

*Extended abstract*

**Childbirth and female labour market involvement: differences between Natives and Immigrant women in Switzerland**

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***SHORT ABSTRACT (300 words)***

This research analyses differences between native and immigrant women in Switzerland in the effect of childbirth on women's decisions either to leave the labour market or to modify the amount of time devoted to paid work. Using panel data from the Swiss Labor Force Survey for the period 2010-2015, analysis focuses on the transitions experienced for employed women from  $t-1$  (1 year prior) to different levels of labor market involvement in  $t$  (reference week) after childbirth (which occurs when a woman has a child under 1 year of age in  $t$ ). As one of the primary effects of children on women's labor supply in Switzerland is through the number of hours worked, dynamics of labour market participation from  $t-1$  to  $t$  include four possible outcomes: same working hours, less working hours, more working hours and withdraw from employment. As fertility is not totally exogenous to labour force participation, using a multinomial probit model, the joint probability of labour market participation and childbirth is estimated. This model is applied to account for the possible endogeneity surrounding the decision to have a child, as well as for any possible selection bias of maternity according with women's national origin. The joint estimation controls for the unobserved individual characteristics affecting both the decision of having a child and the labour market decision. Differences regarding skill composition and job opportunities may explain diversity in labour supply surrounding childbirth among diverse national groups. Consequently, analysis focus particularly on the relative influence of women's *opportunity cost* measured through educational attainment and job characteristics, upon the decision to "totally or partially leave the paid job". Place of residence and household variables are also included in the analysis, especially the presence of other children, partner's profile (educational level, job characteristics), total household income and, woman's contribution to household income.

## **1. The peculiar Swiss case: increasing demand for migrant labour force in a context of weak female labour market participation**

Nowadays, more than a quarter (29,2%) of the Swiss workforce consists of foreign workers (FSO 2013). Skilled migrants are essential to the global economy, and both employers and states depend on them to maintain their competitive advantage. This is particularly true for the Swiss economy, which attracts an impressive number of migrants, in special highly qualified foreign workers, to counteract the national shortage of skilled workers (Département fédéral de l'économie, 2011; Naville, Walti and Tischhauser, 2007). Effectively, the economic growth of the country is strongly reliant on an accumulation of knowledge and human capital that stimulates a strong demand for highly qualified personnel (Pecoraro, 2007). Furthermore and like in other European countries, the aging population and its subsequent shortage of working-age resident emphasis the difficulties face to fulfill jobs and sustain the pension system. Nevertheless, although economic drivers maintain a high demand for new (qualified) workers and despite the efforts to recruit new workers outside the country, a large part of the female resident-population remains on the margin of the labour market. Indeed, among OECD countries Switzerland has one of the highest participation rates of its female population, but at the same time, one of the smallest full-time employment rate. According to the Swiss Federal Statistical Office (2014) more than half of the working female-population in the country works part-time, compared to one man out of seven.

Challenges face by women to combine family life and paid work should be carefully addressed in a productive economy in order to maximize the country's human capital and minimize its actual brain waste. In spite of the fact that in Switzerland, legislative and educational progress have been made for gender equality, employment equality for men and women still poorly developed (Stadelmann-Steffen, 2007; Bühler, 2011). Switzerland evolved from the pure male breadwinner model, to a 'one-and-a-half-earner' model that restructures women's time while leaving men's untouched (Grossenbacher, 2004; Lewis and Giullari, 2006; Morgan, 2006; Evertsson et al., 2009). Some disincentives to participate in the labour market for women strengthen this model in Switzerland. First, the joint taxation system for spouses is associated with a lower female participation, as the second earner (generally the wife) is taxed at a higher rate (Schwarz, 2012). Second, scare and non-affordable provision of external childcare encourages mothers either to withdraw from employment or to work short part-time (Steffen, 2007; Buchmann, Kriesi, Pfeifer and Sacchi, 2002; Stebler, 1999).

