

Formal and Informal Childcare in Italy and its Regions

Giuseppe Gabrielli and Gianpiero Dalla-Zuanna

Abstract: Childcare arrangements are the mixed result of couples' preferences, resources and constraints. Couples must first decide between a "traditional" model (man as breadwinner and woman as housewife) and a dual-earner model. Dual-earners must then choose between formal (principally kindergarten) and informal (mainly grandparents) childcare; the latter of the two is quite diffused in Mediterranean European countries. Our paper aims to investigate childcare arrangements in Italy and this two-phase decisional pattern using a Heckman procedure and taking into account territorial differences. The results emphasize the economic rationality of informal childcare in Italy.

Keywords: childcare, fertility and family, Heckman procedure, model selection

1 Introduction

Over the last thirty years, private and public care of infants (aged 0-2 years old) has become widespread in Western Europe. In Italy, on the contrary, both services lack and the country ranks second to last (among 24 countries) at well below 10% (UNICEF, 2008). Moreover, there are large disparities among Italian regions: the absence of care is particularly evident in the South. Some scholars argue that Italy, along with several other European countries, such as Spain and Greece, can be grouped into a so-called "Southern or Mediterranean model", characterized by a very low level of social protection and minimal availability of childcare for children under 3 (Ferrera, 1996). The relative lack of formal childcare is somewhat compensated for by a substantial family support system (Del Boca et al., 2005). Informal childcare (mainly provided by

Giuseppe Gabrielli, University of Bari; email: giuseppe.gabrielli@tiscali.it

Gianpiero Dalla-Zuanna, University of Padua; email: gpdz@stat.unipd.it

grandparents) offers different advantages, above all flexibility for particular familiar needs and gratuitousness (Goodfellow, Lavery, 2003).

Through use of the ISTAT Italian Survey on Births (ISB), our paper aims to investigate the determinants of childcare arrangements in Italy. A couple's first choice (and/or constraint) is whether employ a "traditional" arrangement (man as breadwinner and woman as housewife) or a dual-earner plan. The dual-earner couples then face a second decision (and/or constraint) between formal and informal childcare. This two-step decisional pattern can be modelled by means of appropriate statistical tools.

2 ISB Data and method

We jointly use the two editions of ISB (2002 and 2005) when a large sample of mothers – statistically representative at the regional level – were interviewed at about 18 months after delivery using the CATI System. Our sample population includes the women interviewed using the long-form questionnaire: 16,589 mothers in 2002 and 15,870 in 2005 (i.e. 1/3 of the total of interviewed women).

The ISB collected information on birth, pregnancy, delivery, the working life of the mother and father, formal and informal childcare, housing conditions, and other socio-economic characteristics of the family. Childcare arrangement possibilities include: parents (mother or father), informal (grandparents, other relatives, friends or neighbours), and formal (public or private nursery or babysitter).

The final allocation of childcare is the result of a two-step processional decision mentioned above. These two choices (and/or constrictions) are correlated and consecutive, but they are driven by determinants that are in part specific. We use a two-step Heckman procedure that fits a maximum-likelihood probit model with the sample selection (Heckman, 1976; Manski, 1991; Winship, 1992; Gabrielli and Gioia, 2006). With the selection equation we analyse the first bi-partition of the sample: one parent (mainly the man) where breadwinner=0 and dual-earners=1. The dependent variable of the outcome equation (for dual-earners couples only) is the childcare arrangement, where informal=0 and formal=1.

