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# **A gender analysis of children's well-being and capabilities through time use data<sup>1</sup>**

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**Abstract:** The main goal of this paper is to analyse gender differences in children's well-being by applying a capability approach and a gender perspective both to the study of the differences in children's capabilities by gender and to the study of the impact of the gendered allocation of time on children's capabilities. The econometric model used is a Multiple Indicator Multiple Causes model (MIMIC). The model is estimated on a sample of children in their middle and late childhood and uses micro-data from the Spanish Time Use Survey. The study focuses on the analysis of well-being through four capabilities: social relations, education and knowledge, leisure and play activities, and domestic and care work. The results point out to the fact that the labour market behaviour by gender is not only related to human capital formation, family conditions or labour market opportunities, but also to children's well-being. Furthermore, gender stereotypes continue influencing the development of children's capabilities during their process of socialisation.

**JEL classification:** C35; I30; J22

**Keywords:** capabilities, child well-being, time use analysis, structural equation models

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## 1. Introduction

The objective of this article is to analyse children's well-being from the capability approach using time use data and applying a gender perspective. To meet this objective, the second section of this work reviews the most recent literature on measuring children's well-being and the capability approach. The third section presents the structural equation model proposed to measure children's well-being in an advanced society and the list of capabilities and complex functionings<sup>2</sup> included in it, and the fourth section describes the empirical application of the model to the case of Spanish children grouped by age and sex. This case study is focused on the measurement of well-being in middle (10-13) and late childhood (14-17). Finally, conclusions and public policy implications are drawn in the last section.

This paper applies a gender perspective both to the study of differences in children's capabilities by gender and to the study of the impact on children's well-being of the gendered allocation of time within the household. The hypothesis of this work is that the achievement of children's capabilities is subject to their family features, so household characteristics and parents' interaction, including as well the effect of gender stereotypes, will have an important impact on the children's functionings. Thus, the work assesses how certain family characteristics (and, implicitly, the economic, social, institutional and cultural environment) and the intra-household allocation of working time by gender affect certain capabilities of Spanish children between 10 and 17 years old.

A structural equation model is used because it is a suitable technique for analysing unobserved latent variables such as capabilities measured through the achievement of

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<sup>2</sup> Those referring to the individuals' self-realization and participation in social life (Sen 1993: 39-53).

functionings. Among the different econometric models using this technique, the Multiple Indicator Multiple Causes (MIMIC) model is the one chosen in this work, since it allows for the introduction of exogenous causes regarding the latent variable of children's well-being.

Another contribution of the present study is that time use data are used to measure both children's functionings and parents' constraints in their interaction with their children. The results show that parents' working time, both paid and unpaid, is determinant for children's well-being. Especially significant are gender differences, having important policy implications both for children (boys and girls) and for men and women in terms of achieving or not gender equality. Therefore, by adopting a gender perspective and by placing unpaid work and social reproduction at the heart of the macroeconomic flow, tensions between the different time uses and responsibilities can be revealed while assessing the sustainability of the system and stressing the related policy issues.

## **2. The measurement of children's well-being and the capability approach**

Although the first steps in the conceptualisation and construction of indicators of children's well-being go back to those proposed by UNICEF in the 1940s, the main development of children's well-being analysis and measurement and its treatment as a multidimensional and complex concept are quite recent. These recent studies have focused on analysing the quality of life, including children's economic conditions, peer relations or political rights and opportunities, while taking into account the effects of social and cultural changes (Ben-Arieh and Wintersberger 1997, Ben-Arieh 2008). Also

recent works by UNICEF (Bradshaw et al. 2009) and the annual reports of the United States Foundation for Child Development have agreed on the need to focus on children's well-being from a multidimensional perspective.

