ISER Working Paper Series

All in the Family: Informal Childcare and Mothers' Labour Market Participation

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No. 2010-24
9 July 2010

INSTITUTE FOR SOCIAL
& ECONOMIC RESEARCH

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NON TECHNICAL SUMMARY

Childcare arrangements are a key element in the work decisions by mothers insofar as they are fundamental to the extent to which women manage to juggle childcare and participation in the labour market.

In traditional economic models of female labour market participation childcare is usually thought as being provided by the market. However, in countries where the lack of public childcare services is particularly acute or prices of private childcare are very high, families tend to turn to yet another type of childcare: informal childcare provided by relatives. Childcare provided by grandparents is relatively common through all Western Europe: the percentage of grandparents looking after their grandchildren at least once a week is about 20%in Northern countries like Denmark and Sweden and around 30% in France. In Italy and Spain this percentage is higher at around 45%. What is more peculiar about Southern European countries is the percentage of grandparents who provide care on a daily basis: around 30% in Italy and Spain, 15% in Germany and Austria but only 2% in countries like Denmark and Sweden. In some countries grandparents seem to complement the service offered by formal childcare whereas in other countries they seem to substitute formal childcare. Another reason to study grandparents' help in childcare is that some parents might have a preference against formal childcare based on concerns about its quality. Mothers may be less willing to entrust their children to institutions and may prefer either to care for the children themselves or having them at the care of relatives, especially when they are very young.

The aim of this paper is to test whether the possibility to be helped by grandparents in childcare activities increases the probability that an Italian mother works. We find that Italian mothers helped by grandparents are 39 percentage points more likely to work. The effect is stronger for less educated women, for families with younger children, and living in the North and Centre of Italy. The fact that for lower educated women the impact of grandparents' help on their work decision is larger can be explained by economic constraints that limit the access to private childcare. The stronger effect for mothers with young children might reflect the limited availability of public childcare for children aged 0 to 3 or parents' preferences to have young children looked after at home.

All in the family: informal childcare and mothers' labour market participation

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Abstract

In the traditional models of female labour supply formal childcare is assumed to be provided by the market. This is not the case in most European countries. In this paper we estimate the causal effect of a particular kind of informal care, the one provided by grandparents, on mothers' work decisions in Italy. We deal with the endogeneity due to mothers' and grandparents' unobserved preferences by instrumenting grandparents' help. We find that having grandparents helping with childcare increases mothers' labour market participation. The effect is particularly strong for lower educated mothers of young children, in North and Centre Italy.

Keywords: female labour supply, informal childcare, intergenerational transfers

JEL classification: D1, J13, J22

Acknowledgments: Funding from the ERC for the CODEC project is gratefully acknowledged.

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1. Introduction

Childcare arrangements are a key element in the work decisions by mothers insofar as they are fundamental to the extent to which women manage to juggle childcare and participation in the labour market.

The traditional models of female labour supply extend the classic model of labour supply by allowing for the presence of children. Participation in the labour market is seen as resulting from the comparison between the market wage and reservation wage, where childcare costs are taken into consideration either in the budget constraint or through their effect on the reservation wage. This model predicts that lower childbearing costs would result in higher female labour force participation, and in fact several studies provide empirical evidence of this relationship (see Blau and Currie 2004).

In these traditional models of female labour supply formal childcare is usually thought as being provided by the market. However, in most European countries childcare where a large share of formal childcare is publicly provided, the problem faced by the families is not so much the price of childcare but its availability (Hank and Kreyenfeld 2003; Wrohlich 2005). As the private market for childcare services is thinner, the lack of competition pushes the price to such high levels that private childcare is simply not an option for the majority of the families (Wrohlich 2006).