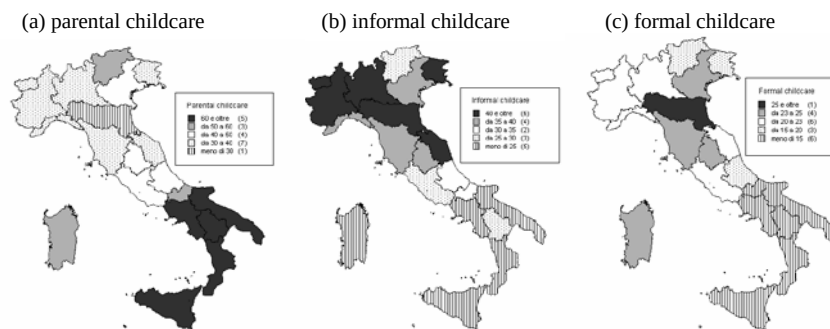
We include only one different predictor in the selection equation: *the woman's attitude towards her job* (instrumental vs. preferential). The idea is that this variable defines a pre-condition which influences women's choice over whether or not to leave work after delivery, without determining the childcare arrangement chosen by the dual-earner couples. The choice of the first variable is supported by the work of Katherine Hakim (2000), who shows how, in the Western world, many women take on, as early as infancy and or their teens, a personal inclination towards career or family. Preferences shaped at a young age persist as "background vibrations" throughout a woman's reproductive life, independently of whether her ultimate reproductive choices are driven by preference alone, or accompanied by the constraints and the changing circumstances of life. As there is no theoretical reason to think that this variable is connected to the subsequent choice faced by dual-earner couples (i.e., formal vs. informal childcare), the fundamental assumption of the Heckman procedure seems to be respected. Other covariates are included in both equations (for details, see the following section) and define the circumstances and constraints that may be common to both steps of the decisional process (and/or constrictions) couples face.

3 Results

Before showing the results from the Heckman procedure, we briefly describe childcare patterns in Italy. According to the ISB data, in 2002 50% of Italian mothers took care of their children; slightly more than 30% had grandparents or other relatives take on (informal) childcare; only 20% used formal care. In 2005 the percentage of parental childcare fell to 46%, whereas both formal and informal childcare increased (33% and 21% respectively).

In Italy, public and private care services are mainly governed by regional laws, and the territorial differences in development and income are very huge. Consequently we pay particular attention to territorial differences. The Southern regions have higher percentages of parental childcare (see figure 1). This result is in part due to the lack of formal care services. However, informal childcare is also relatively infrequent, hinting at the possible problem of a weak labor market which forces woman to stay at home.

Figure 1: Percentage of mothers by region of residence and childcare arrangement



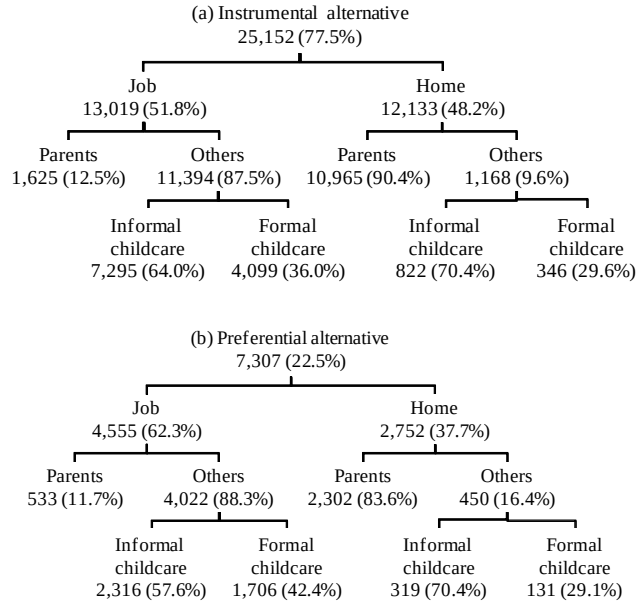
Source: our elaborations on ISB data, 2002 and 2005 (32,459 individuals).

Most Italian women (77.5%) show an instrumental attitude towards employment. Among this group, 52% is “forced” to work, whereas among the women who underline the expressive meaning of job (22.5%), 38% is “forced” to stay at home with the baby (see figure 2).

