
European Population Conference 2012

“Gender, Policies and Population”

Stockholm, 13-16 June 2012

**Gendering the cost of children in terms of time. An estimate
for Italy with time-use survey data**

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Abstract

The high cost of children in terms of time may be an important factor associated with low fertility in Italy, but empirical data are lacking. This paper investigates how Italian couples' time dedicated to childcare, unpaid and total work varies by presence, number and age of children. The methodology is a loose adaptation of that used for the estimate of the monetary cost of children. The analysis is based on a sample of 4,827 couples – childless or with at least one child under thirteen – using the Italian Time Use survey of 2002-2003. OLS model results corroborate the hypothesis that Italian children are great time consumers. *Ceteris paribus*, parents' workload increases by more than 3 hours a day when there is a child under 3. Time costs increase with the number of children, albeit less than proportionally, and decrease with the age of the youngest child. Most of these costs are borne by women. Mothers of one child under 3 increase their workload time by 2 hours a day, while fathers by little less than 1. If children are three and one is an infant, mothers have to work 3 hours a day more while men less than 2.5. The costs of children shrink considerably when children reach school-age, but they still remain substantial for mothers. The gender role-set seems to be less unequal as the number of children grows: for the first infant women pay 64% of the incremental cost of children, while for three children (the youngest under three) they pay 57%. Conversely, the

proportion of incremental child-cost paid by women increases as the age of the youngest increases. In this case we may wonder whether men activate themselves only in case of extreme need, that is when children are babies.

1. Introduction

Time is an important economic resource, which is normally exchanged between generations. Children use a large amount of parental time when they are young, and are expected to give it back some when they become adults, and their parents grow old (see e.g. Bordone, this volume, or Keefe at al, this volume). In this paper, I concentrate on the descending flux of time from parents to young children, and try to estimate the additional domestic time that the presence of children requires. This is what I call the “time cost of children”.

The high costs of children in terms of time – and not only in terms of money – are considered an important factor associated with low fertility. This may be particularly true in Italy, where family ties are strong and parents invest very much in what is frequently, if perhaps misleadingly, called “child quality” (Reher 1998, Dalla Zuanna 2001, Dalla Zuanna and Micheli 2004). Women bear the largest part of this investment - Italy is still a deeply gendered society - which may explain in part why fertility is so low (Mencarini and Tanturri 2004, Mills at al. 2008).

In all modern societies, rearing children is a time-intensive activity, but parents’ time is typically scarce, especially when both are full-time workers. Nevertheless, and perhaps surprisingly, recent studies in the US show that parents spend more time with their children today than they did forty years ago (Sayer et al. 2004). In Italy several studies have been carried out on the cost of children in monetary terms (De Santis 2004), but little is known about their cost in terms of time. Studies normally concentrate on reconciliation issues and “opportunity costs”, but the effects of children may well go beyond a reduction of their parents’ working time. Our hypothesis is that also (and in some cases mainly) pure leisure time and the time dedicated to personal care (e.g. sleeping, bathing, ...) may be reduced because of child-related activities.

This paper investigates how Italian couples’ time use varies, qualitatively and quantitatively, when they have children, and how it changes according to the number and age of children. To this end, we will exploit the 2002-2003 Italian Time Use survey, carried out by ISTAT. My methodology is a loose adaptation of the one normally used in microeconomics, except that here the dependent variable is time, not money. The methodology largely relies on a seminal paper by Craig and Bittman (2008), on

Australia. The marginal time costs of children in Italy are assessed by comparing the daily workload (separately: childcare, total unpaid work and total work) of couples with and without children. In the second part of the paper, I examine how the cost of children is distributed between parents, in a gender perspective.

2. Background

The low Italian fertility is amply studied in demographic literature (Salvini 2004; Kohler et al. 2002). Period fertility in Italy has been below replacement since mid-seventies, and has been one of the first in the world to reach "lowest-low" levels (TFR<1.3) in the nineties (Kohler et al., 2002). Since 2000, a small recovery has brought our TFR close to 1.4.

Fertility pathways across generations reveal that the proportion of high parity women in the cohorts born since the 1940s has fallen considerably, and the "norm" has gradually shifted from having "at least two children" to "no more than two" (Santini, 1995). Moreover, recent estimates for the cohorts born after 1960 show a steep increase in the proportion of women who are childless (from 14.6% for the cohort of 1960 to 22.5% for that of 1966) or have an only child (28.7% for the 1966 cohort, versus 25.7% for the 1960 cohort).

In Italy, low fertility interplays with strong family ties and values (Reher 1998, Livi Bacci 2001), with familism and high parental investments in child quality (Dalla Zuanna 2001; Dalla Zuanna and Micheli 2004), and with women's scarce labour market participation (Del Boca 2003). The increase in both direct and indirect costs of children (De Santis and Livi Bacci 2001), the difficulties in combining motherhood and labour market participation (Del Boca 1997, Del Boca et al. 2005), and the lack of gender equity in the division of domestic tasks and childcare (McDonald 2000a and 2000b; Mencarini and Tanturri 2004, Mills et al. 2008, Anxo et al. 2011) are among the factors that can explain the reluctance of couples to have larger off-spring.

The time costs of children are partly endogenous and partly exogenous. On the one hand, parents choose to spend time with their children, in part, possibly, because of social pressure and expectations, in part for the high value attributed to children (Dalla Zuanna 2001). On the other hand, the lack of childcare services – especially for very young children – contributes to increasing exogenously the time that parents must

dedicate to childrearing. In addition, the scarce working opportunities for Italian women give them more free time than in other countries, some of which they spend with their children. Indeed, it is still common for young women (especially for those with lower educational levels, or resident in the South of Italy, or with short-term work contracts) to permanently drop out of the labour market after childbearing (Istat 2007). Conversely, women participating in the labour market – subject to working-time rigidity and under the personal costs of the double burden – may be deterred from having (more) children, for fear that might compromise their job opportunities or damage their individual life (Del Boca et al. 2005). This may explain why in Italy low female employment goes hand in hand with very low fertility.

The difficulties in reconciling family and work are aggravated by the characteristics of the Italian labour market, with high rates of self-employment, high shares of people employed in small firms, a high degree of employment protection for the male breadwinner combined with a high degree of informal flexibility, mainly through the underground economy.

The familistic character of the Italian welfare regime does not help to reduce child costs in terms of time for parents in general, and for mothers in particular. In Italy, as well as in other Southern countries, families are expected to support their own members (family responsibilities and obligations extend beyond the nuclear family) with only limited help from the state. Accordingly, family policies are scarcely developed, in comparison with other EU countries. This feature is mirrored in the low share of social expenditure related to family and children (OECD 2011). Maternity leave duration is long (21 weeks), and well paid (at 80 percent of previous earnings), but balancing childrearing and market work is made difficult by the limited supply of public childcare for children under 3 years, both in terms of availability (only 29 percent of children attend formal childcare) and opening hours. Grandparents are usually the main care providers when both parents work, according to a long tradition of intergenerational solidarity (Istat 2007).

As gender roles are still shaped in a traditional way, paternity leave has never been enacted. It is only since 2000 that both fathers and mother can take parental leave for a total period of 36 weeks, at 30 percent of previous earnings (previously it was only mothers), and an additional month is given if the father takes at least three months of

paternal leave. But in 2004 the take-up rates of eligible mothers was 75 percent and that of eligible fathers only 7 percent (Anxo et al. 2011).

The lack of gender equity has been put forward as a possible cause for the persistence of low fertility in Italy (McDonald 2000a and 2000b). Over the past two decades, Italian women have greatly improved their educational attainment and have accordingly raised their labour market ambitions: indeed the work more than they did in the recent past, although their employment rate is still low by European standards (47%), and gender gaps in employment and unemployment rates remain amongst the highest in the EU27. However, the responsibility for family care and domestic work still falls almost exclusively on women's shoulders. Italian men seem to be particularly reluctant to carry out domestic chores, even when their partners are in the labour market. In this context, childbearing tends to exacerbate an already heavily unbalanced division of household labour, and this discourages fertility (Cooke 2003; Mencarini and Tanturri 2004; Mills et al. 2008).

