 20,6 | 21,1 | 22,5 |
| <i>3+</i> | 5,8 | 2,3 | 5,2 | 2,3 | 2,9 | 7,9 | 3,6 | 4,9 | 6,2 | 5,2 | 10,5 | 3,6 | 3,9 | 8,2 | 5,5 |
| External childcare (for children 0-14) * | | | | | | | | | | | | | | | |
| <i>Not</i> | 54,6 | 64,8 | 43,1 | 61,6 | 52,5 | 76,1 | 57,1 | 53,4 | 82,1 | 62,8 | 73,7 | 71,2 | 64 | 71 | 68,6 |
| <i>Formal childcare</i> | 16,2 | 18 | 40 | 21,9 | 30,3 | 7,7 | 29,4 | 24,2 | 13,6 | 23,8 | 14,4 | 18,8 | 19,2 | 18,7 | 21,2 |
| <i>Extended family</i> | 25,7 | 12,9 | 9,6 | 11,4 | 11,3 | 15,8 | 7 | 14,3 | 4,1 | 9,1 | 6,3 | 10 | 13,3 | 5,1 | 8,4 |
| <i>Other</i> | 3,5 | 4,3 | 7,2 | 5,2 | 5,9 | 0,5 | 6,6 | 8 | 0,3 | 4,3 | 5,6 | 0 | 3,5 | 5,2 | 1,8 |

Table 1: Socio-demographic and family characteristics, women aged 20–49 (Continued)

| | Switzerland | Italy | France | Portugal | Spain | Former Yugoslavia | Germany | Austria | Turkey | Other EU | EFTA & N. America & Oceania | Other Europe | Latin America | Africa | Asia |
|--|-------------|---------|---------|----------|---------|-------------------|---------|---------|--------|----------|-----------------------------|--------------|---------------|--------|---------|
| Partner's educational level (%) | | | | | | | | | | | | | | | |
| <i>Low</i> | 5,3 | 27,1 | 10,3 | 64,6 | 21,4 | 33,3 | 3,8 | 4,4 | 41,7 | 7,4 | 2,8 | 5,2 | 10,2 | 22,5 | 17,7 |
| <i>Medium</i> | 55,6 | 44,2 | 37,1 | 28,8 | 45,8 | 58 | 43 | 59 | 48 | 46,4 | 28 | 43,6 | 53,2 | 46 | 43,5 |
| <i>Tertiary</i> | 39,1 | 28,7 | 52,6 | 6,6 | 32,8 | 8,7 | 53,3 | 36,6 | 10,3 | 46,2 | 69,2 | 51,1 | 36,6 | 31,5 | 38,8 |
| Partner's working time (%) | | | | | | | | | | | | | | | |
| <i>Not employed</i> | 5,9 | 10,2 | 9,6 | 10,7 | 12,9 | 16,2 | 4,7 | 3,2 | 23,6 | 9,1 | 11,4 | 13,4 | 14,4 | 24,3 | 12,6 |
| <i>0-40 h</i> | 13,7 | 19,8 | 14 | 14,5 | 20,2 | 9,5 | 14,1 | 10,3 | 9 | 12,4 | 12,3 | 14,8 | 16,3 | 15,1 | 11,8 |
| <i>40 h+</i> | 80,4 | 70 | 76,5 | 74,8 | 66,8 | 74,3 | 81,1 | 86,5 | 67,4 | 78,5 | 76,3 | 71,8 | 69,3 | 60,6 | 75,6 |
| Partner's wages (mean) | 109 852 | 102 950 | 108 576 | 78 064 | 124 340 | 88 908 | 119 061 | 100 154 | 82 157 | 125 400 | 183 443 | 177 532 | 95 431 | 75 142 | 104 226 |
| Immigration characteristics | | | | | | | | | | | | | | | |
| <i>Median years in Switzerland</i> | -- | 17,3 | 10,1 | 14,1 | 17,1 | 15,1 | 8,2 | 13,9 | 16,7 | 11,3 | 12 | 6,8 | 10,6 | 12,1 | 11,3 |
| <i>Immigrated aged 16 or older (%)</i> | -- | 70,4 | 91,5 | 82,3 | 70,4 | 69,6 | 93,3 | 84,6 | 75 | 85,7 | 78,8 | 96,2 | 87,5 | 83,8 | 83,7 |
| Linguistic region | | | | | | | | | | | | | | | |
| <i>German</i> | 74 | 47,5 | 18,4 | 32 | 49,9 | 80,6 | 93,9 | 93,9 | 83,4 | 70,2 | 59,1 | 65 | 57,5 | 41,7 | 77,4 |
| <i>French</i> | 21,4 | 19,9 | 80,5 | 62,2 | 46 | 15,4 | 4,9 | 3,9 | 14,1 | 25,3 | 38,1 | 28,2 | 35 | 57 | 21 |
| <i>Italian</i> | 4,2 | 32,4 | 1,1 | 5,3 | 3,9 | 4 | 1 | 2 | 2,4 | 4,5 | 2,5 | 6,8 | 7,5 | 1,3 | 1,4 |
| <i>Romansh</i> | 0,4 | 0,2 | 0 | 0,6 | 0,2 | 0 | 0,2 | 0,2 | 0 | 0 | 0,3 | 0 | 0 | 0 | 0,2 |
| Residence in urban areas (%) | 68,2 | 87,1 | 78,5 | 75,6 | 86,2 | 79,5 | 79,9 | 76,4 | 87,9 | 83 | 86,7 | 87,1 | 85,7 | 82,6 | 85,2 |
| <i>Observations (N), not weighted</i> | 21 962 | 1 073 | 1 144 | 1 537 | 383 | 2 655 | 3 312 | 334 | 651 | 2 009 | 390 | 487 | 1 286 | 1 082 | 1 564 |
| <i>%</i> | 55,1 | 2,7 | 2,9 | 3,9 | 1 | 6,7 | 8,3 | 0,8 | 1,6 | 5 | 1 | 1,2 | 3,2 | 2,7 | 3,9 |