## 2. Research objectives

Switzerland is a country with a long history as immigrant receiving country, with a large share of foreign-born among its female labour force. During the guest worker period in Switzerland, participation rates of foreign women exceeded those of the Swiss women, due to their work-oriented migratory strategy. Although the upward trend in the labour supply of foreign women continued, the increase in the female labour force has been more accelerated among Swiss women, leading to a smaller participation rate of female immigrant nowadays, especially for some immigrant groups. Nevertheless, Wanner, Pecoraro and Fibbi, 2005, using data from the Swiss 2000 Censuses, focused on the differences on labour supply between Swiss and foreign women, revealed that Swiss women participate more frequently in the labour market only in the absence of children. However, an increase of family tied migrants during the 1990, and a more recent high-skilled from the 2000s, caused a heterogeneity in terms of origin, human capital, purpose of migration, family composition and household economic arrangements, as well as in the determinants of their labour behaviour. Other authors as Banfi, Farsi and Filippini (2009) concluded that participation of immigrant mothers may be specially determined by the family policies on the country, as immigrant families are more likely to benefit from external child care due to the absence of a family network. Nevertheless, quantitative analyses of the participation patterns of Swiss and foreign-born women after childbearing are still poorly developed. Consequently, the country is interesting case for analysing the link between fertility and female labour market participation among diverse national groups.

In this sense, the present paper analyses the effect of childbirth on labour market involvement of Swiss and foreign-born women. Concretely we aim to answer the following research questions: Does childbirth impact differently the employment behaviour, regarding participation and working time, of native and immigrant women? To which extent the different impact of fertility on labour supply between Swiss and foreign-born women is explained by differences in women's opportunity cost, measured through educational level and job characteristics? Is the effect of the arrival of a new born moderated by household characteristics (male partner's characteristics, presence of siblings, household income)?

For addressing these questions, the first objective of the investigation is searching for differences by origin in the effect of childbirth on women's decisions either to leave the labour market or to modify the amount of time devoted to paid work. Analysis focuses on the transitions experienced for employed women from  $t-1$  (1 year prior) to different levels of labor market involvement in  $t$  (reference week) after childbirth (which occurs when a woman has a child under 1 year of age in  $t$ ). As one of the primary effects of children on women's labor

supply is through the number of hours worked, dynamics of labour market participation from  $t-1$  to  $t$  include four possible outcomes: same working hours, less working hours, more working hours and withdraw from employment.

The second objective of this investigation is to evaluate the relative importance among women from different origins, of the most common explanations of labour supply dynamics due to motherhood. We are in particular interested in examining the relative influence of women's *opportunity cost* measured through educational attainment and job characteristics, upon the decision to "totally or partially leave the paid job". In this particular, research on female labour supply often highlights strong positive effect of women's education on their labour force participation. Human capital theory holds that more highly educated women are more likely to remain in employment when they become mothers than their equivalents with lower labour market oriented skills due to their higher opportunity costs of abandoning the labour force (Mincer, 1962; Becker, 1985 and 1991). The micro-economic perspective predicts that higher the income which can be earned, higher is the opportunity cost of unpaid time, so the more a person is would be inclined to participated in the labour market (Henkens et al. 2002; Blau and Kahn, 2007). Moreover, woman's level of education is not only reflecting her earnings potential on the labour market and employment opportunities in terms of prestige and professional status, but also shapes attitudes and gender roles (Lestheaghe, 2002; Van de Kaa, 2002). In this sense, analysis aim to test the effect of the different skill composition of native and immigrant female population in their labour supply strategies surrounding de birth of a child. Whereas Swiss-born women are more widespread through all educational levels, the human capital of the foreign-born female population is more polarised. This polarization is due to the evolution of the origins, and of the purpose of migration of foreign-born women in Switzerland. Therefore, women's highest education achieved is a key variable which may explain part of the observed differences among national groups in employment dynamics due to childbirth.

However, returns to education are usually larger for native-born than for immigrant women. Authors as Boyd (2003), point that racial, birthplace and gender-based hierarchies exist in countries of destination are important and influence immigrant women's job opportunities, work environment and wages. In the same line, many authors stressed segmentation and discrimination processes, especially towards women from immigrant countries with less perceived cultural proximity to destination, which favored natives in obtaining employment (e.g. Constant and Massey, 2005 for Germany, or Bevelander, 2005 for Sweden). Other authors as Adsera and Chiswick (2007) or Blau et al. (2011) stressed some degree of assimilation of immigrant labour market behavior towards native-born women over time in the host country. Consequently, analysis also has into account the different structures of job opportunities

between native and foreign-born female population. Therefore, women's job characteristics (occupation, job security, public or private sector, wage, etc.) are also considered as a main determinant of our outcome.