The experience of parenthood often implies a crystallization of gender roles, with an increase of women's time spent in housework and childcare, as well as a decrease in leisure time - and things are obviously worse for working mothers, who are thus subject to a "dual burden" or "second shift". Indeed, in Italy when a child is born, men typically increase the time devoted to paid work (this effect has not been observed in countries like France, Sweden or the US; see Anxo et al. 2011), while women reduce it, or even leave the labour market (Istat 2007, Mencarini and Tanturri, 2004).

3. Data and definitions

In Italy, the Time Use Survey was carried out within the Multipurpose Surveys Project by the National Institute of Statistics in 2002-2003, on a sample of over 55,000 individuals (Istat 2005). The diary days are randomly distributed across days of the week, and throughout the year. The daily diary was filled in by (or for) all the members of the household aged 3 years or over. The time diary technique, whereby individuals report their time use over 24 hours, provides extremely detailed information on the activities performed during that day. The diary data are based on a grid of 10 minute-intervals, with a description of the main activity carried out by the respondent (in own words), the secondary (or concurrent) activity, their location and the presence of other

persons. Besides the diary, all the data sets contain large amounts of information on the background and socio-economic situation of individuals and households.

From the 2003 Italian Time Use Survey we select a sub-sample of 4,827, married or cohabiting couples, where both partners are aged 20-54 years old, who are either childless (20%), or with at least one child under 13 years (80%). Households with other adults other than the marital or *de facto* couples are excluded to avoid the confounding effect of other adults able to provide childcare or domestic tasks. Similarly also complex households are eliminated from the sub-sample. We create family typologies combining the number of children in a family (one, two, three or more) with the age of the youngest child (0-2, 3-5 and 6-12 years old), so as to deal only with relatively homogeneous groups. The absolute and relative frequencies of the typologies thus created are shown in table 1.

[Table 1 about here]

We will try to estimate the incremental time cost of children, keeping into account not only the time devoted directly to childcare, but the total amount of unpaid work, under the hypothesis that a child may also cause an increase in the time dedicated to other mundane tasks, as for instance meals cooking or cleaning. In the definition of childcare the following activities are included: interactive childcare, physical care, transports and minding only with the children in the household. In the definition of unpaid work we include childcare, care of other family members (e.g. the aged or disabled), housework, home maintenance, shopping, paying bills and household management and transports related to these activities. Moreover, also total work (total household production) has been included in the analysis, given by the sum of time dedicated to both paid and unpaid work. Paid work encompasses employment-related activities, work breaks, job search, education, and travels associated with these activities. The hypothesis is that couple's total work is influenced by the number and age of children. What remains after (total) work is the time dedicated to personal care, e.g. sleeping and bathing, and to (pure) leisure. Since days are made of 24 hours, if a couple increases its total work by one hour when a child arrives, the time that parents devote to self-care (sleeping for instance) or leisure (e.g. cinema), must decline correspondingly.

In the computation of the time devoted to children, we will only refer to the primary activity recorded in the diary, which of course leads to an underestimation of child costs: parents – especially mothers - very often care for their children while they are performing some other "main" activity (Craig 2007). The consideration also of the secondary or concurrent activity would lead to a more realistic assessment of the true time costs (Folbre et al. 2005), but the large numbers of missing values in the Italian survey discourages its use. Similarly it is not possible to use the information on the presence of other persons during the activity (other than care) to assess the time parents spend with their children (even during leisure activities, e.g. going to the swimming pool), because it is impossible to distinguish children from other young family members unequivocally.

4. Descriptive findings

Descriptive statistics of the time spent in unpaid and paid work by women and men by family type is given in tables 2 and 3. The first column for each gender shows the average daily hours spent in a certain activity calculated on the whole sample, while the second column shows the average calculated only on those doing a certain specific activity on the interview day. The third column shows, for each sex, the proportion of people performing a certain activity on the interview day. Regardless of family typology, virtually all women perform an activity of unpaid work, while among men the participation is not universal: one man out of five does not perform any domestic or care activities and the proportion is even higher for men having three children, if the youngest is over three (Table 2). On the whole, even considering only "doers", men devote to unpaid work about a third of the time of women: about 2 hours and a half a day, as against 7 (Table 2).

[insert Table 2 about here]

As for paid work, only slightly more than a third of the women performed a labour market activity on the day of the interview, versus about two thirds of men (Table 3). Working men spend more than 8 hours in related paid work activity on the average day of the week, working women about 2 hours less. Differences shrink to one hour only

among the childless. Among women, labour supply decreases with the number of children but tends to increase with the age of the youngest. For men the profile is flatter, but, in this case, the time devoted to work increases slightly when there are children (Table 3). In a previous comparative study, we showed that this behaviour of fathers is observed only in Italy, as in France, Sweden and the US the opposite is true: fathers work less than childless men (Anxo et al. 2011).

In the following paragraphs we check if the differences in time use patterns according to different family typologies still hold also when we control for other possible confounders.

[insert Table 3 about here]

5. An explorative analysis of time use: models and variables

We run three separate OLS models for the couple, and then, separately, for men and women: in the first, the dependent variable is the time that couples dedicate to childcare, the second is run on paid work and the third on total work (paid and unpaid). The rationale is to assess the time cost of children for the couple on the whole firstly and subsequently for each parent, according to our typologies (see table 1), net of the effect of other control variables.

Among these, we include the following:

- the age of each partner, in three broad classes (25-34, 35-44 and 45-54 years);
- the mix of partners' education, in seven categories: 1) both partners have high education (degree or over); 2) both partners have medium education (secondary school certificate); 3) both partners have a low (less than a secondary school certificate); 4) man with high, and woman with low education; 5) man with intermediate and woman with low education; 6) man with intermediate and woman with high education; 7) man with low and women with high education;
- dummies describing the couple's labour supply: 1) both partners work full-time; 2) man works full-, and woman part-time; 3) man works full-time, and woman is housewife (male breadwinner couple); 4) man does not work full time (a residual category). Of course, these last dummies will be excluded in the regression on total work;

- dummies for the self-evaluation of the economic resources of the household (household income is unfortunately not asked in this survey). Economic resources are estimated to be 1) fine, 2) adequate or 3) scarce;
- dummies for the households that outsource part of care activity and domestic tasks: we merge them into the same category because only 5% of the couples declare that they rely on paid aid for these specific activities;
- three dummies for the days of the week: 1) week-day; 2) Saturday and 3) Sunday;
- dummies for the region (North, Centre, South).

When we run our regressions separately on men and women, we consider the level of education of each partner separately, and not in combination. In addition we include the number of daily hours of paid work of each partner (but, again, not in the regression on total work).

We present our findings in two ways. The parameters are in the appendix tables (4 to 7), together with their standard errors and p-values. The reference couple is childless; the partners are both poorly educated, work full time, report adequate economic resources and do not outsource domestic and care tasks. They live in the North of Italy, and were interviewed on a week-day.

But we also present figures, which show how the predicted values (number of hours of work) evolve with the number of children, by family typology.

6. Model findings: the time cost of children for the couple as a whole

In Italy, when a first child is born, parents spend a considerable amount of time on childcare, other things being equal: more than four hours a day (Figure 1). When the only child grows up and goes to school, his/her (time) cost declines but is still more than one hour and a half a day. The number of children matters much less than the age of the youngest: the profile of time use is almost flat when the number of children increases. In short, substantial economies of scale are possible with childcare, because adults can care for more children simultaneously, and, occasionally, they can have elder children look after the young ones.

A partially different way of reading these findings is that children who grow up in a larger family receive less (separate) attention from their parents, in a sort of “dilution effect” (Craig 2007). It is not clear if and how this may affect the “quality of children”: the impact is potentially negative, but there may instead be positive consequences deriving from the early socialization process with brothers and sisters.

[Figure 1 about here]

The picture changes when we consider total unpaid work including domestic activities, childcare and care of other household members (Figure 2). Childless couples spend a remarkable quantity of time performing unpaid work: more than 5.5 hours a day, which increase to more than 9.5 after the birth of a baby. This efforts declines somewhat as the baby ages, down to slightly less than 7.5 hours when he/she reaches school age. With more children, unpaid work increases: less than proportionally, but non negligibly (Figure 2).

