

## Why are fertility and participation rates so low in Italy (and Southern Europe)?

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### Introduction

Over the last decades labour market participation of women increased, while fertility declined in most advanced countries. This pattern is consistent with microeconomic predictions: economic models of fertility behaviour predict in fact that an increase in women's schooling levels and wage rates leads to an increase in their labour supply and to a reduction in fertility. The existence of an inverse relationship between fertility and participation was theoretically established by Becker and Lewis (1973) and Willis (1973) and empirically documented by Butz and Ward (1979) for the U.S. and Mincer (1985) on a cross-country basis.

**Table 1. Fertility Rates and Female Participation rates in selected countries**

Country	Fertility rates		Participation rates	
	1977	2000	1977	2000
Italy	1.98	1.21	37.6	44.1
France	1.86	1.71	53.0	59.8
Spain	2.65	1.25	33.0	47.1
Greece	2.27	1.30	33.3	47.5
Denmark	1.66	1.75	64.7	75.1
Sweden	1.65	1.62	70.0	74.5
U.K.	1.69	1.71	56.3	67.5

Source: OECD Eurostat 2002 Statistics in Focus

Policies aimed to support participation may have the undesired effect of a declining population. On one hand a smaller population reduce human pressures on the environment

and limited natural resources. On the other hand, negative consequences of the fertility decline include a lower growth in the population in working age, in the real GDP as well domestic savings. A growing number of people who have few immediate family ties which will increase the demand for formal provision of services, young children and older people with no siblings. An understanding of this relationship is therefore relevant to policy makers in ways which go beyond theoretical speculation.

Recent analyses focusing on the temporal pattern of fertility and female participation show that as early as the mid-1980s, the sign of the cross-country correlation changed from negative to positive and became more volatile. After 1985, the participation of women in the labour market continued to increase in all countries, but fertility rates started to decline at a lower rate or, in some countries, began to grow again.

The countries that currently have the lowest levels of fertility (Spain, Italy and Greece) are those with relatively low levels of female labour force participation while the countries with higher fertility levels (Denmark, France) have relatively high female labour force participation rates.

The interpretation of the temporal change in the relationship between participation and fertility has mainly been found in the changes in social norms towards working mothers and in the effects of policies that diminish incompatibilities between childrearing and female employment: more generous parental leave, greater availability of childcare, and greater opportunities for flexible hours and part-time employment (Ermisch 1989, Hotz and Miller 1988, Del Boca 2002, Brewster and Rindfuss 2000, Benjamin 2001). The empirical evidence indicating a positive relationship between women's participation and fertility is certainly encouraging in view of pension system sustainability. Boosting female employment, if supported by such policies, will not necessarily lead to significant declines in fertility as was experienced in the past.

Other studies of this phenomenon have shown different results, revealing a weaker and less significant correlation, but not a change from a negative to a positive sign. These analyses, pooling cross country and time series data, allow for country-effects and show that only in Mediterranean countries is there a negative correlation between fertility and female employment (Engelhardt *et al.* 2001). This result implies that it is important in these countries for female participation and fertility to be considered as a joint decision and that

policies encouraging fertility may have an adverse effect on female employment and *vice versa* (Del Boca 2002).

Fertility is low today where was very high decades ago and it is high today where was very low. Social policies have been implemented in most Northern and Central European countries to make childrearing less difficult to be reconciled with employment. In some countries the view in favour of pro-natalist actions has prevailed, and government intervention has been directed towards promoting higher fertility. In others, the view that, independently of the possible consequences on fertility levels, governments are not justified in interfering with intact families' decision and in particular with how many children to have, which is essentially a private decision, has prevailed.

## 1.2. Temporal patterns and cross-country differences

Several important changes over the last decades have characterized the temporal pattern of both women's labour market participation and fertility, increasing the differences across countries.

The temporal changes in fertility are determined by the combined effects of a *tempo* and a *quantum* effect: on the one hand, the total fertility has declined over the last decades (the *quantum* effect), on the other hand the age at first child has increased (the *tempo* effect). As a consequence, the number of children per family has decreased over the years, while new mothers in 1970 were older than in 1960 and again older in 1980 than in 1970 for most European countries (Gustafsson and Wetzel 2000, Billari *et al.* 2002). While in Nordic countries, France and the UK fertility rates tend to recuperate as women get older, in Italy and Spain the postponement has crucial impact on level of fertility .