Moreover, as female's decision regarding the labour market participation after childbirth is made within the "family unit" in order to maximize household's resources and welfare, it is necessary to include in the analysis the "household characteristics", particularly the presence of other children, partner's profile (educational level, job characteristics), total household income and, woman's contribution to household income. This is to discriminate between women who would have the choice to modify their volume of working-time over their life course from those constrained to maintain high level of participation because of a precarious economic situation despite their preferences on living arrangement.

However, not only individual and family factors but also institutional contexts shape women's time allocation to employment. In this sense, Bühler and Meier Kruker, (2002) empathize that more than one gender culture exists in Switzerland and thus residential location makes a significant difference for women's labour market participation. In this regard, Steffen (2007) used a multilevel analysis in order to explain the existing differences at cantonal level in female employment patterns by the diverse level of development of the family policies among cantons. This two researches, also point to the importance of the linguistic zone within the country, with lower actual and potential demand for public facilities in German-speaking regions, whereas French and Italian-speaking parts of Switzerland offer better access to day care and amenable school schedules, which allows both parents to combine professional careers and family life. Finally, Thoenen (2010) points to the greater facility coverage in urban areas than in rural areas, and Riaño et al. (2015), suggest that 'geography matters', whether motherhood turn out to be critical depends to a large extent to location (urban or rural). Thus, analysis includes controls for place of residence within Switzerland.

### **3. Data and methods**

The empirical analysis presented in this research is based on microdata for the period 2010-2015 from the Swiss Labor Force Survey (Enquête suisse sur la population active, ESPA hereafter), a panel data administrated by the Swiss Federal Statistical Office. The main purpose of the ESPA is to provide information on the structure of the labour force and employment behavior patterns. The survey is based on sampling of individuals obtained from the permanent resident population aged 15 and older. The survey has an annual sample of some 105,000 interviews with an additional sampling of 21,000 foreigners. Since 2010, the ESPA is conducted on a continuous basis. Since then ESPA is comprised of a rotated panel of 4 waves, and individuals are interviewed 4 times over a period of one and a half year. 1<sup>st</sup> and 2<sup>nd</sup> waves are in two

consecutive quarters then a lapse of 9 months is between 2<sup>nd</sup> and 3<sup>rd</sup> wages, and finally, a lapse of a quarter is between 3<sup>rd</sup> and 4<sup>th</sup> wage. The full questionnaire is applied in wages 1<sup>st</sup> and 3<sup>rd</sup>, asking for detailed information regarding the labour and sociodemographic profile, and household composition, whereas a short version is used in wages 2<sup>nd</sup> and 4<sup>th</sup>. Therefore, following individuals from wage 1<sup>st</sup> to wage 3<sup>rd</sup> (one year later), we can analyze employment and family dynamics occurred during a full year.

Furthermore, although children have a negative effect on women's labor supply, it is not so simple to analyze the direct effect of childbirth on female labour supply, as fertility is not totally exogenous to labour force participation. Both decisions are usually jointly determined, because the population preferences for having children and for working are correlated in some way (Carrasco, 2001). Therefore, using a multinomial probit model the joint probability of labour market participation and childbirth is estimated. Doing this, the analysis accounts for the possible endogeneity surrounding the decision to have a child, as well as for any possible selection bias of maternity according with women's national origin. Effectively, across native and migrant women the individual decision to participate and to accumulate human capital may be affected to a different extent by underlying characteristics such as family formation and child care arrangements (Andersson and Scott, 2005). The joint estimation controls for the unobserved individual characteristics affecting both the decision of having a child and the labour market decision. Effectively, this allows to solve any possible selection bias, which implies that women with children would behave differently from those women with no child, independent of any true causal effect of children on participation (Carrasco, 2001). Regressions coefficient are reported and marginal effects are calculated for illustrate the magnitude of employment change among diverse national groups given childbirth and human capital characteristics.

The used subsample consist of Swiss and foreign-born women residing in Switzerland aged 20-49 cohabiting with their partners (married or not). We consider that a women has modified her labour supply is she was working 1 year ago ( $t-1$ ) and either she is out of the labour force or she has reduced (or increased) her working time. The variables used in the empirical analysis are: having a new born between  $t-1$  and  $t$ , woman's characteristics (birthplace, educational level, sociodemographic profile, job characteristics), other household and partner's characteritics and place of residence within Switzerland.