[insert Figure 2 about here]

If we consider total (paid and unpaid) work, we see that parents with an only child of pre-school age work 20.5 hours per day, and the time increases with the number of children up to close on 23 hours, but again less than proportionally (Figure 3). The same holds also for parents whose youngest child is in some older age group, but at a lower level: for instance, from 19.4 hours a week when there is only a toddler to 21 when there are three children and the youngest is a toddler (Figure 3). When the youngest child is aged 6-12 years old the profile is similar, but at lower values, ranging from 18.8 hours to 19.7 (Figure 3).

[Figure 3 about here]

The net variation in time use for parents, as opposed to the childless couple, is summarized in Figure 4. Couples take time from other activities (personal care or sleep for instance) in order to cope with their children, but the time cost of children on the whole decreases substantially with age, independently of their number. Not surprisingly,

changes are more evident for the parents who have a baby at home, since they work 3.3 extra hours a day if the child is alone, up to more than 5 if he/she has two siblings. Time costs decrease with the age of the child, and school-age children are remarkably less time intensive: however, they still cost 1.5 to 2.5 hours a day, depending on the number of (older) siblings they have.

[Figure 4 about here]

7. Who pays the (time) cost of children?

Let us now evaluate how child costs are distributed between mothers and fathers. Mothers of an infant spend between 3 (if the child is an only child) to almost 4 hours (if the child is the youngest in a family with three children) in childcare per day (Figure 5a). If the youngest is a school-age child, costs are lower: around 1.3 hours. Men are substantially less involved, slightly more than half as much (Figure 5b).

[insert Figure 5 about here]

Women's time dedicated to unpaid work exceed 6 hours a day even without children, and rises to 8/10 hours a day for the largest family with at least one child under 3 (Figure 6a). Conversely, men's time devoted to unpaid work is relatively flat, at 4/5 hours a day, even in the most demanding families (Figure 6b). The gender imbalance in the distribution of unpaid work is evident even among childless couples – where men perform only 3 and the half hours of domestic tasks while women more than six – but worsen when children, especially infants, are present. Comparing Figures 5 and 6, we notice that fathers substitute domestic tasks with childcare when they have young children; this holds also for women but to a lesser extent, as they typically reduce their labour market supply (see Figure 7).

[Figure 6 about here]

Gender differences decline when we consider total household production (Figure 7). The time dedicated to total work is virtually the same between childless partners, but in

the transition to parenthood women increase their total work more than men. This is particularly true among mothers of infants, whose share of the workload exceeds 53% (68% of the unpaid work) in larger families. Gender differences persist not only in cases of children under three – linked partly to biological reasons – but also when the youngest child is of school age.

[Figure 7 about here]

In Figure 8, we show the additional daily hours of total work performed by women and men with children, by number of children and age of the youngest: this is what we define as the *incremental time cost of children*. The incremental cost of children is always higher for women. For instance, mothers of one child under three reduce their self-care and leisure time by 2 hours a day, while fathers reduce it by little more than 1 (Figure 8). If children are three and one is an infant, mothers have to renounce to more than 3 hours a day while men give up less than 2.5. The costs of children shrink considerably for both men and women when children reach school-age, but they still remain substantial for mothers, between 1 and 2 hours for those having three children, while for men they are always less than one hour (Figure 8).

[insert Figure 8 about here]

However, the gender role-set seems to be less unequal as the number of children grows: for instance for the first infant women pay 64% of the incremental cost of children, while for three children (the youngest under three) they pay 57%. Selection may have a part here, if fertility is higher among the most egalitarian couples.

Conversely, the proportion of incremental child-cost paid by women increases as the age of the youngest increases: three quarters of the cost of one child in school age is paid by mothers. In this case we may wonder whether men activate themselves only in case of extreme need, that is when children are babies.

8. Conclusions

This paper investigates how Italian couples' time use varies, qualitatively and quantitatively, when they have children, and how it changes according to children's numbers and age. The idea is that the presence of a child impacts deeply of the use of time, causing an important contraction of time for self-care and leisure time. This is what we define as the marginal time cost of children.

The analysis was carried out using the most recent round of data from the Italian Time Use Survey (2002-03). Time budgets represent a unique source of information, but they are not perfect. First, they do not provide longitudinal but only cross-sectional data, and the interpretation of our results requires special caution. Selection, for instance, can bias our findings. Imagine that those who prefer large families spend more time doing housework even before having children: the arrival of a child does not alter their use of time very much, but in a cross sectional observation we are implicitly assuming that, without children, they would have used their time like those who are childless.

Secondly, the cost of children can be underestimated, as we do not have any good quality data on the concurrent (or secondary) activity. Parents – especially mothers – frequently mind their children while attending another occupation, reported as the main activity: e.g. ironing and looking after children. With the new survey carried out in 2009 (but not available yet), it will be possible to compute the cost of children also taking secondary activity into account.

Finally, a reflection should be devoted to the “meaning” of the cost of children, which in this term might appear only as a burden for parents. In developed societies indeed the benefits of having children are mainly psychological and parents usually consider spending time with them as a benefit rather than a cost.

Despite their limitations, models results seem to corroborate the hypothesis that Italian children are particularly time-intensive. Unfortunately our models do not allow us to say whether this is linked more to cultural reasons or structural constraints, such as the lack of alternative services in the public sector for outsourcing either some care or domestic tasks. *Ceteris paribus*, a child under 3 requires from parents more than 3 hours of additional work per day, compared to the childless reference couple. This means an equal reduction in self-care and leisure time. The time cost increases with the number of children, but less than proportionally: substantial economies of scale are possible in this

respect. Conversely, the time cost decreases substantially as the age of the youngest grows. The very high cost of an infant may depend on the lack (or inaccessibility) of crèches for infant care. Mandatory school, in fact, seem to reduce the cost of older children very substantially.

The increase in household production associated with a child is always higher for women than it is for men. In other countries, targeted gender policies have contributed to rebalancing gender inequalities in this domain, reducing the costs of children for mothers, and have sustained fertility. Similar actions are probably needed also in Italy.

Acknowledgements

I gratefully acknowledge financial support from the Italian MIUR/PRIN 2007 (Research Project: The cost of children. Estimates, connections with the low Italian fertility, policy implications, and determination of a fair child support payment when parents divorce) and from the GALILEO Programme (Research project on: Le coût de l'enfant en temps sur le cycle de vie en France et en Italie)

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TABLES AND FIGURES

Table 1. Couple typologies in the sub-sample (absolute frequencies and column percentages)

<i>Couple typologies</i>	N.	%
Childless	966	20.0
Youngest child 0-2		
One child	491	10.2
Two children	449	9.3
Three children	150	3.1
Youngest child 3-6		
One child	360	7.5
Two children	452	9.4
Three children	162	3.4
Youngest child 7-12		
One child	457	9.5
Two children	1052	21.8
Three children	288	6.0
Total	4827	100

Source: Italian Time Use Survey 2003

Table 2. Average daily hours dedicated to unpaid work by family typologies and sex. Average calculated on the whole sample, and only on doers and percentage doers, on any given day

	Women			Men		
	Average time on the whole sample	Average time only on doers	% doers	Average time on the whole sample	Average time only on doers	% doers
Childless	4.25	4.34	96.9	1.41	2.16	74.2
1 child, 0-2	7.29	7.30	99.9	2.07	2.23	89.2
1 child, 3-5	7.02	7.02	99.9	1.52	2.14	83.9
1 child, 6-12	6.14	6.16	99.3	1.48	2.11	82.3
2 children, the youngest 0-2	8.42	8.42	100	2.30	2.51	87.7
2 children, the youngest 3-5	7.26	7.28	99.7	2.04	2.24	86.4
2 children, the youngest 6-12	7.13	7.15	99.5	1.54	2.28	77.1
3 children, the youngest 0-2	9.36	9.36	100	2.23	2.44	86.7
3 children, the youngest 3-5	8.28	8.28	100	2.04	2.45	75.2
3 children, the youngest 6-12	7.45	7.50	98.8	1.26	2.13	64.9
Total	6.48	6.52	99.0	1.56	2.25	80.3