Source: SFLS 2010–2014

In relation to partner characteristics, partners' education and income were clearly lower for the Portugal, Turkey and former Yugoslavia groups than for the France, Germany, other EU, EFTA, North America and Oceania and other European groups. The latter groups of women were in partnerships with more educated and better-paid men. Their partners worked long hours in all cases, although it is equally relevant that male unemployment in former Yugoslavian, Turkish and African groups might explain their lower mean wages. Immigrants are more concentrated in urban areas than Swiss-born women. Moreover, many immigrant groups from non-neighbouring countries tend to settle in the French-speaking regions, with the exception of the former Yugoslavian and Turkish groups, which concentrate in the German-speaking region. Finally, the median years spent in Switzerland reveals longer settlement and a larger percentage of women arriving at younger ages (aged 0-15) among the most traditional groups in the country, particularly Italians and Spaniards.

Women's educational and labour distributions are displayed in Table 2. Whereas Swiss-born women are more concentrated at the medium educational level, the share of immigrant women who completed tertiary education is higher in general, in accordance with the highly skilled profile of immigration in Switzerland. In contrast, many Portuguese, former Yugoslavian and Turkish women have low qualifications, whereas Latin American, African and Asian women present a dual educational distribution. The labour force participation and employment levels are higher for Swiss-born and other EU women than for the other groups. Temporality is generally low in all cases, whereas public employment is more common for Swiss-born women, as expected. In relation to the time devoted to paid employment, it is relevant to mention the large share of native women working less than 50% (23.5%) and the small percentage working full time (43.3%) -- only slightly higher than that of Turkish women. Finally, we observe a dual profile of the immigrant female population regarding their socio-professional categories, in line with the observations regarding their educational profiles. Women from the EU (with the exception of Portugal), EFTA, North America and Oceania and other European countries are overwhelmingly concentrated at higher positions on the socio-professional scale, whereas Portuguese, former Yugoslavian and Turkish women are over-represented in the unskilled category.