One explanation of the postponement has to do with the increased educational levels of women. More highly educated women are more likely not to have children or to have the first child at a much later age than women with lower levels of education. Other explanations emphasize labour market insecurity which push women to defer family formation until full integration in the labour market. (OECD 2000)

Although the increasing long-term trend in female participation rate is similar for most countries, persistent differences in levels suggest that different countries are

constrained by country-specific institutional and social factors. Analyzing the behavior of OECD countries, Ahn and Mira (2002) and Engelhardt *et al.* (2001) have divided the 21 OECD countries into three groups. The high participation group, in which the participation rate (FLP) is higher than 60%, includes the U.S., Canada, the U.K., Sweden, Norway, Denmark, Finland and Switzerland. The medium participation group includes countries where the participation rate is in the 50-60% range. The low participation countries are where the female participation rate is less than 50% (Italy, Spain and Greece). In those countries characterized by high participation the total fertility rate starts at 2.19 in 1970, declines to 1.65 in 1980 and then returns to 1.78 at the end of 2000. On the contrary, in countries characterized by low participation, the fertility rate starts at 2.72 in 1970 and continues to decline to 1.4.

The *tempo* effect is given by women's mean age at first birth, indicating the significance of postponement of the fertility decision. The average age in the 1960's was in the 24-26 range and grew to around 28-30 in the year 2000. The phenomenon of postponement has implied a reduction of completed fertility and a large number of women who remain childless. In countries where fertility has declined more, a higher number of women, especially of educated women, has remained childless.

Because of these different temporal patterns, more and more empirical research focusing on the relationship between women's participation and fertility is being done, especially in Southern European countries, while in Northern European countries more attention is being given to the effects of the high participation of mothers on wages, careers, and child outcomes. In Northern European countries, in fact, the employment rates of mothers with young children increased quite significantly over the last decades, while the increase was much smaller in Southern Europe. The low employment rate among young women with children and the low fertility rate symbolise the difficulties encountered by women in Southern European. Significant differences emerge between the employment rates of mothers with children under six in Europe. Italy, Greece, and Spain are ranked at the lowest level<sup>1</sup>.

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<sup>1</sup> Several studies have questioned whether low fertility rates represent a voluntary choice by the household rather than being the effect of economic constraints. Bongaarts (2001) provides data on desired and realized fertility for several European countries showing that preferences fall short of achievement. This study also reports that when fertility is low, desired fertility is usually above realized fertility.

As we discussed above among the most important factors of decline fertility in Southern European countries are the labour market insecurity and rigidities, the lack of formal child care and parental leave, child benefits and the interactions within the family and between generations.

### **1.3. The characteristics of the labour market**

The regulations of the labour market have an important impact on participation rates. In spite of recent institutional changes, Southern European labour markets are still highly regulated: strict rules apply regarding the hiring and firing of workers and permissible types of employment arrangements. The hiring system and the high entry wage as well as very strict firing rules severely restrict employment opportunities for labor market entrants. These labor market regulations have been largely responsible for the high unemployment rates of women and youth. In those countries where high percentages of youth are unemployed (Italy, Greece, Spain) women participation rate is lower. Moreover, when the unemployment rate is high, fewer women leave the labour market during the childbearing years because it is more difficult to re-enter later.

In countries where the unemployment rate is higher, young couples tend also to postpone household formation and fertility. Young people, both men and women, wait to be well established in their jobs before getting married and having children. The lack of stable jobs among Spanish men is an important factor that forces many young people to delay marriage and childbearing: between 1987 and 1995 the proportion of employed Spanish men aged 25-39 years who held permanent work contracts fell from 55 to 37 per cent. The low level of confidence among young workers about their future employment prospects is an important determinant of the low fertility (Ahn and Mira 2001).

A negative relationship between unemployment and fertility also emerges for Italy. On the one hand women tend to participate more in the labour market to protect household income from negative shocks to the partners' wage and employment, on the other hand they

do not leave work during childbearing years to protect their own labour market prospects (Bettio and Villa 1998).

The experience of unemployment not only reduces current income, but also affects the level of income that the families consider necessary for the well being of their children. Tests of the hypothesis that expectations of future labour market outcomes affect current fertility decisions show that unemployment is one of the variables that most significantly affects the expectations of future wages and job opportunities and therefore may be responsible for the decline in fertility (Del Bono 2001).