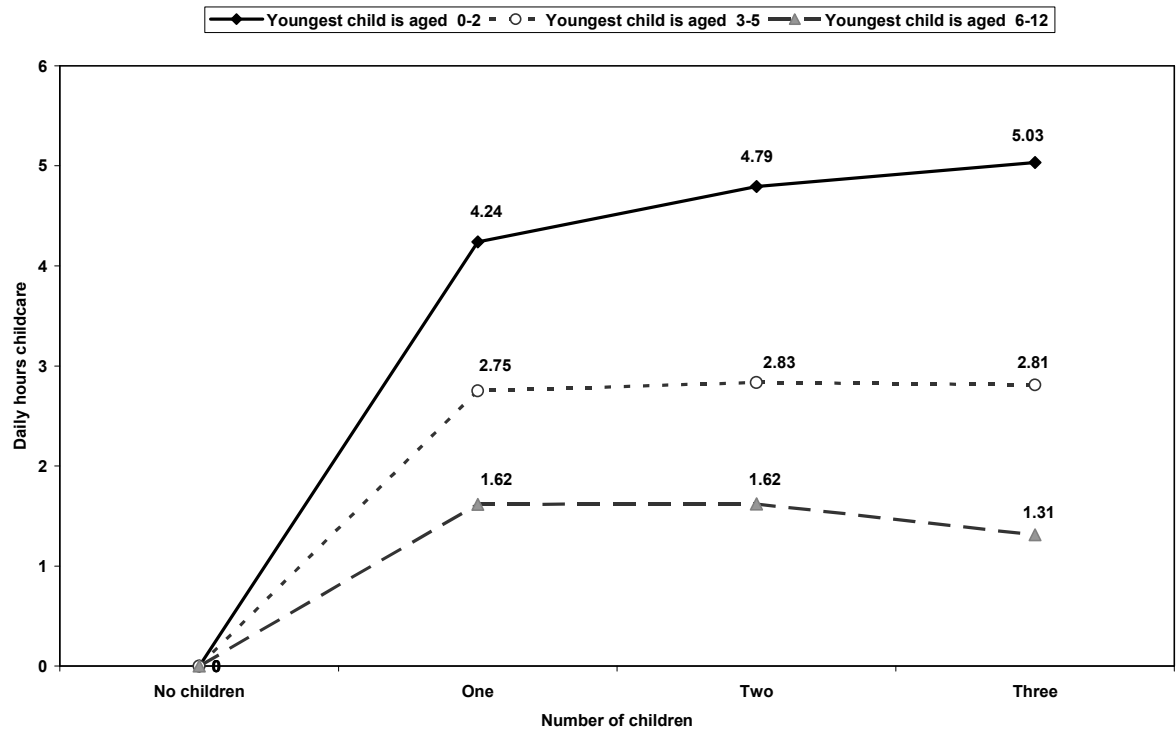
Data source: Italian Time Use Survey 2003

Table 3. Average daily hours dedicated to paid work by family typologies and sex. Average calculated on the whole sample, and only on doers and percentage doers, on any given day

	Women			Men		
	Average time on the whole sample	Average time only on doers	% doers	Average time on the whole sample	Average time only on doers	% doers
Childless	3.18	7.11	46	5.29	8.18	66.1
1 child, 0-2	1.55	5.55	32.6	6.28	8.19	77.9
1 child, 3-5	2.01	5.37	35.9	6.16	8.33	73.3
1 child, 6-12	3.06	6.36	47.0	6.08	8.07	75.6
2 children, the youngest 0-2	1.35	6.00	26.4	6.01	8.15	72.9
2 children, the youngest 3-5	2.13	6.08	36.2	6.24	8.27	75.8
2 children, the youngest 6-12	2.07	5.57	35.5	5.55	8.02	73.7
3 children, the youngest 0-2	1.11	5.09	22.9	6.34	8.23	78.4
3 children, the youngest 3-5	1.39	5.39	29.1	6.03	7.55	76.5
3 children, the youngest 6-12	1.41	6.09	27.3	5.55	8.00	73.9
Total	2.20	6.22	36.8	6.01	8.14	73.1

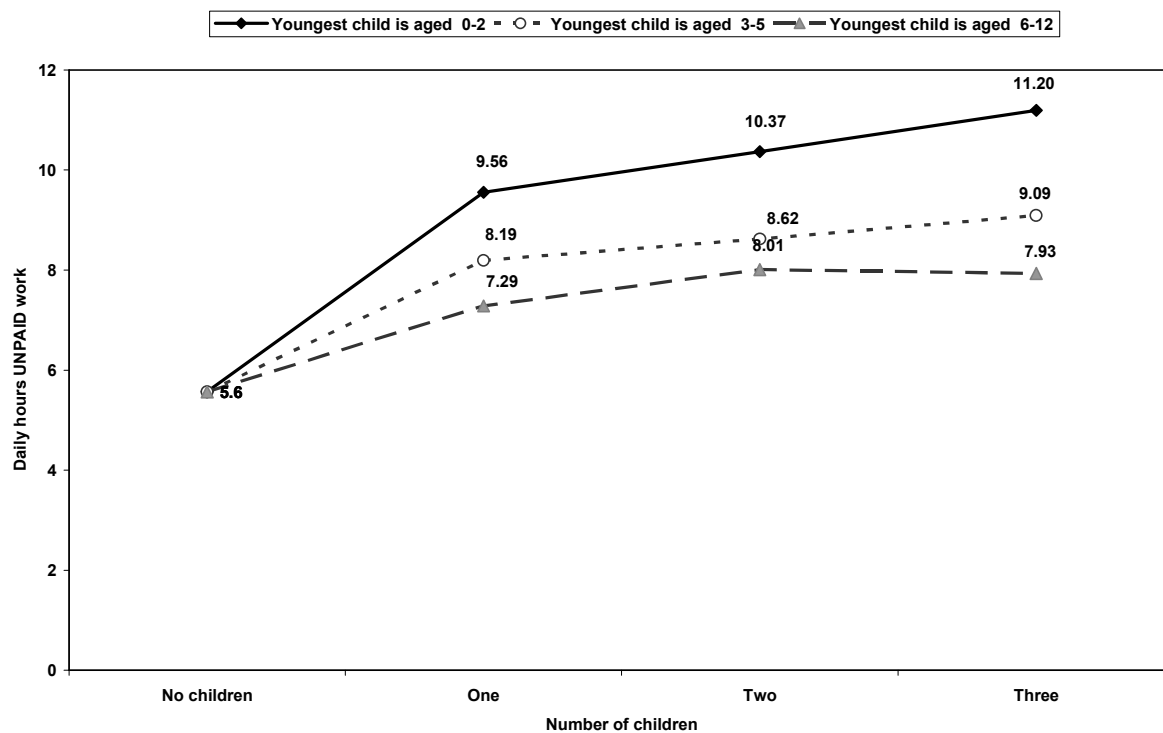
Data source: Italian Time Use Survey 2003

Figure 1. Daily hours of childcare performed by the couple according to the number of children and age of the youngest child, net of other confounders (Italy, 2003).