These developments are closely related to recent advances in the conceptualisation and measurement of well-being, which include both the efforts of international institutions<sup>3</sup> and the ongoing endeavour of associations and research networks, such as the Human Development and Capability Association (HDCA), particularly in the development and application of the capability approach. The advances made through the use of the capability approach in the knowledge and measurement of well-being demonstrate its potential and point to the need to deepen into the possibilities of applying this approach to different contexts or groups, such as children, and to further develop the econometric modelling of the capability approach.<sup>4</sup> However, few studies have yet examined children's capabilities; among them, some relevant researches are Phipps (2002), Mehrotra and Biggeri (2002), Saito (2003), Addabbo et al. (2004), Di Tommaso (2007), Walker and Unterhalter (2007), Addabbo and Di Tommaso (2008), Biggeri et al. (2010b) and Wüst and Volkert (2012).

One of the first issues to be resolved in the study of children's well-being from the capability approach is the choice of obtaining the data with either participatory or non-participatory methods. Participatory methods solve the problem of parental influence on

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<sup>3</sup> The efforts include those being made for the development of the UNDP Human Development Index, which has recently suffered a revision in its twentieth anniversary, the OECD initiative "Beyond GDP", the establishment for over ten years of the Commission on the Measurement of Economic Performance and Social Progress, or the OECD "Better Life Initiative: Measuring Well-being and Progress".

<sup>4</sup> For instance, modelling techniques using latent variables, such as principal components, factor analysis or structural equation models (Krishnakumar 2007; Krishnakumar and Nagar 2008; Krishnakumar and Ballon 2008; Anand et al. 2011), have led to a significant methodological advance in the study of capabilities because they provide a framework that transcends traditional multidimensional analysis models.

children's development by including children in the selection of capabilities and the assignment of a grade of relevance to them (Biggeri et al. 2006), but they are costly and difficult to execute, whereas non-participatory methods employ secondary data to analyse children's well-being according to their functionings and capabilities. Thus, the dimensions included in the model are constrained by the information contained in the database used (Biggeri et al. 2010a). Most analyses, as the one carried out in this study, are based on non-participatory methods.

Another crucial issue in studies on children's well-being is how to balance the concepts of *being* and *becoming*, as children's well-being refers both to present life and to their rights and capacity to develop their potentials on their way to adulthood (Ben-Arieh and Frønes 2011). Thus, an important choice in relation to the models and research proposed is which capabilities should be taken into account when approaching a concept as multidimensional as children's well-being, which will also differ depending on the context, the area of analysis and the age group.

For instance, Phipps (2002) compared the well-being of children in the USA, Canada and Norway focusing on their physical health and emotional well-being and measuring ten specific functionings (low birth weight, asthma, accidents, activity limitation, trouble concentrating, disobedience at school, bullying, anxiety, lying, hyperactivity).

The paper by Saito (2003) and the book edited by Walker and Unterhalter (2007) explored only the possible relation between capabilities and education. Addabbo et al. (2004) proposed six capabilities for Italian children: life and physical health, mental well-being, bodily integrity, education and knowledge, leisure and play activities, and social interaction. Di Tommaso (2007), on her paper on Indian children, endorsed a list

of seven capabilities: life, bodily health, bodily integrity, senses, imagination and thought, leisure and play activities, emotions and social interaction. Addabbo and Di Tommaso (2008) used a MIMIC model to measure two capabilities of 6-13 year-old Italian children: senses, imagination and thought, and leisure and play activities. They found that socio-economic, political and geographical factors are important in determining children's well-being.

The analysis by Wüst and Volkert (2012) on German children suggest that not only financial means but also personal and social conversion factors – which determine to what extent financial means can be transformed into personal well-being –, such as the type of household, the number of children in the household, the social norms, the child care situation, the mother's education or the time budget, have a major impact on children's functionings. Among these indicators, they noticed that children's participation in social life and contacts strongly depend on the time parents can spend with each child.

### **3. Measuring children's well-being in an advanced society**

To study children's well-being, a Multiple Indicators Multiple-Causes (MIMIC) model approach is selected as the structural equation model which best fits the objectives of this work. This model is based on a single latent variable that reflects its magnitude on some indicators and results from a combination of factors, i.e. considers multiple causes and indicators.

