## The incompatibility between labour force participation and fertility for women in Spain

Southern Europe, and particularly Spain and Italy, were identified as those countries with the "lowest-low" fertility level of the European context and also as those societies remaining with low levels of female labour participation.
The origins of these sociodemographic trends are related to the spectacular transformation of women’s role in Spain during the last decades of 20th Century, on the one hand, and to a weak Welfare State, on the other. For the Spanish context, the changing socio-demographic and labour scenarios during the last decades of 20th Century leaded to an improvement on the educational attainment of young women as a consequence of publicly available resources in secondary and university education. This certainly explains the growing participation rates of young birth-cohorts of women in the Spanish labour market. Moreover, the improvement on the educational levels of young women is also linked with the decrease of the interruption of their careers caused by marriage (or partnership formation) and childbearing. Therefore, the most important transformation in order to explain the growing female labour participation in Spain has been the dramatic change of the educational structure on female population, which shifted from majority of primary level in all age groups to high proportions of university educational level, mainly in those women born from the 60s.
However, the growing labour participation of female population is only one part of the bigger picture and the participation rates of native women follow an age and cohort effects and are clearly related to their educational levels. A second key element in order to understand the incompatibility between female labour participation and motherhood is the imperfect transition towards the gender equity in Spain. Although young women have equalled, or even exceeded men in their educational attainment, the labour participation of women is similar (o even lower) to that of men and their presence in the labour market is no longer interrupted by marriage. However, the formal equity between men and women is not accompanied by an actual equity within the domestic sphere. The reproductive responsibilities are still being almost exclusive undertaken by women. Nevertheless, men's response to women's new role differs sharply across educational levels. While higher educated men have, in recent decades, increased their contribution to child care and housework dramatically, this is not the case among less educated men. The existing relation between productive and reproductive work and the conciliating problems between these two spheres in Spain, together with a deficient Welfare State, explain why female participation in the labour market is still dramatically decreasing during the reproductive age, specially for those less skilled women.

The main aim of this investigation is to improve the knowledge of the relation between female labour participation and fertility from the 1960s births cohort women in Spain. The first analytical purpose is the description of the activity rates and fertility patterns by age and birth cohort. For the second objective our initial observational point is 1999, the first time in which Spanish Labour Force Survey asked for the partnership situation and for the family connections between individuals within the household. This information will allow us, using the panel version of the survey, to identify children aged 0 years who are living in the household and were not in the previous wave in order to link how changes in fertility within Spanish families affect couples arrangements regarding reproductive task and labour supply. In particular we aim to understand how the impact of maternity affects Spanish women's labour behaviour and always linking
the labour trajectories of mothers after having their children with their partners’ labour and socio-demographic characteristics.

Previously, on one hand, register data has allowed us to reconstruct the completed fertility pattern by parity from the 1959 birth cohort up to the 1970 birth cohort: register data for cohorts born before 1959 is no available, and fertility is not conclude for those women born after 1966. On the other hand, data from the Labour Force Survey allows to rebuilt the activity patterns by birth cohort from the age cohorts had in 1987 until their anniversary in 2011. For instance, for those born in 1959 we elaborate the proportions in the labour marked from 27 to 51 years, for those born in 1960 from 26 to 50 years, and so on.

The Spanish Labour Force Survey (SLFS) in its panel version is an excellent source of data to capture this phenomenon. It can be considered as the best primary dataset to analyse the link between female labour participation and fertility, as it appears from 1976 to nowadays every three months, fieldwork is punctual and micro-data is exquisitely spread. Moreover, 60,000 households which are representative of the whole Spanish territory are interviewed quarterly. This survey is a rotative panel: in each wave $1 / 6$ of the sample is substituted, remaining $5 / 6$ of the sample. Consequently, we must apply panel techniques to analyse this data source, as otherwise we could seriously misinterpreted the information we obtain from it. In sum, subjects are followed up to six times in six consequently quarters, that is, they are followed during a year and a half: any wave is representative of any observed moment, but all waves considered together lead to a representative pattern for a specific individual. Here we will consider the activity status of a woman, with a dichotomous variable that is coded 1 if a woman in the labour marked (employed or looking for a job) and 0 otherwise.

We use multilevel analysis in order to combine those contextual and generational characterisitcs as labour market trends or generational educational attainment (macro level) with individual and family variables as activity and occupational characteristics, educational attainment and couple’s gender model (micro levels).

There is a broadly literature on the increase in female labour market participation and its link with fertility. But usually labour activity is not analysed by age: it seems than once you are in the labour marked, you are not going to leave it until you retire. Although this pattern uses to be certain for males, it is not for females, as women usually leave the labour market in order to fulfil a family project when there is not a public policy to support certain combination between work and family. Spain is a classic example of it, as we will show in this paper.

Comparing fertility patterns by parity with female labour force participation leads to the conclusion than in Spain being in the labour marked is strongly incompatible with fertility, as activity rates for women decrease deeply with age during fertile ages and increase quickly when fertility can be considered finish. There is any exception in Spain among the 1960s birth cohorts.

Activity and fertility rates by age and birth cohort in Spain


1961 cohort



1963 cohort