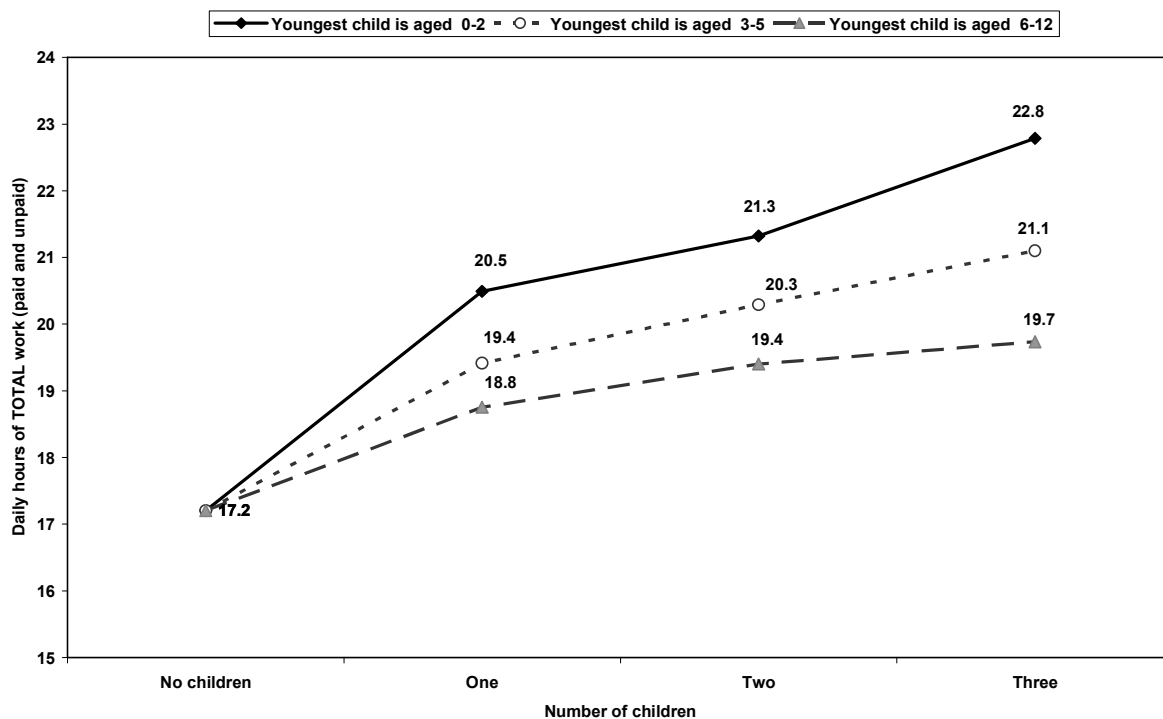
Data source: Italian Time Use Survey 2003

Figure 2. Daily hours of unpaid work performed by the couple by number of children and age of the youngest child net of other confounders (Italy, 2003)



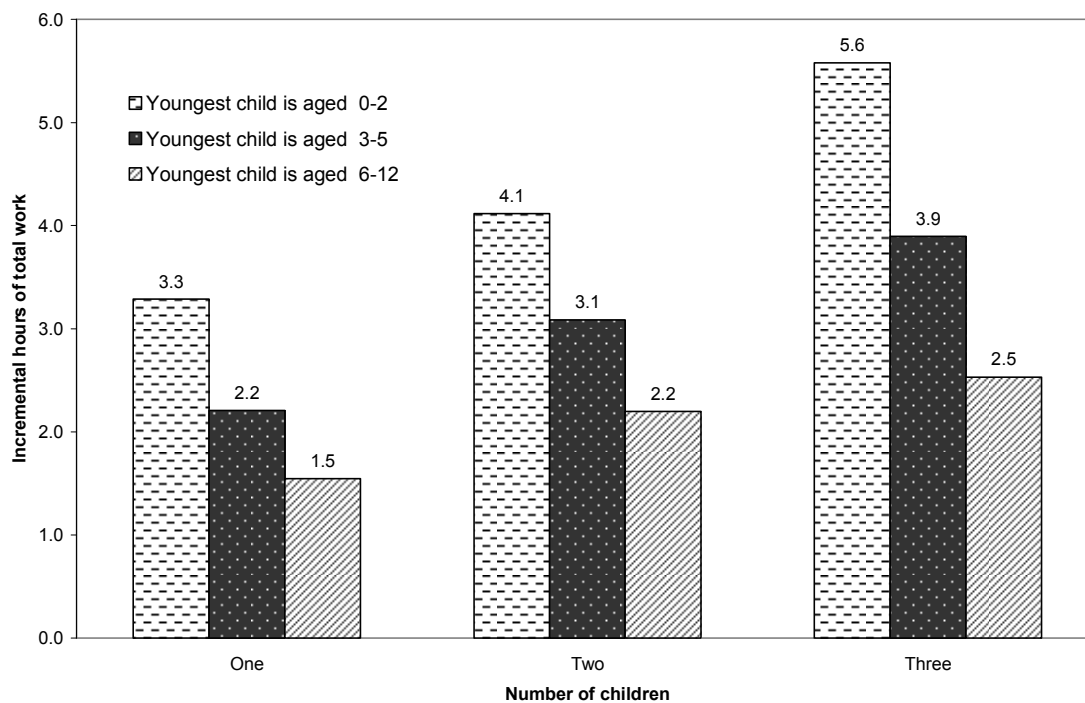
Data source: Italian Time Use Survey 2003

Figure 3. Daily hours of total work (paid and unpaid) performed by the couple according to number of children and age of the youngest child, net of other confounders (Italy, 2003).



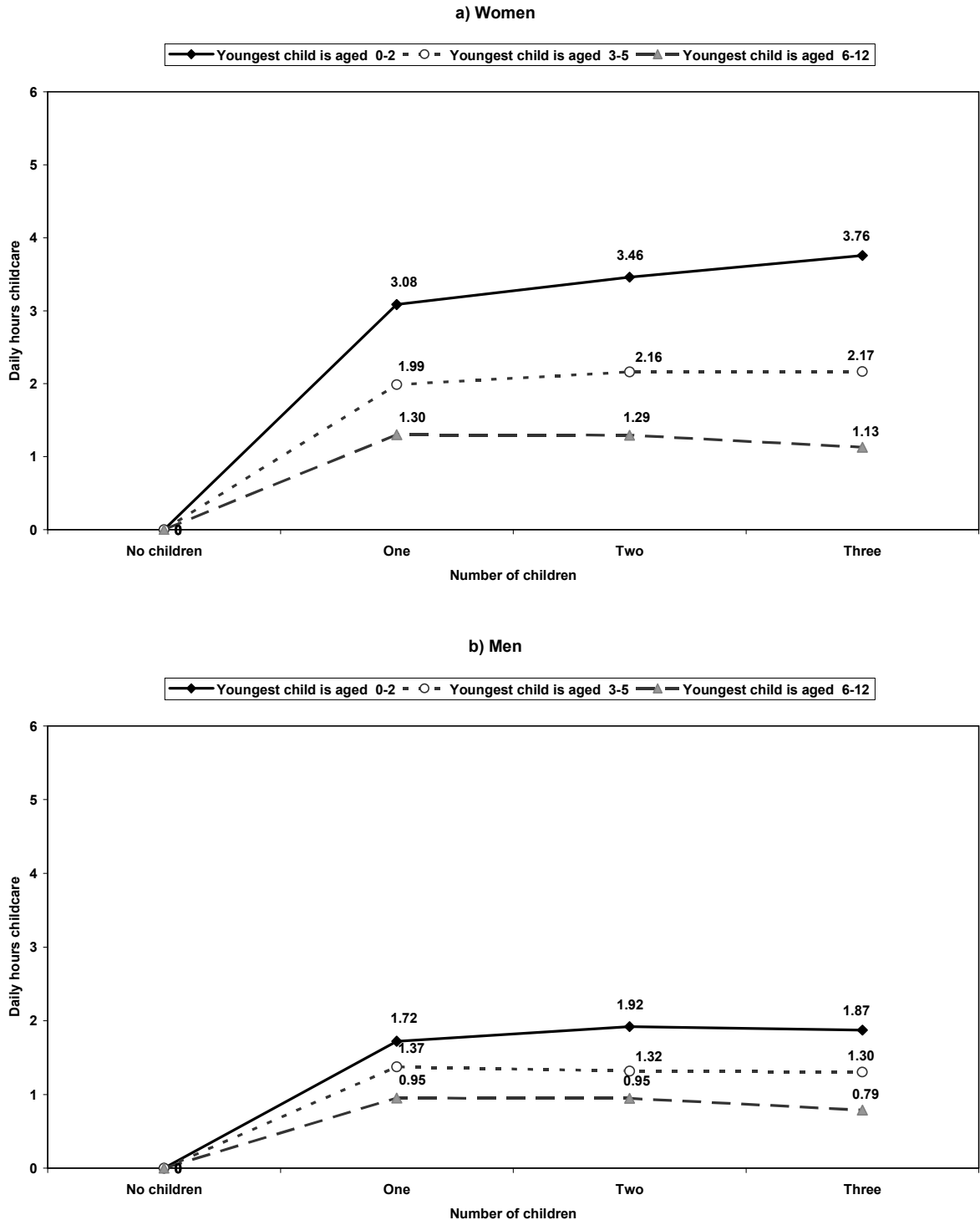
Data source: Italian Time Use Survey 2003

Figure 4. Daily additional hours of total work (paid and unpaid) performed by the couple for the marginal child, by rank and age of the youngest child, net of other confounders (Italy, 2003).