A system of equations is constructed that specifies the relationship between an unobserved latent variable  $Y^*$  (children's well-being) and the capabilities associated

with it, a set of observable endogenous indicators  $Y^i$  (functionings), and a set of observable exogenous variables  $X_j$  (causes). The proposed structural model is based on the hypothesis of causal links existing between the latent variable and its functionings and a series of exogenous factors on an individual basis ( $X_j$ ), which refer to the individual characteristics of the persons tested and their environment when engaging in each activity.

The MIMIC model is configured based on two types of equations: measurement equations, which relate the latent variable with observed indicators of achieved functionings, and structural equations, which specify the causal relationship between the latent variable and some exogenous factors. The measurement equation, reflecting that the observed measurements are imperfect indicators, is as follows:

$$Y^i = \beta^{Y_i} Y^* + \xi_i \quad i = 1, \dots, m \quad (1)$$

where  $Y = (Y^1, Y^2, Y^3, \dots, Y^m)$  is a  $m \times 1$  vector with each element representing an independent indicator of children's well-being denoted as  $Y^*$ ;  $\beta^{Y_i}$  denotes a  $m \times 1$  parameter vector of factor loadings, with each element representing the expected change in the corresponding indicator following a one unit change in the latent variable and  $\xi$  is a  $m \times 1$  vector of measurement errors.

In addition, the idea that children's well-being is linearly determined by a vector of observable exogenous variables  $X = (X_1, X_2, \dots, X_j)$  and a stochastic error  $\zeta$  is posited, so that:

$$Y^* = \gamma_{ij} X_j + \zeta_j \quad j = 1, \dots, s \quad (2)$$

where  $\gamma$  is a  $j \times 1$  parameter vector. Expression (2) represents the structural equation model.

Since the aim is to approach the study of children's well-being in developed countries and to differentiate it by gender, four important capabilities are included in the present model, following Robeyns' proposal (2003) for the assessment of gender inequality in post-industrialised Western societies: social relationships, education and knowledge, leisure and play activities, and domestic work and non-market care.

Some capabilities usually proposed in studies on children's well-being, such as life, bodily health or physical integrity, have been excluded because this work focuses on developed countries where the development of those capabilities is available to most children and there are no significant gender differences in them. Instead, the capabilities selected (and its associated functionings) are those that are likely to present the most significant gender differences in advanced societies and the development of which may still vary widely depending on family and societal variables.

Six functionings associated to the four capabilities selected are also proposed; they will be measured through time use data. First of all, two are the general functionings of children's well-being suggested: the total daily time devoted to the performance of the activities considered<sup>5</sup> and an index that measures the diversity of activities, since it is deemed better for children to be able to carry out more than one or two activities.

For the social relations capability the functioning "social life time" has been chosen. The forming, nurturing and enjoyment of social relations are all included in it because it is important for children to learn how to socialise, to construct their identity and to get social support from social networks. Time use data on developed countries show a higher participation of women in social relationships outside market networks,

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<sup>5</sup> See Table AI for the list of activities included.

and this higher amount of time devoted by women to social relations can be seen already from childhood.

For education and knowledge, time involved in human capital-building activities, such as homework and extracurricular activities, including culture, is selected. Education and knowledge are also a basic capability for the development of children given that the quality of education plays a crucial role in children's cognitive development. However, girls and boys have equal access to compulsory formal education in Western countries, and this is the reason why formal education is excluded from this study. On the contrary, gendered social norms may still affect girls' access to non-compulsory activities related to knowledge acquisition, such as participation in cultural activities.