Table 2: Education and labor characteristics, women aged 20–49

| | Switzerland | Italy | France | Portugal | Spain | Former Yugoslavia | Germany | Austria | Turkey | Other EU | EFTA & N. America & Oceania | Other Europe | Latin America | Africa | Asia |
|---|-------------|-------|--------|----------|-------|-------------------|---------|---------|--------|----------|-----------------------------|--------------|---------------|--------|-------|
| Partner's educational level (low) | 5,3 | 27,1 | 10,3 | 64,6 | 21,4 | 33,3 | 3,8 | 4,4 | 41,7 | 7,4 | 2,8 | 5,2 | 10,2 | 22,5 | 17,7 |
| <i>Medium</i> | 55,6 | 44,2 | 37,1 | 28,8 | 45,8 | 58,0 | 43,0 | 59,0 | 48,0 | 46,4 | 28,0 | 43,6 | 53,2 | 46,0 | 43,5 |
| <i>Tertiary</i> | 39,1 | 28,7 | 52,6 | 6,6 | 32,8 | 8,7 | 53,3 | 36,6 | 10,3 | 46,2 | 69,2 | 51,1 | 36,6 | 31,5 | 38,8 |
| Partner's working time (not employed) | 5,9 | 10,2 | 9,6 | 10,7 | 12,9 | 16,2 | 4,7 | 3,2 | 23,6 | 9,1 | 11,4 | 13,4 | 14,4 | 24,3 | 12,6 |
| <i>0-40 h</i> | 13,7 | 19,8 | 14,0 | 14,5 | 20,2 | 9,5 | 14,1 | 10,3 | 9,0 | 12,4 | 12,3 | 14,8 | 16,3 | 15,1 | 11,8 |
| <i>40 h+</i> | 80,4 | 70,0 | 76,5 | 74,8 | 66,8 | 74,3 | 81,1 | 86,5 | 67,4 | 78,5 | 76,3 | 71,8 | 69,3 | 60,6 | 75,6 |
| Partner's wages (mean) | 109 | 102 | 108 | 78 | 124 | 88 | 119 | 100 | 82 | 125 | 183 | 177 | 95 | 75 | 104 |
| | 852 | 950 | 576 | 064 | 340 | 908 | 061 | 154 | 157 | 400 | 443 | 532 | 431 | 142 | 226 |
| Immigration characteristics | | | | | | | | | | | | | | | |
| <i>Median years in Switzerland</i> | -- | 17,3 | 10,1 | 14,1 | 17,1 | 15,1 | 8,2 | 13,9 | 16,7 | 11,3 | 12 | 6,8 | 10,6 | 12,1 | 11,3 |
| <i>Immigrated aged 16 or older (%)</i> | -- | 70,4 | 91,5 | 82,3 | 70,4 | 69,6 | 93,3 | 84,6 | 75 | 85,7 | 78,8 | 96,2 | 87,5 | 83,8 | 83,7 |
| Linguistic region (German) | 74,0 | 47,5 | 18,4 | 32,0 | 49,9 | 80,6 | 93,9 | 93,9 | 83,4 | 70,2 | 59,1 | 65,0 | 57,5 | 41,7 | 77,4 |
| <i>French</i> | 21,4 | 19,9 | 80,5 | 62,2 | 46,0 | 15,4 | 4,9 | 3,9 | 14,1 | 25,3 | 38,1 | 28,2 | 35,0 | 57,0 | 21,0 |
| <i>Italian</i> | 4,2 | 32,4 | 1,1 | 5,3 | 3,9 | 4,0 | 1,0 | 2,0 | 2,4 | 4,5 | 2,5 | 6,8 | 7,5 | 1,3 | 1,4 |
| <i>Romansh</i> | 0,4 | 0,2 | 0,0 | 0,6 | 0,2 | 0,0 | 0,2 | 0,2 | 0,0 | 0,0 | 0,3 | 0,0 | 0,0 | 0,0 | 0,2 |
| Residence in urban areas (%) | 68,2 | 87,1 | 78,5 | 75,6 | 86,2 | 79,5 | 79,9 | 76,4 | 87,9 | 83,0 | 86,7 | 87,1 | 85,7 | 82,6 | 85,2 |
| Socio-professional category (Manager) | 2,6 | 3,7 | 5,1 | 0,8 | 3 | 1,5 | 3,7 | 3,3 | 0,7 | 3,8 | 5,5 | 0,9 | 2 | 2,4 | 1,3 |
| <i>Higher professional</i> | 17,3 | 22,7 | 35,5 | 5,3 | 23,1 | 4,9 | 37,1 | 26,2 | 7,8 | 31,6 | 49,4 | 33,6 | 15,8 | 16,5 | 17,7 |
| <i>Lower professional and technical</i> | 30,9 | 22,9 | 33,5 | 17,9 | 27,1 | 17,6 | 31,1 | 33,1 | 16,9 | 25,8 | 27,9 | 32,8 | 23,8 | 23,1 | 27 |
| <i>Intermediate qualified (non-manual)</i> | 38,6 | 26,5 | 16,2 | 17,4 | 23,3 | 32,6 | 23,5 | 29,1 | 23,4 | 29 | 13 | 18,5 | 27 | 26,5 | 23,1 |
| <i>Intermediate qualified (manual)</i> | 3,4 | 3,2 | 2,3 | 2,5 | 1,9 | 5,8 | 1,9 | 4,1 | 3,9 | 3,1 | 0,4 | 1,9 | 2,7 | 3 | 3,9 |
| <i>Unskilled worker</i> | 3,8 | 20,5 | 6,8 | 54,7 | 18,6 | 35,5 | 1,6 | 3,6 | 44,8 | 5,9 | 3 | 10,5 | 24,5 | 26,3 | 23,2 |
| <i>Trainee</i> | 3,3 | 0,6 | 0,6 | 1,3 | 1,6 | 1,6 | 0,9 | 0,6 | 2,4 | 0,7 | 0,3 | 0,9 | 3,9 | 2,2 | 3 |
| <i>Not classifiable</i> | 0,1 | 0 | 0 | 0,1 | 1,5 | 0,5 | 0,1 | 0 | 0 | 0,2 | 0,4 | 0,8 | 0,3 | 0,1 | 0,8 |
| Number of observations (N), not weighted | 21 962 | 1 073 | 1 144 | 1 537 | 383 | 2 655 | 3 312 | 334 | 651 | 2 009 | 390 | 487 | 1 286 | 1 082 | 1 564 |
| % | 55,1 | 2,7 | 2,9 | 3,9 | 1 | 6,7 | 8,3 | 0,8 | 1,6 | 5 | 1 | 1,2 | 3,2 | 2,7 | 3,9 |

Employment patterns by origin and family composition

Table 3 provides the results of the multivariate analysis of the participation level and hours worked by natives and immigrant women. Differences for the first category, *singles*, are constrained within the participation equation, whereas outcomes for the number of hours are almost the same across groups. Discrepancies in employment levels are already noticeable at this stage for Turkish, other European, and African women. Conversely, there is no significant difference between women born in the EU, with the exception of Portuguese women, whose participation rate is 6% higher than that of Swiss women. The second group, *women living with a partner without children*, emphasizes the disadvantage in employment rates of women born outside the EU. With the exception of women born in EFTA countries, North America and Oceania, all of the groups show a lower probability of being employed. In contrast, women born in Germany and Portugal show a slight advantage over Swiss-born women. Regarding singles, the amount of time devoted to paid work varies only slightly among women of different national origins.