The possibility to combine work and childrearing depends strongly on the occupational structure and working arrangements. Changes in the occupational structure, especially for part-time employment, have expanded employment opportunities for women (O'Reilly and Fagan 1998). However, the development of the service sector and the part-time opportunities have not increased equally in all advanced countries. While in the North European countries, a high proportion of women work in the tertiary sector and are employed part-time, in the South of Europe the tertiary sector is less developed and part-time employment is very limited. In countries where part-time opportunities are scarce, married women are forced to choose between not working or working full-time, neither of which is necessarily their preferred option. Married women who choose to work tend to have full-time work commitments, which is not compatible with having large numbers of children.

Part-time jobs opportunities are very limited in Southern European countries when compared to Northern and Central European countries. The positive link between part-time jobs and women's participation in the labour market has been shown in studies based on cross-country analyses. Empirical analyses of several countries show that being a mother (compared with being childless) decreases the probability of choosing full-time work and increases the probability both of not working or working part-time. The availability of part-time jobs increases the probability that women are employed in all European countries (Bardasi and Gornick 2000, Tanda 2001). Greater opportunities for part-time employment also reduces the opportunity costs of having children with a positive impact on fertility rates. In countries where part-time opportunities are higher, fertility rates are also higher (Netherlands, Denmark, U.K., Sweden).



The availability of part-time opportunities has a positive impact on both the probability of women participating in the labour market and the probability of having children in Italy (Del Boca 2002). However part-time work may have also negative effects on wages and career prospects (especially in countries where it is widespread). Part-time jobs tend to be more frequent in low-qualified occupations with a negative impact on women's career opportunities. U.K. and U.S. mothers are more likely to work in part-time jobs and earn lower wages compared with women without children.

When we look at the employment conditions of women before and after childbirth we see that after the first birth, mothers either become unemployed or inactive or experience downward occupational mobility. That is, even if a woman remains employed she may end up in an occupation that is inferior to the one held before the birth in terms of quality, payment and responsibility (Guetierrez-Domènech 2002). This may stem from the fact that mothers might sometimes be willing to supply labour that involves fewer responsibilities during the childrearing years and/or because employers may be reluctant to hire mothers for high profile positions since they believe that their family role may absorb most of their energy and interfere with their productivity. A comparison across European countries show that in Southern European countries a smaller number of women change their status after childbirth given the low availability of part time (Figure 1).

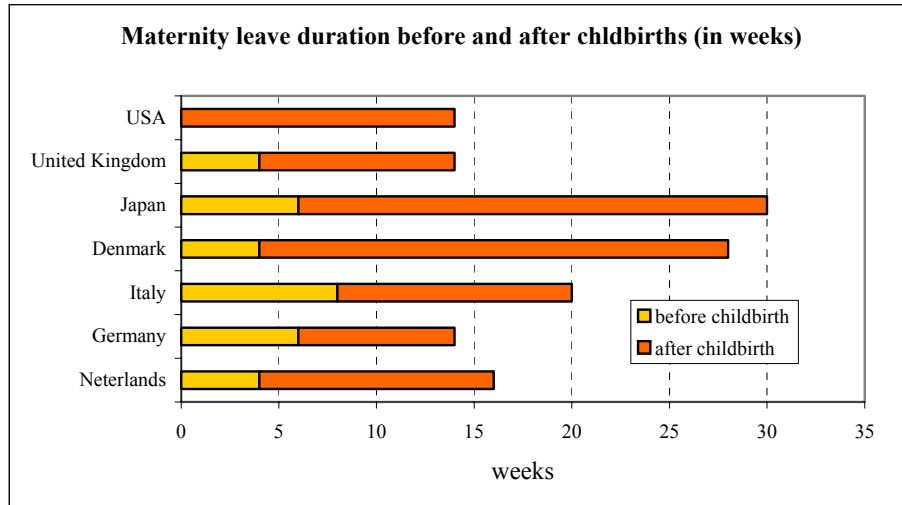
#### **1.4. From maternity to parental leave**

It is usually claimed that maternity leave increases female participation because women are not forced to exit from the labour market after childbirth to take care of their newborn children. Therefore, maternity leave is an important policy to help women to reconcile household responsibilities with work activities.

In 1992 a European Union directive mandated a paid maternity leave of 14 weeks and in 1998 a directive mandating a 3-months parental leave was also approved. However, maternity leave policies are still quite different across Europe both for duration and benefits of compulsory and optional leave. Denmark, Finland and Italy are the most generous country in terms of duration of base maternity leave, while France, Spain and Portugal have longer optional parental leave periods. In the U.S. maternity leave has only recently been introduced with the FMLA, Family and Medical Leave Act (1993) and its coverage is still

quite limited and most often unpaid.