For the leisure and play activities capability, time devoted to sports, hobbies and games is selected, given that these activities are important means for relaxation, creativity and pleasure, all of them intrinsic aspects of well-being. And for children's well-being, the role of this capability is even more important as it is strongly correlated with other capabilities, such as social interaction and education (Addabbo and Di Tommaso 2008). Play can promote positive development, including cognitive, linguistic, social and emotional development. Structured activities like sports, arts, music, hobbies, and participation in organisations offer the possibility to confront new challenges and to improve concentration and motivation (Larson 2001). However, passive leisure time such as screen time<sup>6</sup> or the activity named "resting-time out", which includes time engaged in "doing nothing", "being bored", "lazing around" or just

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<sup>6</sup> TV/video watching is not typically associated with positive developmental experiences for children, as it is correlated with, among other things, obesity, lower school grades and aggressive behaviour (Larson 2001).

“letting time pass”, are excluded, because these activities may be considered unproductive and do not add up to children’s well-being.

The last capability, domestic work and non-market care, involves all household work and caretaking done by the household members and is rarely included in studies on well-being, especially in those focused on children. However, if it is considered that these activities are crucial for adults in modern societies (Folbre 1994 and 2001, Himmelweit 2000), that children should also develop the capability of caring for others from early childhood and that this capability is highly related to social interaction with parents or other members of the family, it will be necessary to support its importance for children’s development and to highlight the significance of gender equality in its formation as a basis for future equal gender opportunities in intra-household work time allocation and in the labour market.

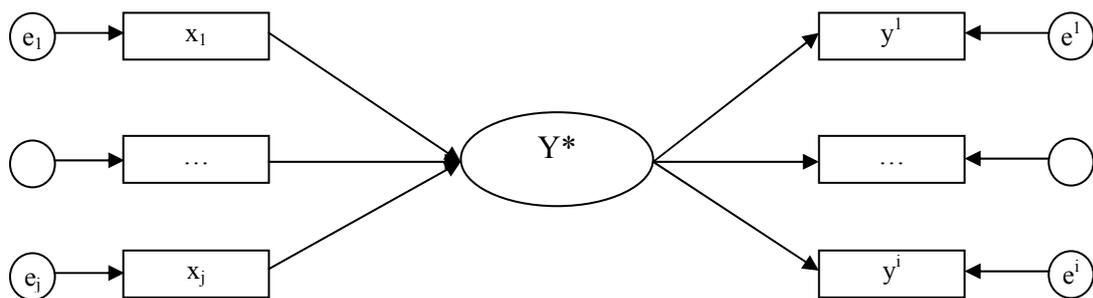
Seven factors that may affect children’s well-being and that are related to the features of household and parents are also introduced in the model: household income level, parents’ educational levels, parents’ working time in the market, and parents’ working time devoted to care activities, all differentiated by gender. A large number of studies have used parents' employment as an indicator of free time with the children; however, the majority of these studies do not include the intensity of work as it is reflected in this research, but only the fact of the parents being employed or not. These studies report evidence that, on the negative side, the loss of parental time with the children has a negative impact on certain measurements of the children's well-being (e.g. socio-emotional adjustment and cognitive outcomes), while, on the positive side, the additional labour income has positive implications in the expenditure on goods consumed by the children (Brooks-Gunn et al. 2002, Ermisch and Francesconi 2005,

Bernal 2008). It still remains unclear which effect is predominant, since the existing research provides conflicting conclusions. The conclusions of empirical estimates range from parental employment having a negative effect (Baydar and Brooks-Gunn 1991, Desai et al. 1989), to its having no effect (Blau and Grossberg 1992), to its being beneficial (Vandell and Ramanan 1992).

Finally, in alternative specifications of this model (Gálvez et al. 2011c and 2013), the variables “household members” and “number of siblings” proposed in certain studies<sup>7</sup> were also included, but they have been dropped this time because they were not significant enough and their coefficients were very low.

Figure 1 presents the path diagram of the model and Table I summarises the variables introduced in the model.