Heterogeneous forms of participation and working time patterns emerge for the third group, *women with pre-school children*. Indeed, employment supplies vary greatly across origins for the two outcomes of interest. Women from EU countries prove to be more or equally employed, compared to Swiss women. Statistical differences appear for France, Spain, Germany and Portugal, which show an increased probability of being employed. In contrast, the disadvantage in employment rates is widespread among women born outside the EU. The probability of being employed is approximately 18% to 23% lower for women born in Turkey, Latin America, Asia, Africa and other European countries. Distinctions are also important for the number of hours, with a contrast emerging between the Swiss and all of the migrant groups. When employed, all groups of foreign-born women work more hours than Swiss women (with the exception of those from Austria, Italy and Turkey, for whom the difference is not statistically significant). These results are similar to those of the fourth group, *women with children aged 6 to 14 years*. Differences in employment level are still at the advantage of some groups from the EU (particularly for women from Portugal and Spain), while women from all of the non-EU countries have a negative probability of being employed, in contrast to Swiss-born women. Again, the number of hours worked is different between the foreign-born groups and the natives, with the paid workload of the latter being smaller on average.

Table 3: Marginal effects for employment and the number of hours worked by family composition, women aged 20-49

| | Singles | | Couples without children | | Couples with child <5 | | Couples with child >5 & <15 | |
|---------------------------------|-----------|-----------|--------------------------|-----------|-----------------------|----------|-----------------------------|----------|
| | Part. | Hours | Part. | Hours | Part. | Hours | Part. | Hours |
| Country of birth (Swiss) | | | | | | | | |
| Italy | 0,01 | 0,30 | 0,01 | -0,80 | 0,02 | 1,90 | -0,06 | 0,10 |
| France | 0,01 | 1,80 ** | 0,01 | 2,10 ** | 0,08 ** | 6,50 *** | 0,04 | 4,50 *** |
| Portugal | 0,06 ** | 1,90 ** | 0,05 ** | 0,90 | 0,15 *** | 7,10 *** | 0,07 ** | 6,30 *** |
| Spain | 0,02 | 2,40 * | 0,03 | 2,70 ** | 0,11 * | 6,60 *** | 0,10 * | 5,00 ** |
| Former Yougoslavia | -0,03 | 1,20 * | -0,05 ** | 0,80 | -0,04 | 7,90 *** | -0,05 * | 8,40 *** |
| Germany | 0,02 | 1,00 * | 0,05 *** | 2,50 *** | 0,08 *** | 4,20 *** | -0,03 | 3,50 ** |
| Austria | 0,04 | 0,30 | 0,03 | 3,30 | 0,02 | 1,40 | 0,08 | 2,80 |
| Turkey | -0,26 *** | 0,40 | -0,14 *** | 0,00 | -0,23 *** | 2,70 | -0,20 *** | 3,90 ** |
| Other EU | -0,04 | 1,00 | -0,01 | 0,70 | -0,02 | 5,20 *** | -0,09 ** | 4,70 *** |
| EFTA, North America, Oceania | -0,02 | 0,10 | -0,02 | 2,00 | -0,09 | 4,40 * | -0,20 ** | 2,30 |
| Other European | -0,16 ** | 1,60 | -0,12 ** | 0,30 | -0,23 *** | 3,80 * | -0,23 ** | 2,90 |
| Latin America | -0,03 | -0,60 | -0,10 *** | -2,20 ** | -0,21 *** | 2,70 * | -0,17 *** | 3,60 ** |
| Africa | -0,08 ** | -0,40 | -0,09 ** | -0,80 | -0,18 *** | 2,70 * | -0,14 ** | 5,70 *** |
| Asia | -0,05 | -0,20 | -0,11 *** | 1,20 | -0,19 *** | 6,20 *** | -0,14 *** | 4,70 *** |
| Age group (30-35) | | | | | | | | |
| 20-25 | -0,03 * | 0,60 | -0,06 ** | 1,00 | -0,15 *** | -1,40 | -0,19 | 7,40 |
| 25-30 | -0,01 | -0,70 | 0,00 | 0,40 | -0,60 ** | 1,30 * | -0,10 | -1,60 |
| 35-40 | -0,02 | -1,00 ** | -0,01 | -1,20 ** | 0,00 | 0,30 | 0,01 | -1,40 |
| 40-45 | -0,05 *** | -2,00 *** | -0,04 ** | -3,20 *** | -0,05 ** | 1,00 | 0,00 | -1,90 * |
| 45-50 | -0,05 *** | -3,60 *** | -0,06 *** | -6,70 *** | -0,11 ** | 1,00 | -0,03 | -2,30 ** |