The proportion of working women that arrange for parental childcare is low (12%). This could be due to a relatively “modern” choice (a house-husband model) or to the woman’s job compatibility with childcare (e.g. helping her husband in a shop, working at home, etc.). There is also a low proportion of housewives who use formal or informal childcare (about 10%). In our model, these minor groups are not taken into account.

Furthermore, it is important to mention that among dual-earner couples, the proportion using formal or informal childcare does not change with the woman’s attitude toward employment, providing empirical proof of the validity of applying a two-step Heckman procedure.

Figure 2: Mothers interviewed by (a) instrumental or (b) preferential attitude toward employment, occupational status, work choice, and childcare arrangement. Absolute values and percentages



Source: see figure 1.

The *Heckman procedure* shows that the selection equation is significant ($p < 0.01$ both for ρ and for the LR test, which measures the difference between the model without selection ($\rho = 0$) and the estimated model) and positive ($\rho > 0$), thus the coefficients would be over-estimated without the employed correction (see table 1). We estimate a probit model for childcare arrangement (formal vs. informal) without the selection equation in order to confirm this issue: all of the coefficients assume higher values than the ones estimated in the outcome model (data available on request).

As expected, the woman's preference for employment have a negative and significant impact on non-parental childcare. Moreover, housewives tend to be less educated, have more siblings and more children, and have a history of migration. Also very young mothers are more frequently housewife. Finally, controlling for other variables reveals that employed women are more common in 2005 than three years earlier, showing the diffusion in Italy of dual-earner couples.

Results from the outcome model show that – among dual-earner couples – “constrictions” play a predominant role in driving the choice between formal or informal care. Grandparents work as caregivers if they are available. Woman with more siblings are less likely to have an available parent, due to the needs of her brothers or sisters. Age also plays a role in that older women are likely to have older parents. Finally, women who have migrated are less likely to have parents who live nearby.

Table 1: Determinants of childcare arrangement. Heckman two-step procedure

Determinants	Selection model (Dual-earner couples vs. One parent breadwinner)			Outcome model (Formal childcare vs. Informal childcare)		
	β	(s.e.)	Sig.	β	(s.e.)	Sig.
<u>Occupational alternative</u>						
Preferential	0.000					
Instrumental	-0.071	(0.02)	***			
<u>Year of interview</u>						
2002	0.000					
2005	0.172	(0.02)	***	-0.306	(0.05)	***
<u>Number of women's siblings</u>						
Number of children	-0.047	(0.01)	***	0.031	(0.02)	**
One child	0.253	(0.02)	***	-0.214	(0.04)	***
Two children	0.000			0.000		
More than two children	-0.215	(0.03)	***	0.179	(0.05)	***
<u>Citizenship</u>						
Italian mother	0.000			0.000		
Foreign mother	-0.380	(0.03)	***	0.031	(0.06)	*
<u>Internal mobility</u>						
No	0.000			0.000		
Yes	-0.142	(0.03)	***	0.178	(0.06)	***
<u>Age at interview</u>						
<25	0.000			0.000		
25-29	0.159	(0.04)	***	0.015	(0.10)	
30-34	0.349	(0.04)	***	0.202	(0.10)	*
35-39	0.473	(0.04)	***	0.435	(0.11)	***
40+	0.470	(0.05)	***	0.708	(0.12)	***
<u>Educational attainment</u>						
Primary school	-0.851	(0.06)	***	-0.850	(0.31)	***
Middle school	-0.499	(0.02)	***	-0.321	(0.09)	***
Secondary school	-0.232	(0.03)	***	-0.091	(0.07)	
High school	0.000			0.000		
University degree	0.527	(0.02)	***	0.398	(0.06)	*
<u>Sufficient income to cover mean costs in a month</u>						
No						
Yes	0.217	(0.02)	***	0.078	(0.04)	**
<u>Region of residence</u>						
Piemonte e Valle d'Aosta	0.128	(0.04)	***	-0.056	(0.08)	
Lombardia	0.079	(0.04)		-0.001	(0.07)	
Trentino-Alto Adige	-0.306	(0.04)	***	-0.008	(0.09)	
Veneto	0.000			0.000		
Friuli-Venezia Giulia	0.080	(0.05)	*	-0.227	(0.09)	***
Liguria	-0.076	(0.05)		-0.079	(0.08)	*
Emilia-Romagna	0.263	(0.05)	***	0.128	(0.10)	**
Toscana	0.060	(0.05)		-0.120	(0.08)	
Umbria	-0.058	(0.05)		-0.200	(0.09)	**
Marche	0.065	(0.04)		-0.153	(0.08)	**
Lazio	-0.242	(0.04)	***	0.068	(0.08)	
Abruzzo	-0.249	(0.04)	***	-0.055	(0.08)	
Molise	-0.416	(0.06)	***	0.027	(0.12)	
Campania	-0.623	(0.04)	***	0.028	(0.11)	
Puglia	-0.425	(0.04)	***	0.064	(0.10)	
Basilicata	-0.531	(0.05)	***	0.110	(0.13)	
Calabria	-0.535	(0.04)	***	0.021	(0.11)	
Sicilia	-0.559	(0.05)	***	0.011	(0.12)	
Sardegna	0.267	(0.05)	***	0.179	(0.09)	**
Constant term	-0.305	(0.05)	***	-1.549	(0.28)	***