Figure 2



Source: Eurostat, Social Protection in the EU Member States and EEA, 2002

Maternity leave is likely to have a positive impact on women's employment rate since more women would enter employment if they knew they had access to leave. A relatively strong correspondence between the generosity of child-related policies of maternal employment (including maternity leave) and women's employment profiles emerges from cross-country comparison. In Northern European countries, where policies are more generous, female participation in the labour market is higher (Gornick *et al.* 1997).

The expected effect of the duration of leave is ambiguous: in theory, the longer women stay out of the labour force, the greater the loss they incur in terms of skill deterioration and lost opportunities for promotion and training. A negative relation between maternity leave and female employment is therefore expected. However a longer leave may also be seen in a positive light since it gives mothers more time to recover while retaining job security. Therefore, the positive effect of maternity leave on fertility and female employment seems to depend strongly on the length of leave and on the generosity of the benefits that women receive during the leave.



A comparison of the effect of compulsory and optional maternity leave regulations in European countries shows that a long compulsory maternity leave period seems to have a negative impact on the probability of women working, possibly increasing the costs of hiring women. In contrast, the length of the optional maternity leave has a positive effect on women's employment rate.

Looking at the labour demand side, maternity leave policies, by imposing additional costs to the employers, may have a negative impact on women's job opportunities, careers and wages or, more precisely, on what is defined as the "family gap", which is the wage difference between women with and without children (Waldfogel 1998). Employers, in fact, may find it risky to hire young women who may be absent from work for long periods. Moreover, they also prefer to employ women in jobs with fewer responsibilities, where they can easily be replaced during maternity leave. Again, the effects on wages and career depend on the length of the leave.

The results show that a short period of maternity leave does not affect human capital accumulation and therefore does not affect negatively new mothers' wages. On the contrary, the possibility to return to the same job after the leave period has a positive effect on women's pay, because of gains in firm-specific work experience and job tenure.

Looking more closely at the Nordic countries, we see that formal parental leave has no effect on women's wages, probably because most women in Sweden work in the public sector. Instead, interruptions due to unemployment prove to cause greater losses than interruptions due to maternity leave and childcare.

Paternity leave is explicitly directed to the fathers of newborns children, while parental leave can be used either by the mother or the father. Only Northern European countries offer fathers the opportunity to stay at home for some days following the birth of the child, while in most South European countries extremely limited paternity leave is provided, if at all.

On the contrary, all European countries give fathers the possibility of parental leave, but only 5% of the fathers in the European Union took the advantage of this opportunity. Usually this is interpreted as indication of the secondary role of fathers in childrearing, while a possible income constraint could be an important cause. Since on average men have a higher labour income than women and parental leave benefit is a portion of the wage, it is less costly, in terms of household income loss, for women than for men to take the optional parental leave. In fact, a higher percentage of fathers taking parental leave is found in Northern Europe

where benefits during the optional period represent a higher percentage of the average wage. Families where the father took parental leave for the first child, are more likely to have a second baby, suggesting that policies encouraging an active participation of the father in childcare may stimulate fertility.

Another relevant aspect to be considered is that maternity/parental leave regulation usually guarantees only entitlement to permanent workers, while the extension of the benefit to part-timers and temporary workers is still quite limited. In Europe, and in particular in Southern European countries, employment has traditionally been based on permanent jobs. Only recently some elements of flexibility have been introduced into Southern European labour markets, with the introduction of temporary jobs, especially for young people. The growth of the proportion of youth with temporary and unstable jobs has increased uncertainty, causing delays in marriages (or cohabitation) and postponement of fertility due to lower coverage in terms of parental leave and benefits (De la Rica and Iza 2003). As a consequence, young women may wait for a stable and protected job before deciding to have a child, especially in areas where the unemployment rate is high. Postponement may result in a lower fertility rate.

### **1.5. Do childcare characteristics affect women's labour supply and fertility?**

The presence of children affects mothers' preferences with respect to non-market time versus market time. Social policies directed at reducing the costs of children by increasing the availability, quality and affordability of childcare may affect fertility and participation rates. Studies on temporal patterns have shown that the increased availability of childcare is one possible explanation for the change in fertility over time and for the observed changes in the relation between women's participation and fertility (Ahn and Mira 2001, Englehardt and Prskawetz 2002).