Table 3: Marginal effects for employment and the number of hours worked by family composition, women aged 20-49 (Continued)

| | Singles | | Couples without children | | Couples with child <5 | | Couples with child >5 & <15 | |
|---|----------|----------|--------------------------|-----------|-----------------------|-----------|-----------------------------|-----------|
| | Part. | Hours | Part. | Hours | Part. | Hours | Part. | Hours |
| Education (Low) | | | | | | | | |
| Medium | 0,12 *** | 1,60 *** | 0,07 *** | 1,80 *** | 0,08 *** | 0,80 | 0,05 * | 1,20 |
| High | 0,16 *** | 1,80 *** | 0,11 *** | 3,80 *** | 0,23 *** | 5,80 *** | 0,14 *** | 5,70 *** |
| Married | - | - | -0,05 *** | -3,60 *** | -0,06 ** | -3,50 *** | -0,09 *** | -5,40 *** |
| Number of children (One) | | | | | | | | |
| Two | - | - | - | - | -0,09 *** | -3,10 *** | -0,03 * | -2,80 *** |
| Three or more | - | - | - | - | -0,21 *** | -7,60 *** | -0,15 *** | -5,60 *** |
| Time since migration (>8 years) | | | | | | | | |
| 3 to 8 years | 0,03 * | 1,00 * | -0,04 ** | -1,30 ** | -0,14 *** | -0,60 | -0,08 ** | 1,60 |
| <3 years | 0,05 ** | 1,10 * | -0,11 *** | -3,00 *** | -0,38 *** | 0,80 | -0,20 *** | 2,10 |
| Foreigner | -0,02 * | 0,20 | -0,05 *** | 0,10 | -0,04 * | 0,60 *** | -0,03 | -0,60 |
| Swiss partner | - | - | -0,01 | -1,80 *** | -0,30 * | -4,20 *** | -0,01 | -3,90 *** |
| Partner's education (same level) | | | | | | | | |
| Partner more educated | - | - | 0,00 | 0,00 | -0,01 | -0,50 | -0,01 | -0,50 |
| Partner less educated | - | - | -0,02 * | -0,70 * | -0,06 *** | -0,70 | -0,02 | -0,80 |

The impact of individual characteristics generally accords with human capital theory. Education level is shown to be a strong determinant of both outcomes for women; the more educated that they are, the more likely that they are to participate and to work more hours. Being married decreases the likelihood of participating and working extended hours. The results also support the increased probability of non-employment with additional children. However, decisions regarding childbearing and employment are endogenous and should not be interpreted as causal effects. Nevertheless, the results indicate that women with more children have lower labour market attachment. This effect is constant across national origins. (Interaction effects are not shown, but they are available upon request.) Having a foreign nationality has a negative effect on employment, but it has almost no effect on the number of hours worked once employed. The impact of the time since immigrating to Switzerland differs according to whether women live with a partner. When in a partnership (with or without children), the results support the usual claim in which the longer that one stays in the country, the more economically integrated that she becomes. In contrast, single women have a higher employment rate during their first years of residence, compared with more established foreign-born singles. Migration motives are likely to differ according to the family composition and to lead to different employment trajectories. While single women often migrate for employment reasons, women in a partnership can move either as primary or as tied movers. In the latter case, a time interval is needed to integrate into the labour market, even for work-oriented women. Additionally, an important share of this group holds resident permits, which require having a job to stay in the country. For these reasons, we do not observe the usual U curve in this group of single, foreign-born women. With regard to the region of residence, we observe clear variations in employment patterns. The German-speaking area represents the prevailing “one-and-a-half-earner” regime in Switzerland. In the Italian region, participation is systematically lower across family compositions but particularly when women have resident children. The number of hours is, however, similar to that in the German region. Finally, women in the French-speaking area present stronger labour market attachment in terms of both participation and number of hours when they have pre-school children.

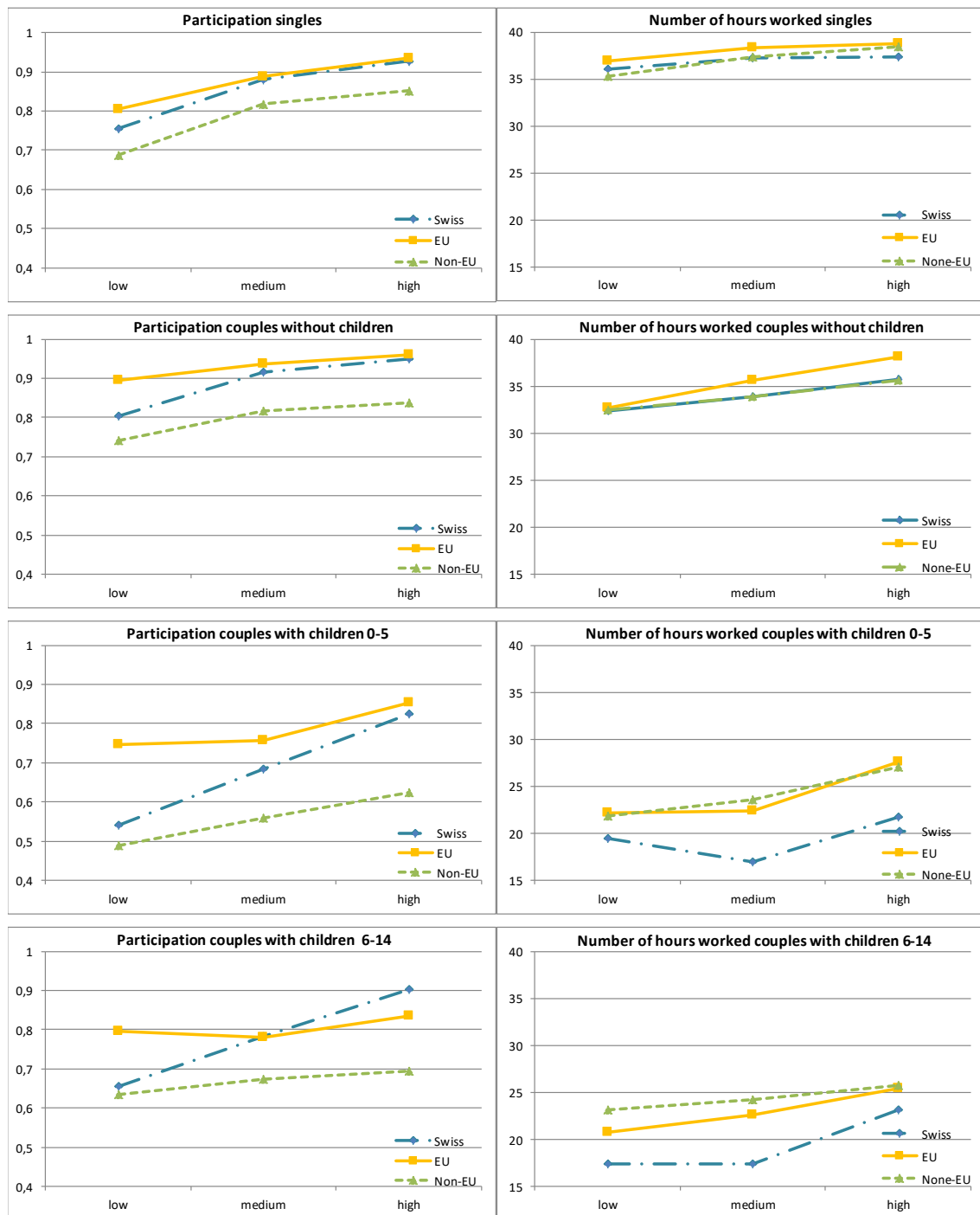
Education and income effects by women’s birthplaces