In countries where the lack of public childcare services is particularly acute, families tend to turn to yet another type of childcare: informal childcare provided by relatives. Both in Italy and in West Germany, for example, informal childcare is a common childcare arrangement (Del Boca et al. 2004; Wrohlich 2006). In fact, childcare provided by grandparents is relatively common through all Western Europe: the percentage of grandparents looking after their grandchildren at least once a week is in Northern countries like Denmark and Sweden and in France is around 20% and 30%, respectively. In Italy and Spain this percentage is higher: around 45%.[6] What is more peculiar about Southern European countries is the percentage of grandparents who provide care on a daily basis: around 30% in Italy and Spain, 15% in Germany and Austria but only 2% in countries like Denmark and Sweden.[7] In some countries grandparents seem to complement the service offered by formal childcare whereas in other countries they seem to substitute formal childcare.

[6] Authors' elaborations from Survey of Health, Ageing and Retirement in Europe (SHARE) 2004.
[7] Authors' elaborations from SHARE 2004.

The aim of this paper is to estimate the causal effect of a particular kind of informal care, the one provided by grandparents, in mothers' work decisions in Italy. Its contribution to the literature on female labour supply relies on the fact that we are not looking at the effect of the price or availability of formal childcare but rather at the effect of informal care provided by the grandparents. Even though Heckman, in his pioneering paper on this field (Heckman 1974), called attention for the fact that many families resort to informal sources of childcare, there are very few empirical studies analysing the causal effect of grandparents' help in childcare in women's work decisions.

Although we are looking at the Italian case, the availability of informal childcare is expected to affect women's work decisions even in countries where there is a proper childcare market, like the U.S., because it is a cheaper alternative.

By looking at the importance of childcare provided by the grandparents in mothers' work decisions this paper also contributes to the literature on intergenerational transfers which is dominated by studies on income transfers. Here we will be looking at the exchange of another type of resources: childcare services.

Another reason to study grandparents' help in childcare is that some parents might have a preference against formal childcare based on concerns about its quality - a common topic in studies about the impact of childcare on female labour market supply (Ham and Buchel 2004; Parera-Nicolau and Mumford 2005).

Similarly to what happens when people use many other services, parents face information asymmetry when using childcare services (either privately or publicly provided). This might make mothers less willing to trust their children to institutions and to prefer either to care for the children themselves or having them at the care of relatives, especially when they are very young. Some studies hint at the importance of trust in the quality of childcare in child care choices (Hank and Kreyenfeld 2003 JMF; Borck and Wrohlich 2008) and El-Attar (2007) finds that lower trust decreases the probability of leaving the child with a more external type of child care, whereby leaving children to the care of grandparents (or other relatives) is the least external solution of non-parental care.

It follows from the above that an effect of grandparents' help in childcare in mothers' work decisions could be observed even if there were no problems of availability of formal childcare – particularly in countries where the trust levels are low, as it is likely to be the case in Southern European countries.

The remainder of the paper is organized as follows. The next section is devoted to the endogeneity issues surrounding the relationship between grandparents' help in childcare and

mothers' work decisions, namely the biases that might arise when these issues are not properly addressed. Section 3 describes the data and methods used, and the results are presented in section 4. Section 5 concludes and discusses policy implications.

2. Grandparents' help in childcare and mother's participation in the Labour Market

In the traditional female labour supply approach it is often assumed that maternal and non-maternal childcare (typically formal childcare) are perfect substitutes. Whereas it might be so for some women, it is difficult to sustain it as a general assumption. That is, heterogeneity in mother's preferences about the type of childcare certainly matters for women's work choices.

Blau and Ferber (1992) suggest that childcare affects the value women place on their time at home. Consequently, women who have a strong preference for maternal childcare will have a higher reservation wage and therefore a lower probability of participating in the labour market. This interrelation between the decisions about participation in the labour market and childcare has been recognized in the literature, and several studies estimate them as a joint decision (Viitanen 2005 and Del Boca and Vuri, 2007, for e.g.). However, usually these studies consider only formal childcare.