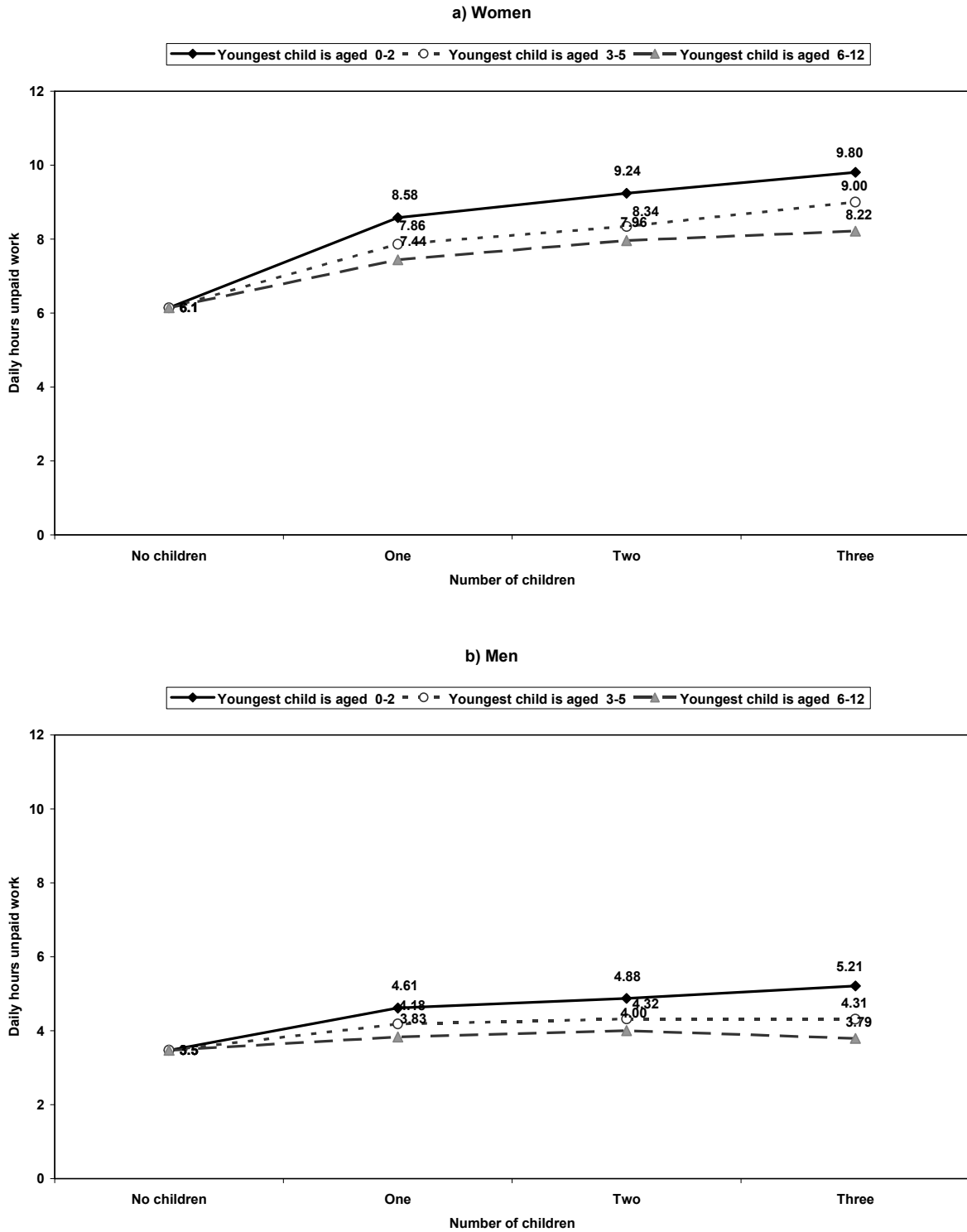
Data source: Italian Time Use Survey 2003

Figure 5. Daily hours of childcare performed by women (a) and by men (b) according to the number of children and the age of the youngest child, net of other confounders (Italy, 2003).



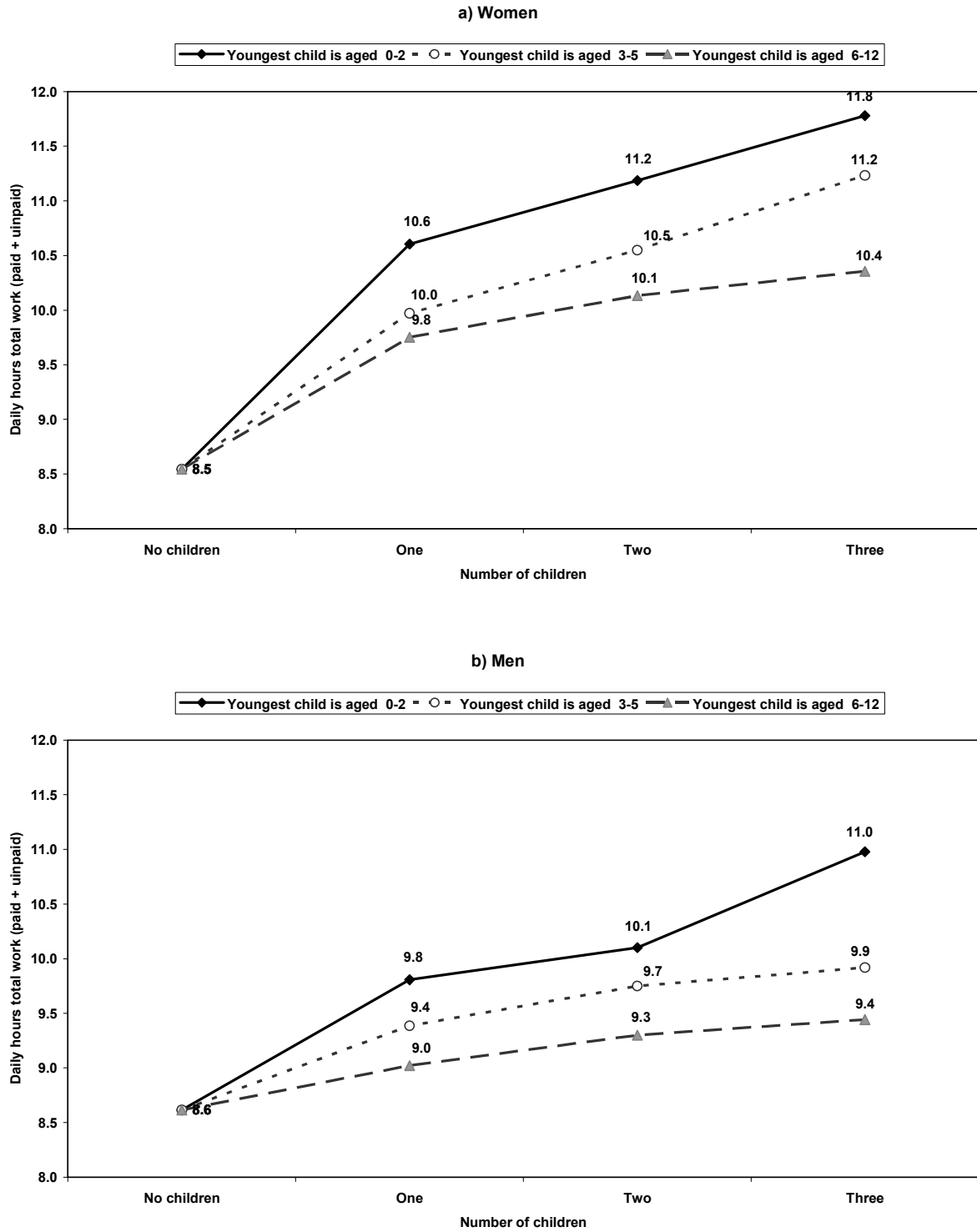
Data source: Italian Time Use Survey 2003

Figure 6. Daily hours of unpaid work performed by women(a) and men (b) according to the number of children and the age of the youngest child, net of other confounders (Italy, 2003).