However childcare systems have not evolved in the same way in all developed countries. In some countries the view that the choice of having children is a private one prevails and government support is targeted only to poor families with children (as in Anglo-Saxon countries). In other countries, children are considered to be public goods and public policies cover the costs of children independently of family income (as in Northern countries). The organization and financing of childcare for children in different age groups

in different countries are different across Europe. In the U.K., a model of private provision and financing of childcare prevails, while in Sweden, public organization and financing prevails, and in Southern Europe (Italy and Spain), there is a mixture of private and public childcare. Coverage for younger children is higher in Sweden while coverage for older children is higher in Italy. The different characteristics of childcare services have different implications on the labour supply of mothers.

For children under 3, the supply of childcare varies across countries considerably. Nordic countries have the highest proportion (40%) while in Southern Europe it is much lower (5-6%). For older children the coverage tends to be much higher and tends to be more uniformly distributed across countries.

Childcare availability also has important effects on fertility, while childcare costs do not seem to be an important factor. In most of the high fertility rate countries childcare availability is relatively high, while in Southern European countries where childcare availability is very low (Italy, Spain, Greece) fertility is also low.

In Southern European countries, childcare does not seem to be designed to accommodate market work of both parents, especially given that part-time opportunities are scarce. Public childcare is only available in some areas of these countries, and with limited hours. These constraints have resulted in lower growth in the participation of Southern European mothers with younger children than in other countries.

The decision to work and to have a child are, in fact, both positively influenced by the availability of childcare. Given the low availability of childcare and the limitation in daily hours, a large proportion of Italian mothers, for example, have to rely on family support systems, mainly on the help of grandparents. The role of the extended family on women's decisions to work and to have children is relevant, and the substitutability between formal childcare and informal help by the family is fundamental (Del Boca 2002). These results indicate, in fact, that the labour force participation of women with children is affected by childcare availability as well as the availability of informal childcare. Family support, both in the form of transfers and in the form of help with the children, increases the probability of women's participation as well as their probability of having children. Similar results also emerge for Spain (where a high opportunity cost is associated with childbearing because of the lack of 'social care services' and is compensated by a strong family support network (Del Boca 2002, Del Boca, Locatelli, Vuri 2003, Baizan *et al.* 2002).



Finally, childcare costs are part of the family decision making in two ways. First, childcare costs can be thought of as a part of the cost of rearing a child and thus influence those decisions for which the cost of children is a relevant factor. In addition, in families where the mother is the principal caregiver, the cost of childcare can be considered as a tax on the mother's net wage and will result in a decrease of mothers' employment and working hours. The higher the cost of childcare, the higher the cost of each additional child. This leads to the prediction that higher childcare costs will also tend to lower fertility (Cigno 1991, Del Boca 2002, Ermisch 1989).

The results of several studies for the U.S., the U.K. and Canada show that childcare cost is a very important variable with significant effects on participation of mothers (Blau and Robins 1988, Ribar 1992, Connelly 1992, Kimmel 1998, Powell 2002). In Northern European countries, instead, where public childcare is readily available, the cost of childcare is less influential on the mother's decision to work (Gustafsson and Stafford 1992). Similar results emerge for Italy: childcare costs are significant only in those areas where there are several childcare places available (in other words where a market exists) (Del Boca 2003).

## **1.6. Child benefits**

As we have discussed above any governmental measure aimed at reducing the cost of children can be expected to have a positive effect on the demand for children. A theoretical distinction is drawn, however, between measures aimed at reducing the direct costs of children (direct expenditures) and measures reducing the opportunity cost of children (foregone earnings).

The magnitude of these effects may depend on the work status of the beneficiary. Higher cash benefits have a greater effect on unemployed women than highly paid executives. On the other hand higher cash benefits may lead to an increased demand for children but also to demand for higher quality. Child benefits may also be expected to have distinct effects on women with different numbers of children. If the same benefits are paid for each child regardless of birth order, benefits can have an increasing influence on the decision to have a greater number of children since their cost would be lower with each additional child (economies of scale).

Studies based on time series found a positive relation between fertility and cash policies. Family benefits were found to result in increased fertility of 0.2-0.3 children per woman (Blanchet and Eckert Jaffe' 1994 using French data). Other studies suggest the existence of a timing effect: higher family benefits would encourage early entry into motherhood but not necessarily a large family size (Barmby and Cigno 1990, and Ermisch 1989). A cross-country comparison, which considers benefits for one-child, two-child and three-child families separately, indicated a positive but very limited effect of child benefits on fertility (Gauthier and Hatzius 1997). These results vary widely across countries and by birth order. The cross-country comparison shows that while cash benefits do not affect fertility in Anglo-Saxon countries, they have a positive effect in Scandinavian countries, since they are likely to be correlated with other family support policies.