Del Boca (2002) is an exception. She finds a positive effect of having one grandparent alive on both labour market participation and fertility decision of Italian women. However, she does not observe actual childcare activity. The presence of a grandmother, who lives close and in good health, is found to have a negative effect on the decision of sending children to the formal childcare (Del Boca et al. 2005).

Studying the impact of grandparents' help in childcare entails complications that do not exist when studying other types of non-parental childcare. Whereas in the latter case, using or not these types of childcare (either formal childcare or hiring a childminder) is a choice made by the parents only, the observed grandparents' help is the result of the demand of childcare help by the parents and the supply of childcare help by the grandparents.

On the one hand this raises a potential problem of reverse causality. Some studies argue that grandparent's help in childcare activities depends on women's working decisions in that grandparents' involvement results from a variety of circumstances in their adult children's lives (Szinovacz, 1998; Elliott, 2008; Hank and Buber, 2009). On the other hand, this also means that there are twice as many sources of endogeneity than usual: the mother's unobserved characteristics and, allowing for intergenerational transmission of attitudes, the grandparents'

unobserved characteristics. We are going to consider the sort of biases that might arise from each source in turn and, for simplification, when thinking about the biases brought about by mother's unobserved characteristics we are going to assume that grandparents' are always willing to help (so that grandparents' help is demand-determined) and, when thinking about the biases due to grandparents' unobserved characteristics we are going to assume that mothers always accept grandparents' help in childcare if they offer it (so that grandparents' help is supply-determined).

Mothers who are more attached to the labour market, and who have a relatively weaker maternal preference for childcare, might ask for grandparents' help in taking care of the children and arrange things in a way that grandparents can effectively help (like going to live closer to the grandparents, for example). In this case, unobserved mother preferences (or characteristics) are positively correlated both with participation and grandparents' help. This would lead to a positive bias in the estimation of grandparents' help effect. Other career-oriented mothers might reject grandparents' help because they might believe that institutional care is better for children's development. In this case, the estimated coefficient of grandparent's help would be downward biased.

Let's now turn to the potential grandparents' unobserved characteristics. The childcare provided by the grandparents depends on their willingness and ability to do so. So, it might be that for some cases for which we observe no childcare provided by the grandparents this is due to the fact that the grandparents are simply not willing to forgo their leisure time in order to take care of their grandchildren. These grandparents who have a modern attitude are very likely to have modern children as well. This in turn means that the mother of their grandchildren will probably be participating in the labour market. In this situation, if these unobserved characteristics are not taken into account, the effect of grandparents' help in childcare in mother's labour market participation might be downward biased.

As we discuss in the next section, we deal with the endogeneity issues due to mothers' and grandparents' unobserved preferences by instrumenting grandparents' help.

3. Data and methods

The data we use are drawn from the Multiscopo - Famiglie e Soggetti Sociali (Families and Social Subjects), collected in 2003, and released by the National Institute of Statistics (ISTAT). The survey contains information on the structure and the characteristics of Italian families (marriage, cohabitation and fertility decisions), on social networks in and outside the family, on

help given and received in childcare and other household chores, and on attitudes and opinions. Information is available for 49,541 individuals in 19,227 households.

We select 3,906 mothers in a couple who have at least one child younger than 14 years old. After dropping observations with missing values in any variable used in the model, the final sample is composed of 3,852 mothers.

Our identification strategy relies on the use of Instrumental Variables (IV). The outcome of interest is the employment status of the mother, *W*, which is defined as a dichotomous variable taking value 1 when she works, 0 otherwise. As information on hours of work is available it would be possible to distinguish between part time and full time. However, given the low availability of part time jobs in Italy and their concentration in the public sector (Del Boca et al. 2009), it is reasonable to assume that there is not much choice about on how many hours to work and therefore we model mothers' working decision as a binary choice.