As shown in the previous section, having children strengthens the differences in employment trends among natives, EU and non-EU women. These three collectives are

grouped accordingly in this subsection. Interaction terms of a woman's origin with her level of education (Figure 1) and the household income (Figure 2) describe the variation in the effects of education and income by birthplace. Confidence intervals (see Table A.1. to A.4. in Appendix) are used to evaluate whether the slopes (employment differences between: (1) the higher and the lower educated and (2) the more and the less affluent households) are significantly different for Swiss, EU and non-EU women.

Figure 1 first shows that the positive effect of education on the level of participation is constant across birthplace for *single* women and *childless women in partnerships*. Nevertheless, significant differences appear for *women with pre-school resident children*. Consistent with our hypotheses, more pronounced differences are observed among Swiss women regarding the employment gap between women with high and low education levels. The difference in the employment rate between minimally and highly educated women is 29% for the Swiss group, whereas it is 10% and 14% in the EU and non-EU countries, respectively. However, this strong and positive effect of education for Swiss women is not a clearly advantageous marker of labour market integration for the less skilled. Indeed, the strength of this effect is mainly attributed to the lower participation rate of Swiss women (54%) compared to EU migrants (75%) with low educational levels. As a result, Swiss women who hold a tertiary degree have a greater margin to differentiate their labour supply from that of the less qualified. These effects of education are similar to those in the fourth group, *women with resident children aged 6 to 14 years*. For EU and non-EU groups, the effect of educational level on participation is far less discriminatory. Whereas the difference is 26% between lower- and higher-educated Swiss women, the effect is almost flat for non-EU women and varies only by 6% among women from EU countries.

Figure 1: Interactions of women's education level and country of birth by family composition



* Predictive margins for employment and number of hours worked, controlled for women's socio-demographic characteristics, partners characteristics and contextual factors.

Variations in the effect of education on the number of hours worked per week based on birthplace are less evident. At its most significant, education has an additional, positive impact of two hours for highly educated EU women in a partnership without children. The interaction terms are otherwise not statistically significant. However, in contrast to immigrants, the relation for the number of hours worked is not linear for native women with children aged 0-14. Rather, it shows a U-shaped pattern, in which the medium educated spend the fewest hours at work. Furthermore, compared with immigrant women with the same educational attainment, they are the group with the shorter schedules.

Second, regarding household income, we observe a consistent effect across family types. This effect is characterized by a clear employment gap (lower participation and hours worked) for the wealthiest households. Again, the magnitude of this effect differs statistically between national origins but not in the household configurations in which we most expected is.