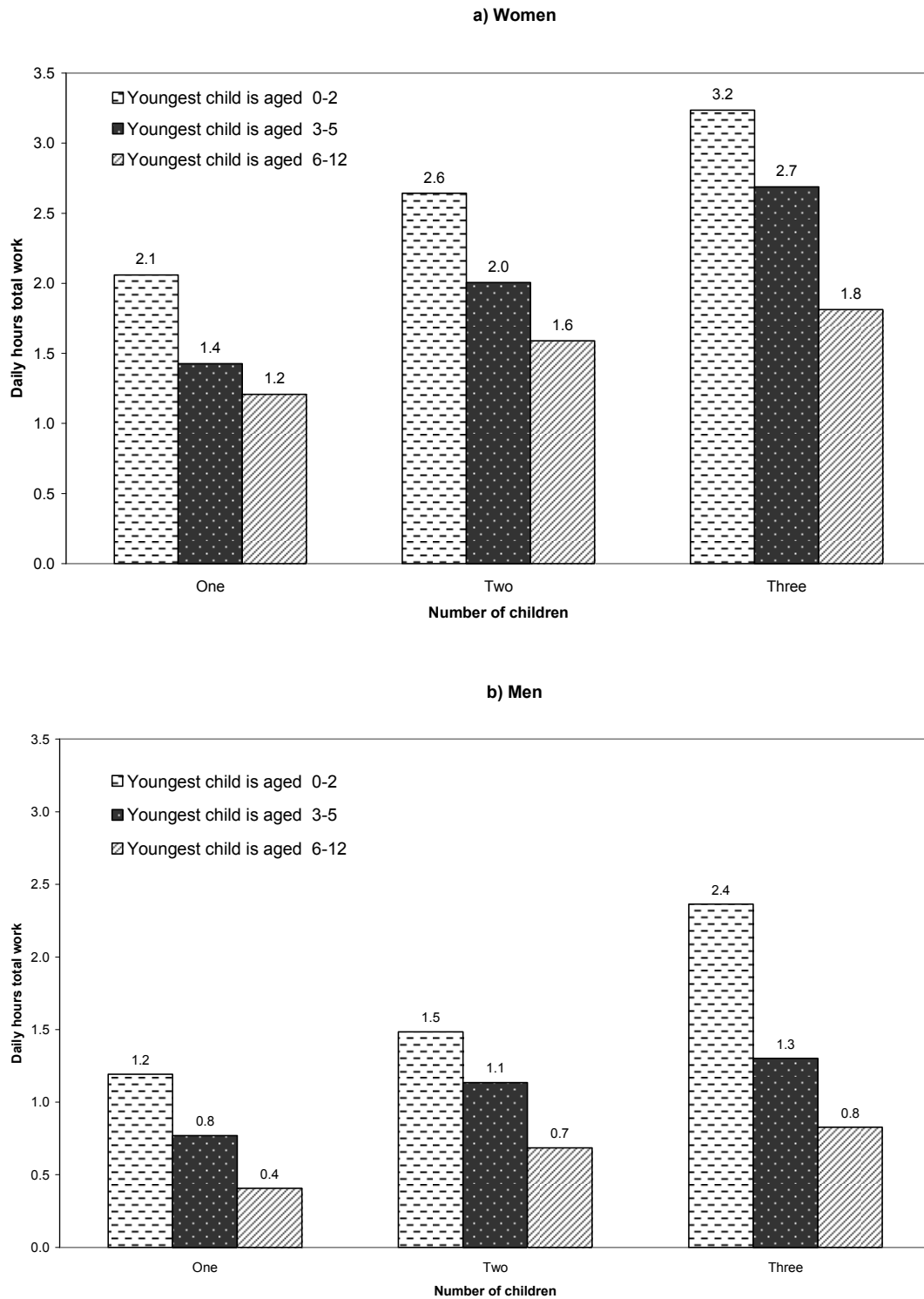
Data source: Italian Time Use Survey 2003

Figure 7. Daily hours of total work performed by women(a) and men (b) according to the number of children and the age of the youngest child, net of other confounders (Italy, 2003).



Data source: Italian Time Use Survey 2003

Figure 8. Incremental time cost of children with respect to childless women or men, net of other confounders. 2003.



Data source: Italian Time Use Survey 2003

APPENDIX

Table 4. OLS regression results for couples. Dep. Variable: time devoted to childcare, unpaid work and total work. Coefficients, Standard Error and p-values.

Variables	CHILDCARE			UNPAID WORK			TOTAL WORK		
	Coeff.	S.E.	Pr > t	Coeff.	S.E.	Pr > t	Coeff.	S.E.	Pr > t
Intercept	-0.068	0.1	0.501	5.566	0.21	<.0001	17.206	0.25	<.0001
Couple typology (childless)									
1 child, 0-2	4.308	0.11	<.0001	3.989	0.22	<.0001	3.287	0.27	<.0001
1 child, 3-5	2.818	0.12	<.0001	2.626	0.24	<.0001	2.208	0.3	<.0001
1 child, 6-12	1.685	0.11	<.0001	1.719	0.23	<.0001	1.548	0.28	<.0001
2 children, the youngest 0-2	4.861	0.11	<.0001	4.801	0.23	<.0001	4.117	0.28	<.0001
2 children, the youngest 3-5	2.903	0.11	<.0001	3.056	0.23	<.0001	3.087	0.28	<.0001
2 children, the youngest 6-	1.688	0.09	<.0001	2.445	0.19	<.0001	2.196	0.23	<.0001
3 children, the youngest 0-2	5.100	0.17	<.0001	5.629	0.35	<.0001	5.579	0.43	<.0001
3 children, the youngest 3-5	2.878	0.17	<.0001	3.526	0.34	<.0001	3.895	0.42	<.0001
3 children, the youngest 6-	1.380	0.14	<.0001	2.368	0.28	<.0001	2.530	0.34	<.0001
Women age (35-44)									
F age 25-34	0.086	0.08	0.255	-0.269	0.16	0.082	-0.191	0.19	0.321
F age 45-54	-0.07	0.11	0.524	0.555	0.22	0.013	0.354	0.28	0.202
Men age (35-44)									
M age 25-34	-0.066	0.08	0.425	-0.326	0.17	0.055	-0.197	0.21	0.351
M age 45-54	-0.19	0.08	0.022	0.192	0.17	0.255	-0.022	0.21	0.918
Education level (both low education)									
both high edu	0.53	0.13	<.0001	-0.201	0.27	0.457	-0.594	0.33	0.075
both medium	0.413	0.08	<.0001	0.09	0.16	0.569	-0.147	0.19	0.445
M high, F lower	0.753	0.13	<.0001	0.37	0.25	0.146	0	0.32	0.999
M medium, F high	0.483	0.14	3E-04	0.037	0.28	0.893	-0.878	0.34	0.01
M medium, F low	0.313	0.1	0.002	0.176	0.21	0.392	-0.415	0.26	0.105
M low, F higher	0.224	0.09	0.008	0.082	0.17	0.634	0.054	0.21	0.798
Labour supply (both full time)									
M Full-time, F Part-Time	0.163	0.08	0.051	0.374	0.17	0.028	-	-	-
M Full-time, F housewife	0.254	0.07	2E-04	1.79	0.14	<.0001	-	-	-
M no full-time	0.268	0.12	0.023	1.73	0.24	<.0001	-	-	-
Economic resources (adequate)									
Economic resources - fine	-0.061	0.17	0.716	-0.124	0.34	0.718	-0.195	0.43	0.648
Economic resources - scarce	0.07	0.07	0.324	0.158	0.14	0.274	-0.405	0.18	0.022
External aids (no)									
	0.012	0.13	0.926	-0.415	0.26	0.111	-0.082	0.32	0.798
Day of the week (week day)									
Sunday	-0.338	0.07	<.0001	-0.967	0.14	<.0001	-9.849	0.17	<.0001
Saturday	-0.258	0.07	<.0001	1.695	0.13	<.0001	-3.577	0.17	<.0001
Geographical area (North)									
Centre	-0.021	0.08	0.784	-0.139	0.16	0.386	0.431	0.2	0.03
South	-0.211	0.06	0.001	-0.396	0.13	0.003	-0.174	0.16	0.27
R-quadr corr	0.438			0.2315			0.450		
N	4,827			4,827			4,827		

Data source: Italian Time Use Survey 2003. Reference category in parenthesis

Table 5. OLS regression results for men and women. Dep. Variable: time devoted to childcare. Coefficients, Standard Error and p-values.