We are interested in the causal effect of grandparents' help in childcare on the work condition of the mother. The IV approach is more easily understood using the terminology of the treatment effect literature. In the case at hand, the treatment variable is grandparents' help (*GH*), which is a dummy variable equal to 1 when any of the grandparents helps looking after the child/ren at least twice a week and 0 otherwise. We also include in the model some control variables (*X)* concerning the mother, the father, and the whole household such as age and age square of the mother, education of each of the parents (dummy variables indicating tertiary and secondary education - less than secondary education is excluded for being the reference category) and two variables summarizing the fertility history of the couple: the number of children under 14 years old and whether the youngest one is in pre-school age (5 years old or less).

So, the estimating equation can be written as:

$$W = \alpha + \delta\ GH + \sum_k \beta_k X_k + \varepsilon \quad (1)$$

where α, δ and β are parameters to be estimated and ε represents the error term. Our main parameter of interest is δ.

As outlined in the introduction, having grandparents helping in childcare activities may be endogenous with respect to the work decision of the mother. In that case the error term in equation (1) would be correlated with the variable of interest (*GH)* and the simple OLS estimator would be inconsistent. So, in order to estimate the causal effect of this type of childcare we instrument grandparents' help i.e. we use variables which affect the probability that grandparents

help in childcare (relevant) but which do not influence directly the probability of working of the mother (valid). More specifically, we use information on whether the mother's parents and her partner's parents are still alive or not. Using this information we create four dummy indicators (one for each grandparent), and these will be our instruments. We can think of an instrumental variable as a randomization device: conditional on X, the instrument (grandparents alive) assigns units (mothers) to either treatment (receive help) or no treatment independently of the outcome. In other words, the instrument is exogenous.

Table 1 presents the descriptive statistics of the variables used in the analysis both for the whole sample and separately for mothers receiving or not grandparents' help. The sample includes relatively young mothers (average age is 37 years old) with a high proportion of grandparents still alive. There are no large differences in the average characteristic of the two sub-samples (families helped by grandparents or not), apart the percentage of mothers working. Not helped mothers are somehow older and with older children, but differences are not significant. Relevant differences, on the contrary, arise concerning the percentage of grandparents alive. This is descriptive evidence of the relevance of our instruments.

Table 1: Descriptive statistics

			Grandparents help		**Grandparents do not help**	
	Mean	**St dev**	**Mean**	**St dev**	**Mean**	**St dev**
Dependent variable						
Mother is working	0.517		0.663		0.422	
Independent variables						
Mother's age	37.2	6.1	36.0	5.5	37.9	6.4
Mother's education: tertiary	0.111		0.127		0.100	
Mother's education: secondary	0.448		0.506		0.410	
Father's education: tertiary	0.110		0.110		0.109	
Father's education: secondary	0.393		0.429		0.369	
At least 1 child younger than 3	0.286		0.337		0.253	
Number of children younger than 14	1.50	0.63	1.55	0.63	1.46	0.63
Endogenous variable						
Grandparents' help	0.395		1.000		0.000	
Instruments						
Maternal grandmother alive	0.875		0.939		0.833	
Maternal grandfather alive	0.697		0.753		0.660	
Paternal grandmother alive	0.825		0.891		0.781	
Paternal grandfather alive	0.614		0.694		0.562	
Observations	3,852		1,523		2,329	

In her paper on the effect of childcare on work and fertility, Del Boca (2002) adopts a different approach. She uses the variables we use as instrument in place of the endogenous variable. This is known in epidemiology as Intention-to-Treat analysis (ITT). This approach

differs from the one described above in that the ITT analysis estimates the effect of the assignment and not of the treatment per se - in our case by using this approach we would be estimating the effect of having grandparents alive and not the help received from them.