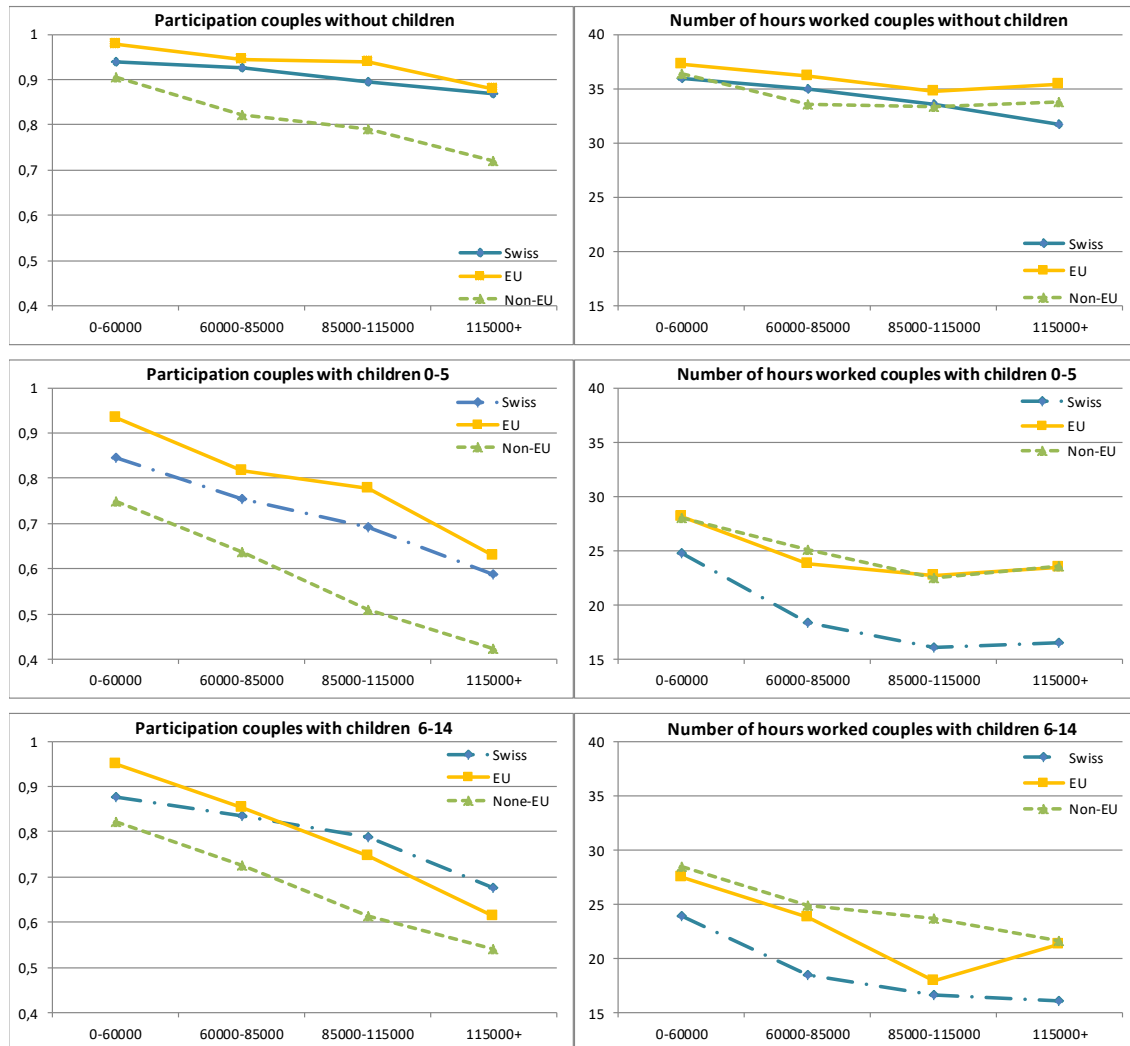
For *couples without children*, variation according to birthplace is mainly observed for the outcome of the participation equation. Marginal effects for non-EU countries suggest that this group is more responsive to household income: the gap in the probability of participating between the most and least affluent households is 22%. In comparison, this gap is 11% and% for EU and Swiss women, respectively. No difference appears for the number of hours worked.

In contrast to expectations, we do not find clear-cut differences among natives, EU immigrants and non-EU immigrants for women with *pre-school resident children*. The slopes for household income do not differ for the participation equation. The gap in the probability of being employed between the most and least affluent households is 33% for non-EU women, 29% for EU women, and 27% for Swiss women. It is the number of hours worked that strengthens the differences in employment trends among these groups. Indeed, this effect is amplified for native women, whose variation (-8 hours) in the average workload is double that of non-EU and EU women (-4 hours).

Finally, among the configuration of *households with resident children aged 6 to 14 years*, noticeable differences are constrained within the participation equation. The negative effect of the family budget is amplified for EU and non-EU women in the third income quartile and for EU women in the fourth income quartile. The results show an

additional 10-point decrease in the probability of being employed, compared to Swiss women.

Figure 2: Interaction of household income and country of birth by family composition



Source ESPA 2010-2014

* Predictive margins for employment and number of hours worked, controlled for women's socio-demographic characteristics, partners characteristics and contextual factors.