In Southern European countries the effect is significant only for the first child, while in other countries (France and Sweden for example) it is significant for the third child. These differences reflect important differences in family support policies across countries. Studies based on macro data reveal a number of methodological pitfalls, since it is difficult to measure the incentive effects of transfers to a population which, in any case, would have had several children. The influence of child transfers on fertility has not been widely studied on individual data. Studies on the role of financial incentives on fertility at the individual level (Lefevre *et al.* 1994 and Laroque and Salanie 2003 for Canada and France respectively) report very weak effects.

The analysis of cash benefits must take into account two important factors. First, child benefit effects may be greater for lower income households, *i.e.* fertility would increase in households where the average number of children is higher. The second aspect concerns the potential discouraging effects on mothers' labour supply. Given the low participation rates of mothers in several countries and the greater response of low income women to changes in tax-transfer systems, these effects are likely to be significant and raise crucial policy questions.

### **1.7. Family structure**

Southern European countries are characterized by a family structure which have peculiar characteristics as compared with the rest of Europe. On one hand, as we have

discussed above the important ties with the family of origin support women's choices to work and having children. Grandparents support their adult children providing time for child care which compensates for the rigidity of the service system (especially in Italy) and providing financial transfers. This responsibility is likely to have a significant effect on women's participation and fertility. Del Boca (2002) shows that the presence of grandparents in the vicinity increases the probability of women working and having children.

The role of the family in supporting children extends far beyond the completion of the children's schooling. Del Boca and Lusardi (2003) shows that 45 % of households have received the house where they live as a gift from their parents and for 65 % the support of family was essential for the down-payment accumulation. Because of limited access to credit and housing markets, the Southern European family traditionally provides income support to its children during their usually lengthy search for a stable, "secure" job. (Giannelli and Monfardini, 2002, Martinez-Granado, Ruiz-Castillo, 2002).

**Table 2 Children aged 20-29 living with their parents in 1987 and 2001(%)**

<b>Country</b>	<b>1987</b>	<b>2001</b>
Italy	60	71
France	34	33
Spain	49	59
Greece	41	49
Denmark	32	27
Sweden	29	18
U.K.	23	19

Source: Eurostat, 2002

Strong family ties encourages late departure from the parental home. The proportion of children living with their parents has actually increased in the Southern European countries in the last decade, while it has decreased in the Northern ones and in Italy it has increased more in the North than in the South.

The responsibilities of mothers towards their adult children is often coupled with the need to elderly care which partly explains the low participation of women after 40 (Del Boca 2001). The stronger the traditional family ties, the lower the fertility rates. The main direct

effect is that late departure from the parental home often results in the failure to marry and have children the shorter the time interval available for childbearing.

The indirect effect on fertility of a late departure from the parental home are two-fold. On one hand, men have no experience of housework since they go directly from their family to their wives without ever lived alone or with friends<sup>2</sup>. Thus Italian husbands do not help in the housework even if their wives are in full time employment and their contribution is much lower than European counterparts. (Table 3)

**Table 3 Hours worked by women and % of male domestic labour.**

	<i>Weekly hours</i>	<i>% male housework</i>
Sweden	30.0	33
Netherlands	25.2	35
UK	30.7	33
Germany	27.5	36
France	34.0	33
Italy	34.6	19
Spain	36.0	12
Greece	37.8	12

Source: OECD 1999, UNPD

Ichino et al (2002) in a comparative work, show that Italy is the European country where husbands help less their wives and where full time mothers have less time with their children. The excessive burden for women has been considered as an important cause for Italy low fertility.

Finally another indirect effect is less easily described and empirically supported. Staying home until their thirties, young Italians have harder times to accept responsibilities: they accept a job only when completely in line with their desires and postpone marriage until the risk of “losing amenities” is low (as Massimo Livi Bacci puts it as being “la sindrome del ritardo”).

According to demographic research children with fewer siblings have more possibilities of improving their own social class thanks to better education. According to survey results (Dalla Zuanna 2002), the value assigned to children is higher in Italy than in

<sup>2</sup> In Italy as well as in Spain most children attend college in their home town and reside with their family.

other Northern European countries where family size is much larger. According to this view, the high value could paradoxically explain the low Italian birth rate, since Italian invest a great deal of time, money and attention in their children, instead of having several children they prefer to have one only. In this context the “familistic” approach strongly emphasizes the microeconomist’s notion of substitution of quantity for quality of children.