The problem of substituting the help received by grandparents with whether they are alive or not arises because individual preferences on childcare can break the randomization assignment process characterising the presence/absence of grandparents. That could be the case if mothers with grandparents alive refuse their help.[8] These mothers are the so-called non-compliers (Imbens and Angrist, 1994). Angrist et al. (1996) proved that without imposing strong assumptions, such as the homogeneity of treatment effects, an IV analysis can only identify the causal effect on the sub-population of compliers (those who react to the instrument). Our situation is simplified by the fact that the units defined by Angrist et al. (1996) as always-takers (units that would take the treatment irrespectively of the instrument assignment) clearly do not exist - mothers receiving grandparents help even if grandparents would have been all dead. In our context, also defiers (units that always behave opposite to the assignment) can be assumed as inexistent - mothers not using grandparents' help if alive *and* using grandparents if dead). Therefore, the only two possible categories in our context are compliers and never-takers (mothers not receiving grandparents help even if grandparents are alive).

Because grandparents cannot be used when they are dead the effect on compliers estimated by the IV coincides with the effect on treated (ATT). In fact, all the treated must be compliers. Interestingly, the IV estimator will coincide to the ITT divided by the "lease up rate" (the proportion of complying mothers). Therefore, we can expect the effect estimated by IV to be higher in magnitude than the one obtained by an ITT-type analysis. In other words, the latter can underestimate the effect of help because it estimates the effect of availability.

On the other hand, the effect estimated by OLS using *GH* as the treatment variable is biased because in an OLS analysis compliers (in the treated group) are compared with compliers and never-takers (included in the non-treated group). Never takers, for the reasons outlined in section 2, are likely to have different preferences toward childcare and work. They can be composed both by modern mothers that prefer formal childcare to grandparents' care and by mothers who favour maternal childcare over grandparents' care. Given that, as outlined in section 2, the preferences of these two types of never-takers give rise to biases in opposite directions, it is not possible to say a priori whether the coefficient estimated by OLS is down or upwards biased.

[8] To keep the discussion simple we assume that if grandparents are alive they are willing to provide childcare. In other words, here we only focus on the source of endogeneity related to mother's preferences.

We use a standard Two-stage least squares (2SLS) approach despite the fact that both the endogenous and the dependent variables are binary, the reason being that its interpretation is more straightforward and tests of validity and endogeneity are easily available in standard statistical packages. We calculate robust standard errors allowing for heteroskedasticity.

The availability of more than one instrument for the endogenous variable *GH* allows us to implement an overidentification restriction test in addition to the F-test of relevance. The tests will be presented in the next section together with the results.

4. Results

Table 2 presents the results of the estimation of a simple linear probability model (OLS) where participation is regressed on the help received by grandparents and on the control variables. We find a highly significant positive association between the help received by grandparents and the probability to work. Mothers helped by grandparents in childcare activity are 22 percentage points more likely to work. The effects of other characteristics of the mother are as expected - the presence of young children and lower education decrease the probability to work - while father's education turns out to be not significant.

Table 2: Effect of observed Grandparents' Help on Mother's Work

Mother is working	**Coef**	**Rob st err**	**Sig**
Mother's age	0.059	0.011	***
Mother's age squared	-0.001	0.000	***
Mother's education: tertiary	0.444	0.027	***
Mother's education: secondary	0.247	0.018	***
Father's education: tertiary	0.019	0.028	
Father's education: secondary	0.007	0.018	
At least 1 child younger than 3	0.025	0.019	
Number of children younger than 14	-0.075	0.012	***
Grandparents' help	0.217	0.015	***
Constant	-0.849	0.200	***
Observations		3,852	

Notes: OLS, robust standard errors (*, ** and *** significant at 10%, 5%, and 1% level, respectively)

As explained in Section 3 the effect of grandparents' help obtained with such a regression model cannot be interpreted as causal. In Table 3 we report the results of a linear probability model where the covariates of interest are the variables that will be used as instruments in the IV approach. This Intention-to-Treat analysis is expected to underestimate the effect of interest,

since not all grandparents alive will give help and not all mothers with grandparents alive will accept help. We present these results so that we can compare them with the estimates obtained using the IV approach presented ahead.