**Figure 1. Path diagram of the econometric model**



<sup>7</sup> Previous studies reveal that the number of household members may have contradictory effects on children’s capabilities. Literature on the relation of social and human capitals provides evidence of a positive relation between family members’ interaction with children – including grandparents living at home – and the development of children’s human capital (Coleman 1988 and 2000; Rute et al. 2008; Österbacka et al. 2010), whereas the number of siblings is usually negatively correlated with such children’s capabilities as education and knowledge and leisure and play (Addabbo et al. 2008 and 2011), although the study by Angrist et al. (2006) showed no evidence of a child-quantity/child-quality trade-off.

**Table I. Variables of the structural equation model**

<b>Y*</b>	<b>Child well-being</b>	<b>Y<sup>i</sup></b>	<b>Functionings</b>
y *	<u>Capabilities:</u> Social Relations, Education and knowledge, Leisure & playing activities, Domestic work and unpaid care	y <sup>1</sup>	Total active free time
		y <sup>2</sup>	Variety of activities
		y <sup>3</sup>	Social life time
		y <sup>4</sup>	Knowledge & cultural time
		y <sup>5</sup>	Sports, hobbies and games time
		y <sup>6</sup>	Domestic & care time
<b>X<sub>j</sub></b>	<b>Observable exogenous factors of the structural equation</b>		
x <sub>1</sub>	Household income level	x <sub>5</sub>	Father's working time
x <sub>2</sub>	Mother's educational level	x <sub>6</sub>	Mother's unpaid care working time
x <sub>3</sub>	Father's educational level	x <sub>7</sub>	Father's unpaid care working time
x <sub>4</sub>	Mother's paid working time		

#### 4. Empirical application and results: the case of Spain

The MIMIC model outlined in the previous section is applied to a target population of Spanish children aged 10 to 17 years divided into two groups: middle childhood (10 to 13 years old) and late childhood (14 to 17 years old). The data are taken from the Spanish Time Use Survey (STUS) held in 2002-2003. This survey has great advantages for the analysis of households, as it contains a diary for every member of the household older than 9 years.

Of the total sample population of young people with these characteristics, those who expressed having a paid job during the reference week were excluded, because this is an exceptional situation for children in Spain. Those living in mono-parental households were also excluded, since this work is focused not only on gender differences in children's capabilities, but also on gender differences in parents' time allocation. In addition, the majority of children in OECD countries (84 percent) still live with two married or cohabiting parents (OECD 2011). The analysis is performed on a

sample of 2,888 children divided into four subgroups: 701 girls and 709 boys between 10 and 13 years old, and 768 girls and 710 boys between 14 and 17 years old.

Table II presents the regression coefficients of the model and the standardised estimates of the “loadings” for each of the components of children’s well-being in the measurement equation.

**Table II. MIMIC model of children’s well-being. Standardised regression weights**

Exogenous variables	Group 10-13 years old				Group 14-17 years old			
	Boys		Girls		Boys		Girls	
	Est	P	Est	P	Est	P	Est	P
Income level	0,322	***	0,401	***	0,285	***	0,295	***
Mother’s education	0,067	0,294	-0,038	0,608	-0,196	**	0,161	0,074
Father’s education	-0,147	*	-0,338	***	-0,322	***	-0,332	***
Mother’s paid working time	-0,673	***	-0,652	***	-0,574	***	-0,296	***
Father’s paid working time	-0,383	***	-0,233	**	-0,285	***	-0,783	***
Mother’s unpaid care working time	-0,316	***	-0,46	***	-0,604	***	-0,209	*
Father’s unpaid care working time	0,413	***	0,18	*	0,018	0,794	0,179	*
<b>Functionings</b>								
Total free time	0,369	***	0,316	***	0,375	***	0,281	***
Variety of activities	0,251	***	0,146	***	0,166	***	0,143	***
Social life	0,173	***	0,252	***	0,245	***	0,199	***
Knowledge & cultural time	0,086	*	0,002	0,948	0,079	*	0,056	0,125
Sports, plays, games time	0,204	***	0,237	***	0,173	***	0,058	0,116
Domestic & care time	0,199	***	-0,019	0,615	0,017	0,649	0,101	**

\*\*\* Significant at the 0,001 level \*\* Significant at the 0,01 level \* Significant at the 0,05 level.