#### 4. Preliminary results

Descriptive results obtained from the Swiss Structural Survey (2010-2012) in table 2, show that Swiss women participate more in the labour market than foreign-born women and that their level of unemployment is clearly lower than for immigrant women. However, it is also clear that, even if their employment levels are higher, they participate more in a part-time basis than immigrants. Moreover, if we look at the labour status of women by their country of birth we can distinguish diverse pattern. On the one hand, EU women present low inactivity rates and higher percentages of full-time employment, in special German and Portuguese women. On the other hand, employment levels are lower for women from outside the EU, some of them (African and Latin American and Other European women) with a high incidence of unemployment. Therefore, these results indicate heterogeneity in the employment status of women in Switzerland by country of birth.

**Table 1. Labour force status of female population (aged 20-59) in Switzerland by country of birth**

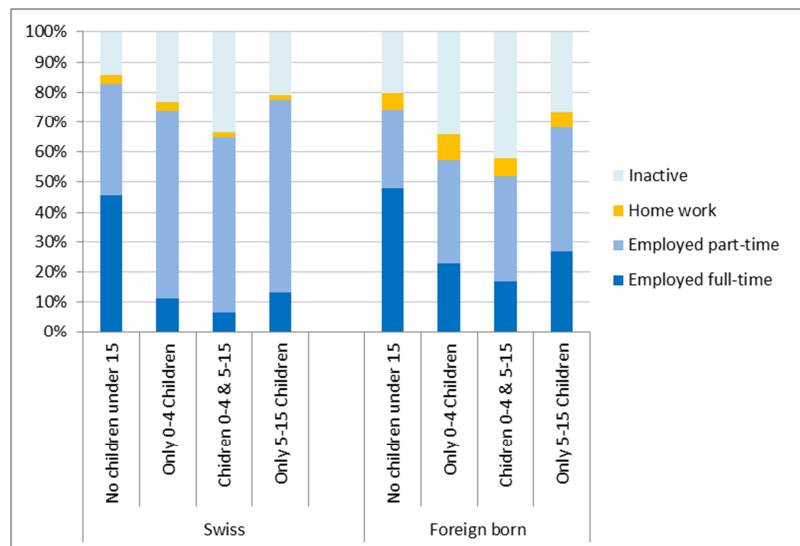
	Employed full-time	Employed part-time	Unemployed	Inactive
Swiss	34.4%	45.8%	2.5%	17.4%
Foreign-born	36.8%	31.8%	6.0%	25.4%
Germany	47.2%	35.4%	3.0%	14.4%
Italy	33.7%	36.7%	4.9%	24.6%
Portugal	48.2%	31.9%	5.5%	14.4%
France	42.0%	33.3%	5.5%	19.2%
Austria	41.0%	40.4%	3.1%	15.4%
Spain	40.8%	36.1%	4.5%	18.5%
Other EU	38.3%	32.4%	5.5%	23.8%
Ex-Yugoslavian	34.1%	29.6%	5.7%	30.6%
Turkey	25.2%	24.6%	6.3%	43.9%
Other Euroean	29.5%	25.6%	9.5%	35.4%
EFTA, North America and Oceania	37.5%	32.5%	3.9%	26.1%
Africa	29.5%	27.8%	12.1%	30.7%
South, Central America and Carib	28.6%	33.6%	10.1%	27.7%
Asia	28.6%	29.5%	6.8%	35.1%

Data source: Swiss Structural Survey (2010-2012)

Figure 1 describes the relation between the female employment status and the presence of children in the household for Swiss and Foreign-born women. The general conclusion is that the participation of women in the labour market is heavily influenced by the presence of children, and that this is a common pattern for both, Swiss and immigrant women. However, children

impact differently depending in the native-migrant origin. Swiss women with young children maintain their employment but in a part-time basis. Although Foreign-born women with young children also present higher levels of part-time work comparing with those without children, their high incidence of inactive may indicate that a common strategy within the collective is to move off the labour market due to their stronger difficulties to conciliate work and family. However, as we have seen in Table 1, employment status of immigrants varies depending on their national origin and we need to run multivariate and longitudinal analysis in order to attain a satisfactory explanation of the determinants of female labour behaviour after childbearing.

**Table 2. Labour force status of Swiss and foreign-born women (aged 20-59) in Switzerland by presence of children in the household**



Data source: Swiss Structural Survey (2010-2012)

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