Mc Donald (2002) emphasised societal norms: when there is incoherence among women’s role in the family and the society (labour market and educational institution) fertility may be negatively affected. Societies where changes in women’s economic roles and aspirations are not matched by similar changes in institutions and family responsibilities are deemed to experience lower fertility rates.

Another important aspect is then related to the flexibility of forms of relationships: for example in countries where the number of cohabiting partners are more frequent, fertility is higher. The neutrality of marriage laws with respect to the form of relationship may be an important condition for sustaining fertility in conditions of marriage market uncertainty. Differences across countries are partly explained by legal provisions in particular by the extent to which rights are extended to mothers and children living outside the marriages.

### **1.9 Methods and empirical findings from the European Household Panel.**

In this section we present evidence of the impact of various factors on fertility and working behaviour of Italian women in a comparative framework.

To analyse the effectiveness of policies one important approach is based on real “experiment” where individuals are randomly assigned to “treatment” and “control” groups. While the US has carried out over the years a series of demonstration projects using this type of research such as training programs for the less educated, tax-transfers for low income individuals, these experimental evaluations are not easily applied in the case of fertility. (Moffitt 1998). Reasons include the difficulties of following these groups of individuals over several years, controlling for “community” effects through which policies may influences individual behaviour and of isolating the effect of individual measures (e.g. contraceptive measures).



Most of the studies in European countries are then based on econometric methods that exploit variation over time and space in the level of various policy instruments and in the variable of interest. The results depend on the quality of the data as well as the type of indicators used, and the possibility of taking into account different culture, tradition and interaction with other policies in each country. Our study uses panel data available for several European countries as well as for several years to allow us to take into account several factors in a dynamic context.

Our approach follows a methodology in which the decision of fertility and participation are estimated jointly. While in the past fertility or participation were considered as exogenous, in recent years fertility and labour market participation decisions have been recognized as the joint result of the maximization of household expected lifetime utility under wealth and time constraints in a dynamic context. The desired participation status and the desired number of children depend on the whole sequence of prices and wages and on the variety of characteristics reflecting preferences.

Moreover, one of the limitations of the economic analysis of fertility is the omission of factors such as fecundity, tastes, and other marriage-specific traits which are unobservable to the researcher. The increasing use of panel data allows researchers to take into account the dynamics involved in the relationship between births and work status of women. Moreover, it allows the inclusion of important factors such as fecundity, tastes, and other individual and marriage-specific traits. These are important factors which are constant over time in explaining fertility decisions, but are unobservable and often omitted by the researcher. Our methodology allows us to take these unobservables into account (Del Boca 2002, 2003a).

In the analysis of the relationship between labour market participation and fertility, we take into consideration not only the effect of prices and incomes and household characteristics, but also several aspects of the labour market, the social service system and the family structure (the child care system, part time, parental leave and family support).

The analysis in the previous sections has suggested the importance of labour market and social policies in a woman's decision to work and/or to have children as well as family structure. Therefore, empirical analysis of participation and fertility is quite complex since these decisions are affected both by individual characteristics (for which we need data at the individual level) and by policies (which are the same across individuals living in the same country or region).



To compare the effect of the different factors we use here the European Community Household Panel (ECHP)<sup>3</sup> and select all women aged 21-45, married (or cohabitant) from France, Italy and Spain, available for the years 1994-2001 (see Del Boca, Pasqua and Pronzato 2003). We match the data set with regional variable from REGIO (Eurostat). The three countries share important similarities but only in France social policies have been implemented (child care, child benefits).

The dependent variables are whether the wife is working at the time of the interview and whether or not she had a child in the year of the interview.

The variables considered include personal characteristics (wife's age, education and non labor income), family characteristics (husband's income, presence of children in the household), environmental variables (regional unemployment rate, percentage of part-timers, availability of childcare, optional parental leave) and indicators of the division of domestic work and child care (hours of husbands housework) and social norms regulating the marriage market.

The empirical results show that

- 1) Higher women's education increase participation and reduce fertility.
- 2) Husband's income decreases participation and increase fertility.
- 3) The presence of previous children in the household has a negative effect both on participation and fertility in Italy and Spain (this is not true for France)
- 4) Regional unemployment rates are negative on participation and fertility, while part-time have a positive effect on both (only in Italy)
- 5) Length of optional parental leave has positive impact on fertility.
- 6) Regional child care costs are not significant while availability affects positively participation and fertility (marginally significant).
- 7) Grandparents' proximity affects positively fertility and participation (only in Italy).
- 8) Husband contribution to housework affects positively participation and fertility (more important in Italy).