As for the results obtained in the equations measuring children’s well-being, each functioning’s weight (factor loading) represents how much that specific functioning counts in explaining the latent variable in relation to other functionings. A strong implication of the results is the relevance of gender and age in relation to the weight of the different capabilities associated to children’s well-being. As children grow older, the weight of the functionings on their well-being changes, though boys’ coefficients are

always higher than girls' than girls in total free time, in variety of activities performed and in time devoted to sports, plays and games time.

Regarding the rest of capabilities and functionings, gender differences vary with age. In the age cohort formed by 10 to 13 year-olds, girls' well-being is more affected by socialisation and play, whereas in the age cohort formed by 14 to 17 year-olds, being a girl implies an increase in the weight of domestic work and care and a decrease in the rest of capabilities. Daughters between 14 and 17 years of age do more care work than sons,<sup>8</sup> mirroring the gendered division of labour in adulthood (Gálvez et al. 2008). These results are consistent with other studies on children's capabilities by gender (Addabbo et al. 2011, Gálvez et al. 2011c) and show the existing gender differentials in children's development, which may affect the future capabilities and opportunities of women and men and have consequences on the total welfare.

Though variations according to sex and age are important in the four subgroups, the exogenous variables that have a bigger and more detrimental impact on children's well-being in all four groups are parents' paid working time and mothers' unpaid care work time.

Mothers' paid working time is a variable with an important negative effect, actually the one most affecting children in middle childhood (10-13 years old). Children at this age still need an important amount of care and interaction with their parents, and the intensity of their mothers' work at the market has a strong detrimental effect on their well-being, stronger than that of the fathers', as in every country mothers' time devoted to interacting with children still exceeds by far fathers' time (Gálvez et al. 2010).

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<sup>8</sup> See Table AII with mean time in activities for each subgroup.

Mothers' unpaid care time has also a significant negative effect on children's well-being, both for sons and daughters, due to different reasons: women's higher workload in domestic tasks (see Table AIII), women's gender specialisation in basic or routine domestic and care activities rather than in the specific activity of child-caring, and the fact that a significant proportion of the time devoted to quality care is frequently included by mothers as leisure time in time diaries.<sup>9</sup>

Also fathers' paid working time negatively affects children's well-being. In middle childhood, fathers' paid working time affects boys more negatively than girls and fathers' domestic and care time has a greater positive effect on boys' well-being than on girls'. This result is consistent with recent researches (Mammen 2005, Raley and Bianchi 2006, Lundberg et al. 2007a and 2007b, Bonke and Esping-Andersen 2011) pointing out towards a stereotyped time use in which fathers spend more time with sons than with daughters, harming the latter's well-being.

As children grow up, fathers' working time at the market has a stronger negative impact on girls' well-being whereas fathers' domestic and care work shows a positive effect for both sexes. Though no definite conclusions can be drawn from these results, it is possible to hypothesise that the intensity of men's paid work leads to the family's female members, including daughters, having to increase their domestic work overload (see Table AII). In fact, the coefficient of domestic and care activities in girls between 14 and 17 years of age gets higher and more significant.

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<sup>9</sup> Some studies show that time use diaries included in surveys like the Harmonised European Time Use Survey underestimate time devoted to care activities, mainly female time, because women do not identify many activities that actually involve their looking after their children, for instance being in the park or going for a walk with them, as child care. Also, child care may be a tertiary activity for women who are performing other domestic tasks simultaneously and therefore may not be taken into account as an activity of its own in the time diary (Carrasco and Mayordomo 2005; Gálvez et al. 2011b).

Finally, the income level has a significant positive effect on children's well-being in both age cohorts, being greater in middle childhood. As for the parents' educational levels, the coefficients are either negative or not significant enough. Contrary to the results of this work, most studies find evidence of the positive impact of parents' education, mainly mothers' educational level, on children's cognitive capabilities or well-being. However, this research does not consider children's educational achievements, which is the variable more closely correlated with parents' education. The negative effect of the parents' educational levels in this analysis seems to be associated to a greater probability of parents being employed full-time at the market.