Discussion and conclusion

This research elucidates the heterogeneous forms of labour market attachment across family compositions in Switzerland. The results reveal that, although there are very few differences in the patterns of work-force participation and working hours among single women of different national origins, differences emerge when children are present

in the household. The part-time regime that prevails among the Swiss-born population contrasts with the employment patterns of women born in EU and non-EU countries. Women from EU countries present higher levels of participation in employment, and they also work more total weekly hours. Conversely, the employment behaviours of non-EU women are more polarized. They are less represented in the work force, but they work longer hours when they are employed. We interpret the major employment attachment of EU women in terms of both work-force participation and working time as the effects of their labour-oriented migration and their most privileged position in the Swiss labour market. In contrast, the dual behaviour of non-EU women could be a response to lower returns on educational credentials and more precarious family finances. As Bevelander and Groeneveld (2006) noted for the Netherlands, the more favourable payment level of natives compared to the foreign-born population, along with the relative and positive incomes of their partners (in endogamous partnerships), could help to explain the shorter working hours of Swiss women. The same can be said for Switzerland, where the median income in the private sector is 11% to 14% higher among native workers (women and men, respectively), compared with their foreign counterparts (SFSO - Swiss Earnings Structure Survey 2018). The results also suggest that the reduction in the labour involvement of mothers in Switzerland is not just a temporary conciliatory strategy to lengthen the short Swiss maternity leave. Indeed, our analysis points to a long-term, negative effect of motherhood in the latter stages of the women's life courses in terms of employment (especially for immigrants) and working time (particularly for natives). However, these results should be understood within the limits of a transversal framework. Indeed, childbearing decisions are strongly intertwined with attitudes towards employment. In order to measure the effect of fertility on employment more directly, one would benefit from analysing the changes in working hours before and after having children, as well as taking into account for the endogenous decisions regarding the number of hours worked and the decision to have a child. Instead, and to circumvent this problem, we focused on the different employment trends across origins within groups of childless and mothers.

To further consider the potential trade-off between the costs and opportunities of integrating into the labour market, we emphasized in particular the differential effects of educational attainment and household income between women according to their birthplaces. Overall, the importance of these attributes is reinforced in households with resident children, regardless of the women's origin. Consistent with our hypotheses, the

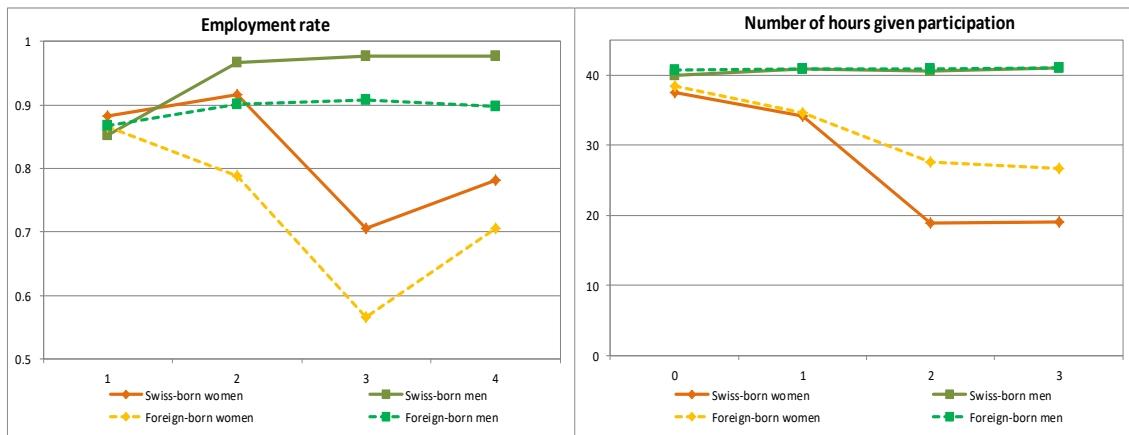
strength of this gap differs among native, EU and non-EU immigrants. First, the effect of education is stronger for Swiss-born women, whose participation decisions vary significantly according to their level of education. In contrast, EU and non-EU immigrants are less responsive to this attribute: while the former display a strong attachment to the labour market regardless of their level of education, the latter are always underrepresented in the work force. As a result, the employment levels of less educated Swiss women approach those of non-EU women. Conversely, the more educated display a similar employment propensity to that of EU women. Second, although they cannot be generalized to all family configurations, the results suggest a greater decrease in hours worked for native women and a greater drop in the probability of being employed for immigrant women in more affluent households.

The lower attachment to the labour market among women in the third and fourth income quartiles supports the cultural hypothesis. One might think that gender role preferences are more achievable when economic constraints are weaker. This reasoning applies to the native population, whose probability of being employed decreases considerably in more affluent households, although to a lesser extent than for immigrant women. However, it is likely that one of the strongest determinant factors of employment behaviours is differential access to public and family-friendly sectors of employment. Individuals usually have more control over their participation decisions than over the number of hours worked. Indeed, many sectors do not allow for part-time schedules and leave women with two choices: either to withdraw from the labour market or to work full-time. Given the segmented labour market, as well as the citizenship requirements to access some public employment sectors, the native population is more likely to have access to flexible schedules. Finally, natives often rely on the support of their extended family members, constituting a precious childcare resource, whereas immigrant families are more dependent on external childcare, which in turn can increase the cost of working. Considered as a whole, Swiss women have more opportunities to combine childrearing and part-time employment. As noted by Blau and Kahn (2013), high participation rates could be achieved as a result of the important adoption of part-time employment because it could encourage the labour continuity of less career-oriented women in stages of the life cycle when their childcare requirements are more demanding. However, part-time employment is far from being an indicator of gender equality since it diminishes women's salaries and their opportunities to be in high-level jobs.

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APPENDIX

Figure 3: Employment rates and number of hours worked in different family compositions, foreign-born and Swiss-born populations



Source: ESPA 2010-2014

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