Table 3: Effect of Grandparents being Alive on Mother's Work

Mother is working	**Coef**	**Rob st err**	**Sig**
Mother's age	0.068	0.011	***
Mother's age squared	-0.001	0.000	***
Mother's education: tertiary	0.471	0.027	***
Mother's education: secondary	0.265	0.018	***
Father's education: tertiary	0.008	0.029	
Father's education: secondary	0.005	0.018	
At least 1 child younger than 3	0.027	0.019	
Number of children younger than 14	-0.070	0.012	***
Maternal grandmother alive	0.045	0.024	*
Maternal grandfather alive	-0.011	0.018	
Paternal grandmother alive	0.064	0.021	***
Paternal grandfather alive	0.027	0.017	
Constant	-1.028	0.204	***
Observations		3,852	

Notes: OLS, robust standard errors (*, ** and *** significant at 10%, 5%, and 1% level, respectively)

Table 4 shows that our 4 instruments are significantly associated with the treatment variable after having controlled for the effect of covariates, therefore confirming that these variables can be considered as good potential instruments - particularly the dummy variables indicating that grandmothers (especially the mother of the father) are alive.

Table 4: Effect of Grandparents' being Alive on Grandparents' Help in Childcare

Grandparents' help	**Coef**	**Rob st err**	**Sig**
Mother's age	0.044	0.011	***
Mother's age squared	-0.001	0.000	***
Mother's education: tertiary	0.141	0.031	***
Mother's education: secondary	0.096	0.018	***
Father's education: tertiary	-0.042	0.030	
Father's education: secondary	0.000	0.018	
At least 1 child younger than 3	0.016	0.020	
Number of children younger than 14	0.026	0.013	**
Maternal grandmother alive	0.159	0.021	***
Maternal grandfather alive	0.021	0.018	
Paternal grandmother alive	0.096	0.020	***
Paternal grandfather alive	0.061	0.017	***
Constant	-0.653	0.208	***
Observations		3,852	

Notes: OLS, robust standard errors (*, ** and *** significant at 10%, 5%, and 1% level, respectively)

Table 5 presents the results of the 2SLS estimation[9] and shows that the estimated effect of grandparents' help remains positive and significant. The relevance of the instruments is confirmed by the Cragg-Donald Wald F-test.[10] The F-statistic of the test of correlation among the instruments and the endogenous variable is 24.354 overcoming the threshold of 10 usually seen as acceptable (Staiger and Stock, 1997). The instruments also passed the test of under-identification (Kleibergen and Paap, 2006) and the test of over-identifying restrictions.[11]

Table 5: Causal Effect of Grandparents' Help on Mother's Work

Mother is working	**Coef**	**Rob st err**	**Sig**
Mother's age	0.050	0.012	***
Mother's age squared	-0.001	0.000	***
Mother's education: tertiary	0.416	0.032	***
Mother's education: secondary	0.228	0.021	***
Father's education: tertiary	0.024	0.028	
Father's education: secondary	0.005	0.018	
At least 1 child younger than 3	0.022	0.019	
Number of children younger than 14	-0.079	0.012	***
Grandparents' help	0.391	0.100	***
Constant	-0.780	0.209	***
Kleibergen-Paap rk LM statistic	111.537		
(Chi-sq(4) P-value)	(0.0000)		
Cragg-Donald Wald F statistic	24.354		
Hansen J statistic	3.790		
(Chi-sq(3) P-value)	(0.2850)		
Observations		3,852	

Notes: Instrumental variables 2SLS linear regression (robust standard errors: *, ** and *** significant at 10%, 5%, and 1% level, respectively). Instrumented: grandparents' observed help. Included instruments: age, age square, mother's and father's education, at least one child younger than 3, number of children younger than 14. Excluded instruments: maternal grandmother alive, maternal grandfather alive, paternal grandmother alive, paternal grandfather alive.