## **5. Conclusions**

In this paper, children's well-being is measured in a developed country (Spain) through the capability approach. A framework is presented that distinguishes and provides a link between the latent variable of well-being in middle and late childhood and several observed functionings of the capabilities selected (social relationships, education and knowledge, leisure and play activities and domestic work and care), and offers an explanation of the level of well-being, both in terms of endogenous and exogenous factors, predicting significant gender and age differentials in children's well-being. Children's functionings and capabilities vary widely as they pass from middle to late childhood; however, in both age cohorts significant gender differences are found. Boys' well-being relies more in total free time and sports, hobbies and games, whereas girls' well-being is more affected by socialisation. Nevertheless, as they grow older, girls' workload of domestic and care activities increases and the importance of the rest

of capabilities falls, mirroring the gendered division of labour in adulthood (Gálvez et al. 2008).

As to the exogenous factors that affect children's well-being, the findings of this work show a high detrimental impact of parents' working time, mainly mothers' care time and market work time. Despite the trend towards an egalitarian sharing of caring tasks between parents within the household, patriarchal work specialisation still survives in Western countries, something that must be taken into consideration as a central issue in macroeconomic models and policies by applying the concept of mainstreaming (Gálvez et al. 2011b). Empirical results show a clear inequality between fathers and mothers in what concerns child care, which is more evident in Mediterranean countries (García et al. 2009). High inequality in parents' time by gender reinforces the resilience of gender stereotypes and prejudices, directly affecting boys' and girls' choices as well as societal behaviours towards men and women. These results prove the persistence of intra-family gender norms that may affect children's development and the future capabilities and opportunities of women and men, while having consequences on the total welfare due to the maintenance of a gender-stereotyped society (Gálvez et al. 2011a and 2011c).

One important finding, already present in some ongoing debates in the European Union (OECD 2006), is that governments cannot design public policies concerning children's education, well-being and long-term benefits without stressing at the same time parental benefits – for both fathers and mothers –, their role in the labour force, the importance of unpaid parental care and parental leave and the uneven division by gender. It is important to encourage fathers' allocation of time towards care, reducing their hours of market work, and to make possible for women to be engaged in paid

work. It is not possible to progress in gender equality if working hours keep increasing and if the rising demand for flexibility turns into total availability, hindering the achievement of any care solution. In order to reach it, it is necessary to respect decent work rules that make sense of mothers' participation in the labour market, to strengthen public commitment in social infrastructures and to increase men's participation in domestic work and care.

All this entails a strong social investment component that requires redistributive taxation and financing, concepts that seem far removed from the recent changes in European welfare edifices after the financial crisis turned into a debt crisis in some European countries.

However, all expenditure benefiting children's well-being today will yield a positive return over many years. At the same time, it represents a unique combination of individual private gains and positive social externalities (Esping-Andersen 2007) that should be given political priority in an ageing society as the European one. And it is essential to guarantee that it will be implemented without deepening gender stereotypes or causing a loss of women's well-being in terms of reducing their financial autonomy and their freedom to live a life that they consider worth living.<sup>10</sup>

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<sup>10</sup> De Henau et al. (2010), in their review of partnered women's employment and child policies in the EU15, concluded that, in the absence of public child care, even the most highly educated mothers cannot cope.