Note (1): *p<0.10; **p<0.05; ***p<0.01; p: 0.128 (0.04)***; for Heckman procedure, LR test: 2.57***

Note (2): number of observations: 32,403; observations censored: 15,388.

Source: see figure 1.

The choice of formal care is also driven by “constrictions”. As number of children is one of the most important parameters indicating the likelihood of attending public kindergarten, the most prolific couples more frequently arrange for formal childcare. Moreover, as the cost of formal care is not cheap, it is logical to see a direct statistical association between the proxies of income (education and self-declaration of economic satisfaction) and formal childcare. Finally, it is very important to mention that - even when other characteristics of the woman and couple are taken into account - in 2005 informal care is more diffused than formal care. Evidently, the role of grandparents as caregivers for their grandchildren is far from disappearing in Italy.

Results show large variation among Italian regions, confirming the descriptive analysis. The selection model shows a clear North-South pattern, with the important exception of Trentino-Alto Adige (where many women stay at home) and Sardinia (where many women work). The outcome model shows, albeit less clearly, a geographical pattern as well. All of the regions but Sardinia have a significant and negative coefficient with Veneto as the reference category.

4 Conclusion

The lack of both private and public childcare services in Italy has important consequences for different economic and demographic aspects of Italian society, particularly female employment, fertility, and family welfare. Employed women with children may face a “mismatch” between full-time employment and inexistent care services (Del Boca and Vuri, 2006). In this context, informal childcare helps women to combine motherhood and career aspirations. Although some change has occurred, parental and informal childcare arrangements will persist in Italy in the years to come. Nevertheless, scholars question the sustainability of the Mediterranean model (Albertini and Rosina, 2010), especially the lack of formal childcare. The latter may improve family conditions and minimize constraints on fertility, particularly in the South of Italy. The couple’s decision plays, however, a decisive role in childcare arrangements, and an increase in the offer of formal care may not have an effect.

Among others, Zollino (2008) argues that an increase in the supply of childcare could have a positive impact on the 20% of the Italian population who have children under the age of three: (a) families on waiting lists for formal care (about 5%); (b) families that don’t have formal childcare nearby (about 5%); (c) families that do not agree with the relationship between the quality and the cost of formal childcare services (about 10%).

These last considerations suggest a less than dramatic situation in terms of childcare in Italy. However, our results show that, even when preferences are taken into account, constrictions play an important role in shaping childcare “choices” in Italy. In our opinion, if some of the constraints were weakened by means of cheaper formal childcare, couples would be better able to manage their first period of parental life, as well as have a greater possibility of enacting a dual-earner strategy, thus increasing their ability to ease financial concerns and guarantee the well-being of their children.

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