The fact that the estimated effect is stronger than the one estimated with OLS means that the downward bias prevails over the others. In other words, the downward bias due to the mothers with more modern attitudes among never-takers overcomes the bias due to the mothers with more traditional attitudes. The effect is also stronger than the one obtained with the Intention-to-Treat analysis (Table 3) – as expected - since not all grandparents alive give help and not all mothers with grandparents alive accept help. Therefore, these results suggest that the

[9] All the tests, as well as the 2SLS estimation, are carried out using the ivreg2 command in STATA (Baum et al. 2007).

[10] This variant of the standard Cragg-Donal F-test is required because we are allowing errors to be not i.i.d. (Baum et al. 2007)

[11] In fact, the value of the Hansen J-statistic is such that the joint null hypothesis that the instruments are valid, i.e. uncorrelated with the error term, and that the excluded instruments are correctly excluded from the estimated equation is not rejected (P-value = 0.2850).

effect of grandparents' help in Del Boca (2002) might be underestimated. However, our estimates cannot be directly compared with theirs because we have four instruments instead of one.

Finally, we want to address the possibility that grandparents' help may have a different effect for different subgroups of mothers. Exploiting the large sample available, we divide it according to the level of education of the mother, the number and age of the children in the household, and the area of residence. Table 6 shows the results both using the OLS and instrumental variables approach. Again, instrumental variable estimates are larger than the OLS ones with the exception of mothers with tertiary education for whom the effect is not significant. However, for this group the sample size is rather small. For all the other sub-groups the IV estimate is significant. In particular, the effect of grandparent child care is stronger for less educated women, for families with younger children, living in the North and Centre of Italy.

Table 6: Heterogeneous Effects of Grandparents' Help on Mother's Work

	OLS			Instrumental variables			
Mother is working	**Coef**	**Rob st err**	**Sig**	**Coef**	**Rob st err**	**Sig**	**Obs**
Mother's edu: primary	0.234	0.025	***	0.415	0.133	***	1,700
Mother's edu: secondary	0.237	0.023	***	0.422	0.169	**	1,724
Mother's edu: tertiary	0.092	0.035	**	0.062	0.223		428
At least one child 0-2	0.219	0.028	***	0.637	0.181	***	1,103
All children > 2	0.215	0.018	***	0.284	0.116	**	2,749
One child	0.231	0.021	***	0.367	0.153	**	2,189
More children	0.197	0.023	***	0.337	0.131	**	1,663
North Italy	0.202	0.023	***	0.486	0.151	***	1,507
Centre Italy	0.231	0.037	***	0.616	0.222	***	605
South Italy	0.181	0.023	***	0.264	0.165		1,740

Notes: Instrumental variables 2SLS linear regression (robust standard errors: *, ** and *** significant at 10%, 5%, and 1% level, respectively). Instrumented: grandparents' observed help. Included instruments: age, age square, mother's and father's education, at least one child younger than 3, number of children younger than 14. Excluded instruments: maternal grandmother alive, maternal grandfather alive, paternal grandmother alive, paternal grandfather alive.

The fact that for lower educated women the impact of grandparents' help on their work decision is larger can be explained by economic constraints that limit the access to private childcare. The stronger effect for mothers with young children might reflect the limited availability of public childcare for children aged 0 to 3.

Since mothers with modern attitudes might be never-takers (even if they can have their parent's help, they do not use it), they induce a downwards bias in the OLS estimates. Therefore, the large positive difference between the regional effects obtained in the instrumental variable and OLS estimations might be interpreted as evidence that the share of mothers with modern attitudes is larger in the North and Centre than in the South.

Even though the effect of measures such as increasing the availability of public childcare on women's work decisions is beyond the scope of the paper, these results do suggest that such a measure would be more effective in the North and Centre.