**Appendix.**

**Table AI. List of activities included in the time use variables**

<p><b>Social Relations</b></p> <p>Social Life (socialising with family, visiting and receiving visitors, celebrations, telephone conversation)</p> <p>Other or Unspecified Social Life</p>
<p><b>Knowledge &amp; Culture</b></p> <p>Study at Home (Doing Homework)</p> <p>Entertainment and Culture (cinema, theatre &amp; concerts, art exhibitions &amp; museums, library, sports events, unspecified)</p> <p>Reading</p> <p>Listening To Music</p>
<p><b>Sports, Hobbies and Games</b></p> <p>Sports and Outdoor Activities</p> <p>    Physical Exercise</p> <p>    Productive Exercise</p> <p>    Sports Related Activities</p> <p>Hobbies And Computing</p> <p>    Arts and Hobbies</p> <p>    Computing</p> <p>Games</p> <p>    Games and Play, Computer Games, Other or Unspecified Games</p>
<p><b>Domestic Work And Care</b></p> <p>Unspecified Household and Family Care</p> <p>Food Management</p> <p>Household Upkeep</p> <p>Making and Care for Textiles</p> <p>Gardening and Pet Care</p> <p>Construction and Repairs</p> <p>Shopping and Services</p> <p>Household Management</p> <p>Childcare</p> <p>Help to an Adult Family Member</p>

**Table AII. Descriptive statistics of the functionings**

10-13 years old	Boys					Girls				
	N	Mean	St. Dev.	Min	Max	N	Mean	St. Dev.	Min	Max
Total Time	709	275,83	158,891	10	1010	701	263,38	151,371	10	790
Variety activities	709	3,03	1,493	1	8	701	3,47	1,639	1	9
Knowledge & culture	709	29,464	68,796	0	650	701	38,816	63,348	0	420
Sports, plays & hobbies	709	170,71	133,12	0	920	701	122,154	116,933	0	660
Domestic & care work	709	37,743	62,569	0	410	701	54,308	69,08	0	640
Social life	709	37,912	68,796	0	420	701	48,102	82,297	0	640
14-17 years old	Boys					Girls				
	N	Mean	St. Dev.	Min	Max	N	Mean	St. Dev.	Min	Max
Total Time	710	320,366	186,229	10	1460	768	299,401	173,056	10	880
Variety activities	710	3,131	1,504	1	8	768	3,538	1,619	1	9
Knowledge & culture	710	34,366	64,525	0	600	768	42,083	68,182	0	540
Sports, plays & hobbies	710	149,127	145,77	0	1460	768	86,914	107,974	0	820
Domestic & care work	710	42,915	72,593	0	680	768	76,393	86,115	0	470
Social life	710	93,958	132,896	0	660	768	94,01	114,562	0	690

**Table AIII. Descriptive statistics of the exogenous factors**

10-13 years old	Boys					Girls				
	N	Mean	St. Dev.	Min	Max	N	Mean	St. Dev.	Min	Max
Income	709	3,958	1,652	1	8	701	4,004	1,656	1	8
Mother's education	709	1,152	0,36	1	2	701	1,157	0,364	1	2
Father's education	707	1,165	0,372	1	2	700	1,157	0,364	1	2
Mother's paid working time	709	107,278	178,306	0	660	701	122,425	193,006	0	780
Father's paid working time	709	314,866	278,518	0	1320	701	330,899	279,844	0	1220
Mother's unpaid care working time	709	373,117	173,414	0	870	701	360,728	168,509	0	940
Father's unpaid care working time	709	103,385	129,387	0	930	701	93,809	113,715	0	740
14-17 years old	Boys					Girls				
	N	Mean	St. Dev.	Min	Max	N	Mean	St. Dev.	Min	Max
Income	710	4,089	1,678	1	8	768	4,163	1,698	1	8
Mother's education	710	1,13	0,336	1	2	768	1,135	0,342	1	2
Father's education	710	1,155	0,362	1	2	767	1,153	0,36	1	2
Mother's paid working time	710	110,577	191,77	0	830	768	125,286	201,77	0	910
Father's paid working time	710	314,958	273,835	0	1330	768	308,438	269,089	0	1000
Mother's unpaid care working time	710	367,507	173,841	0	860	768	345,807	170,773	0	930
Father's unpaid care working time	710	87,986	114,569	0	740	768	82,695	109,373	0	680

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