Variables	Women			Men		
	Coeff.	S.E.	Pr > t	Coeff.	S.E.	Pr > t
Intercept	0.260	0.08	8E-04	0.294	0.06	<.0001
Couple typology (childless)						
1 child, 0-2	2.824	0.08	<.0001	1.427	0.06	<.0001
1 child, 3-5	1.727	0.08	<.0001	1.080	0.06	<.0001
1 child, 6-12	1.040	0.08	<.0001	0.657	0.06	<.0001
2 children, the youngest 0-2	3.201	0.08	<.0001	1.626	0.06	<.0001
2 children, the youngest 3-5	1.902	0.08	<.0001	1.023	0.06	<.0001
2 children, the youngest 6-12	1.034	0.06	<.0001	0.653	0.05	<.0001
3 children, the youngest 0-2	3.496	0.12	<.0001	1.580	0.09	<.0001
3 children, the youngest 3-5	1.906	0.12	<.0001	1.010	0.09	<.0001
3 children, the youngest 6-12	0.868	0.09	<.0001	0.495	0.07	<.0001
Age (35-44)						
Age 25-34	0.113	0.05	0.014	-0.007	0.04	0.855
Age 45-54	-0.118	0.07	0.08	-0.079	0.04	0.042
Education (Low)						
High Education	0.287	0.07	<.0001	0.320	0.05	<.0001
Medium Education	0.142	0.04	7E-04	0.149	0.03	<.0001
Economic resources (adequate)						
Economic resources - fine	0.055	0.12	0.642	-0.143	0.09	0.116
Economic resources - scarce	0.028	0.05	0.562	0.017	0.04	0.643
External aids (no)	0.034	0.09	0.703	-0.036	0.07	0.594
Day of the week (week day)						
Sunday	-0.496	0.06	<.0001	-0.237	0.05	<.0001
Saturday	-0.372	0.05	<.0001	-0.127	0.04	0.001
Working hours						
M working hours	0.052	0.01	<.0001	-0.079	0	<.0001
F working hours	-0.123	0.01	<.0001	0.037	0.01	<.0001
Geographical area (North)						
Centre	0.006	0.06	0.915	0.005	0.04	0.906
South	-0.095	0.04	0.029	-0.104	0.03	0.002
R-quadr corr	0.460			0.247		

Data source: Italian Time Use Survey 2003. Reference category in parenthesis

Table 6. OLS regression results for men and women. Dep. Variable: time devoted to unpaid work. Coefficients, Standard Error and p-values.

Variables	Women			Men		
	Coeff.	S.E.	Pr > t	Coeff.	S.E.	Pr > t
Intercept	6.144	0.14	<.0001	3.472	0.11	<.0001
Couple typology (childless)						
1 child, 0-2	2.437	0.13	<.0001	1.143	0.11	<.0001
1 child, 3-5	1.717	0.15	<.0001	0.709	0.12	<.0001
1 child, 6-12	1.295	0.14	<.0001	0.360	0.11	0.002
2 children, the youngest 0-2	3.094	0.14	<.0001	1.404	0.12	<.0001
2 children, the youngest 3-5	2.200	0.14	<.0001	0.844	0.12	<.0001
2 children, the youngest 6-12	1.819	0.11	<.0001	0.530	0.09	<.0001
3 children, the youngest 0-2	3.66	0.21	<.0001	1.738	0.18	<.0001
3 children, the youngest 3-5	2.858	0.20	<.0001	0.841	0.17	<.0001
3 children, the youngest 6-12	2.073	0.17	<.0001	0.322	0.14	0.02
Age (35-44)						
Age 25-34	-0.242	0.08	0.003	-0.144	0.08	0.06
Age 45-54	0.442	0.12	2E-04	0.192	0.07	0.01
Education (Low)						
High Education	-0.422	0.12	3E-04	0.203	0.10	0.038
Medium Education	-0.266	0.07	3E-04	0.115	0.06	0.067
Economic resources (adequate)						
Economic resources - fine	-0.046	0.21	0.824	-0.295	0.18	0.091
Economic resources - scarce	0.207	0.09	0.016	-0.087	0.07	0.228
External aids (no)	-0.394	0.16	0.011	-0.135	0.13	0.302
Day of the week (week day)						
Sunday	-2.319	0.10	<.0001	-1.284	0.09	<.0001
Saturday	-0.132	0.09	0.14	0.236	0.08	0.002
Working hours						
M working hours	0.134	0.01	<.0001	-0.329	0.01	<.0001
F working hours	-0.612	0.01	<.0001	0.075	0.01	<.0001
Geographical area (North)						
Centre	0.194	0.10	0.045	-0.083	0.08	0.309
South	0.352	0.08	<.0001	-0.534	0.06	<.0001
R-quadr corr	0.502			0.314		

Data source: Italian Time Use Survey 2003. Reference category in parenthesis

Table 7. OLS regression results for men and women. Dep. Variable: time devoted to total work. Coefficients, Standard Error and p-values.

Variables	Women			Men		
	Coeff.	S.E.	Pr > t	Coeff.	S.E.	Pr > t
Intercept	8.544	0.13	<.0001	8.615	0.14	<.0001
Couple typology (childless)						
1 child, 0-2	2.059	0.15	<.0001	1.191	0.17	<.0001
1 child, 3-5	1.426	0.17	<.0001	0.771	0.19	<.0001
1 child, 6-12	1.208	0.15	<.0001	0.407	0.18	0.022
2 children, the youngest 0-2	2.642	0.15	<.0001	1.484	0.18	<.0001
2 children, the youngest 3-5	2.004	0.16	<.0001	1.134	0.18	<.0001
2 children, the youngest 6-12	1.588	0.13	<.0001	0.685	0.14	<.0001
3 children, the youngest 0-2	3.235	0.24	<.0001	2.364	0.27	<.0001
3 children, the youngest 3-5	2.688	0.23	<.0001	1.303	0.27	<.0001
3 children, the youngest 6-12	1.811	0.19	<.0001	0.827	0.22	1E-04
Age (35-44)						
Age 25-34	-0.240	0.09	0.009	0.066	0.12	0.583
Age 45-54	0.351	0.14	0.009	-0.086	0.12	0.458
Education (Low)						
High Education	-0.310	0.13	0.017	0.043	0.15	0.78
Medium Education	-0.150	0.08	0.075	-0.074	0.10	0.452
Economic resources (adequate)						
Economic resources - fine	-0.100	0.24	0.672	-0.156	0.27	0.566
Economic resources - scarce	0.019	0.10	0.845	-0.395	0.11	4E-04
External aids (no)	-0.206	0.18	0.242	0.002	0.20	0.992
Day of the week (week day)						
Sunday	-4.177	0.09	<.0001	-5.699	0.11	<.0001
Saturday	-1.239	0.09	<.0001	-2.375	0.11	<.0001
Geographical area (North)						
Centre	0.285	0.11	0.01	0.137	0.13	0.28
South	0.201	0.09	0.02	-0.381	0.10	1E-04
R-quadr corr	0.361			0.383		

Data source: Italian Time Use Survey 2003. Reference category in parenthesis