On the other hand, the success of increasing the availability of public childcare in terms of women's work decisions depends on the degree to which mothers are willing to exchange an internal type of childcare with an external one (formal childcare). Multiscopo gives us information about parents' preference for type of childcare thereby shedding some more light on this issue. Table 7 shows some descriptive statistics regarding pre-school children.

Table 7: Reasons for (not) sending Children to School

	Child aged 0-2	Child aged 3-5
% of children at school	15.4%	89.0%
Number of children	1,241	1,267
Reasons for not sending children to school		
No available place at school	0.044	0.064
School not convenient	0.134	0.271
Doesn't want to send the child at school	0.539	0.364
Other reasons	0.283	0.301
Reasons for sending children to school		
Educational reasons	0.476	0.650
To play with other children	0.283	0.291
Mainly need for care	0.241	0.059

Notes: "school not convenient" includes childcare far away for home, not convenient opening hours, too expensive, child was often sick; "doesn't want" includes child needs to be grown in the family, can feel alone at school, is too young, doesn't want; "other reasons" includes a member of the family can look after him/her, a doctor advices not to send him/her to school.; "mainly need for care" includes baby-sitter would be too expensive, no family members available for caring, every child goes to school.

We have parents' opinions for 1,241 children younger than 3 years old, and 1,267 between 3 and 5 years old. As it is well-known, in Italy the percentages of children in institutional care within these two age-ranges are markedly different: only 15% among the youngest and almost 90% among the oldest. The most common reason not to enrol infants in childcare is that parents simply do not want to do so (54%). This comprises justifications like "the child needs to be raised in the family", "can feel alone at school", "is too young" or "doesn't want". Very few complain about costs and opening hours. This suggests that these parents have a 'true' preference for a more internal type of childcare. On the other hand, the few parents of infants enrolled in childcare stress more the educational aspect of the institutional childcare and the possibility for their children to play with other children, rather than the need of someone looking after their children. This is clear evidence that there is selection in the use formal childcare: the parents who choose this type of childcare have more modern attitudes.

It is also interesting to note that, for parents of older children, educational reasons are also the predominant ones.

5. Policy implications

Population aging is putting pension systems under strain. Based on the idea that keeping older workers in the labour force is crucial to ensure the solvency of pensions plans (OECD 2005), the delay in retirement has been an important policy goal in Europe.

Pension eligibility ages for women are still lower than men's in several OCDE countries but in most of these the aim is to equalise the two – at 65. Moreover, the pension eligibility age might be further raised as it already happening in Germany where the statutory retirement age is to be gradually increased up to 67 (Brussig and Knuth 2007). This trend might gain momentum due to the current economic downturn which is adding to the pressure caused by population aging.

Given the aim of increasing the number of contributors to the pension funds, the goal of keeping older workers in the labour market is accompanied with the one of increasing women's labour market participation - set by the Lisbon strategy. However, these two goals are, to some extent, contradictory especially in countries where a large proportion of the population relies on informal childcare (usually provided by the grandmothers).

Our results show that having grandparents helping with childcare increases mother's labour participation. What is more, these results - obtained instrumenting grandparents' help with whether grandparents are alive - suggest that the effect of grandparents' help is stronger than what has been found in previous studies. This evidence stresses the need of framing the retirement policies in the larger picture of employment policies i.e. it is necessary to take into account the consequences of the retirement policies on family and gender policies (Cook 2006; Brussig and Knuth 2007). This is particularly relevant because despite claiming that the provision of high-quality childcare is a priority, the European Commission also acknowledges that most member states have not been able to ensure the desired access to formal childcare (European Commission 2009).

The present paper also calls attention to the fact that just more childcare services may not be enough to attain the goal of increasing female labour force participation. The increase in quantity needs to be matched by an increase in quality and a corresponding increase in perceived

quality. As it stands, in Italy parents still have a strong preference for a more internal type of childcare which probably reflects their distrust in formal childcare.

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