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<sup>3</sup> L'ECHP is a standardised multi-purpose longitudinal survey co-ordinated and supported by Eurostat, which allows study and comparison of the Member States in the European Union. The survey involves annual interviews of a representative panel of households and individuals in each country, covering a wide range of topics on living conditions such as income, employment, poverty and social exclusion, housing, health, migration and other social indicators. The unit of analysis is the household and, within the household, all

## 1.9. Conclusions

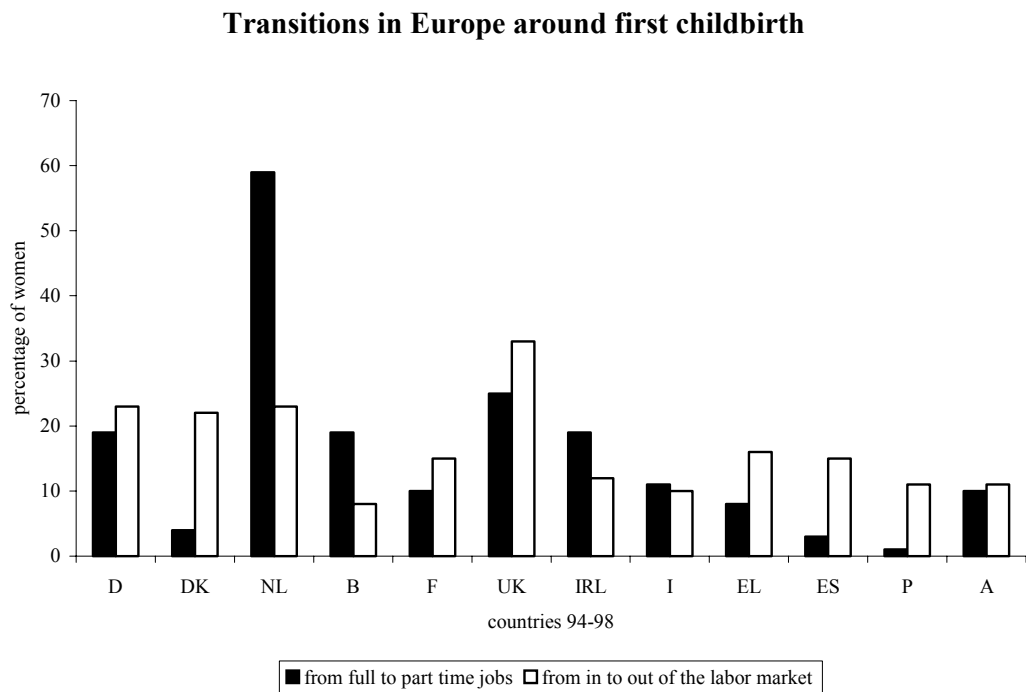
The analysis of the temporal and cross-country patterns of women's labour market participation shows how several factors affect the compatibility between childrearing and work (labour market characteristics, social services, and family structure). Empirical evidence and comparative results show that it is more difficult to combine work and having children in Southern Europe than in the rest of Europe. The role of institutions (the state and the family) is very important. Low fertility is explained by the mismatch between women's advancement in the socio economic level and the unequal division of labour coupled with the lack of support from public institutions. In the labour market and the service system there seems to be a mismatch between the types of jobs sought by married women with children (part-time) and the types of job available (full-time) in a situation of lack of affordable child care. Married women who choose to work tend to have full-time commitments and this is not conducive to having a large number of children. Thus the labour market structure imposes large fertility costs. This imbalance could be addressed especially in Italy by increasing the provision for childcare (public and private) which reduce children costs and the incompatibility between work and child rearing. This also would simultaneously increase job opportunities for women and reduce the costs of taking full-time jobs. By creating more flexible employment opportunities, more women would be able to continue working during their childbearing years.

Moreover, social policies should be addressed to induce a more equal share of the care of children between husbands and wives (for example encouraging paternity leave) as well as to reduce fertility postponement by supporting young people to form relationships and start families (for example more affordable rents as well as housing programs and tax advantages).

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individuals older than 16, although it is possible to gather demographic information on family members under sixteen as well.

Figure 1



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