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of living in old age

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ABSTRACT

A cross sectional data source, the Bank of Italy Survey on Household Income and Wealth (SHIW) of the years 2000 and 2002, is used to assess the association between the economic conditions in one's old age and a few covariates, among which past fertility, marital status and living arrangements. For an elderly, having had children does not have any clear impact on current economic performance, except that it is associated with fewer assets. However, *ceteris paribus*, having (adult) *co-residing* children corresponds to worse economic conditions, both objectively (equivalent income, poverty, assets) and subjectively. In short, own children do not seem to protect from poverty in old age (and may make things worse). Prospects are better when there are other grown-up members in the household (especially if they are males), when education is high, and when the household resides in the North of Italy.

Keywords: Elderly people, Economic well-being, Poverty, Fertility, Living arrangement.

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1. Introduction

Aging has become a major demographic topic, and its several facets have been frequently investigated: e.g. the quality of life of the elderly, their likely future demand for formal and informal support, their socio-economic conditions, health status, and living arrangements, and, increasingly, the availability and composition of the family network that surrounds them (see, e.g., Strain, Payne 1992; Pezzin, Steinberg Schone 1999, GENUS 2003).

Many studies have assessed the role of children as a source of support and care for the elderly, but only a few of them have empirically investigated the relationship between the number of children and the economic well-being of the older population in the developed countries. In this study, we are specifically interested in evaluating whether past fertility has an impact on the current economic well-being of the elderly, both when their (grown up) children live with them, and when they live elsewhere.

The basic research questions that drive us are: who is better off in old age, parents or non parents? Does the number of children count? Does co-residence with one's own (grown up) children matter? What economic variables, if any, are mostly affected (e.g. income, assets, relative poverty status, ...)? And, finally, how can one take into account all of the possible confounding variables?

There is a relative scarcity of adequate micro-data to investigate this topic. On the one hand, economic surveys typically neglect to gather information on past fertility, and only inform us on the current composition of the household. On the other hand, social and demographic surveys usually prove very inefficient in providing information on income and wealth. In particular, in Italy, data on both economic conditions and number of surviving children – either co-resident or not – have become available just very recently, since the 2000 wave of the SHIW (Italian Survey on Household Income and Wealth).

We should perhaps make it clear from the start that, although our analysis will keep under control as many potentially relevant variables as the data set allows, our (cross-sectional) data only permit us to talk of "meaningful associations" between covariates, and do not prove the cause-effect relationship that we suspect to exist between past fertility (decided in one's adult years) and current socio-economic conditions, in old age. Future research, with

better data, will hopefully scrutinise more in depth the causal mechanisms that, we submit, lead to the statistical associations that emerge from our analysis.

2. Theoretical background and previous research

In most cultures, children surviving to adulthood are seen as a potential source of support for their aged parents: they provide emotional help (Friedman *et al.* 1994), constitute a sort of insurance against dependency (Wenger, 2001), may protect from economic hardship (Cigno, 1991), and frequently play more than just one part (Legrand *et al.* 2003; Lillard, Willis 1997). Indeed, their potentially protecting role has frequently been used as an explanation for fertility itself – the so called “old-age security motive” (Nugent 1985).

In practice, however, empirical research does not provide unique indications on the relationship between the presence of children and the economic well-being of the elderly. Caldwell (1982) thought that the wealth would flow upwards, from the young to the elderly, but things are in fact more complicated than this interpretation suggests. In the first place, one should consider co-residence, which is still very high in Italy, where about a third of the over-65 parents live with their children (ISTAT 2001). Increasingly, even in Italy, co-residence is being substituted by independently living (as elsewhere, like the US, for instance - see McGarry, Schoeni 2000), although proximity is greatly appreciated, and more than a third of non co-residing elderly parents live within a kilometre from at least one of their children (ISTAT 2001; Tomassini, Wolf, Rosina 2003; Tomassini et alii 2004). Now, independent living translates into lower exchanges. Besides, with or without co-residence, the exchange is normally on a mutual basis (e.g. Couch, Daly, Wolf 1999). Finally, and most importantly, the prevalent direction is apparently downwards (ISTAT 2001): the elderly seem to give more than they receive (for a different view, see Rendall, Bachieva 1998). This happens both in the developing societies (e.g. Stecklov 1997; Lee, Kramer 2002) and, privately, in modern settings, although in the latter case the existence of an extensive social security system (with income flowing upwards, towards the elderly) more than compensates for the private downwards transfers (Lee 2000, 2003). In several modern societies, pension and health assistance systems are financed in a way (e.g. on a

pay-as-you-go basis), which is not actuarially equitable: the average individual receives more (especially in old age), than he or she has paid for (almost exclusively in his or her adult years), and the system proves sustainable only if the age pyramid remains favourable. This means, among other things, that childless elderly - and, more generally, people with fewer-than-average children - benefit from social security services for which they have not paid their full share, either as direct contributions or in terms of the formation of the following generation (Demeny 1986; Sartor 2004).

This brings into question the issue of how costly it is to raise up a child, from conception to economic independency, which is still controversial, despite the huge literature that has developed around it. Estimates fluctuate considerably, also because they seem to depend on several variables (e.g. age at parenthood, birth order, socio-economic status of the household, etc.), and, most worryingly, on how measurement is carried out (De Santis 2004). However, to give a rough idea, direct costs can be estimated at about 20% of the budget of a childless couple, per child, per year of economic dependency. On top of this, there is also a substantial amount of unearned income to consider, possibly about 20 to 30% of the potential lifetime earnings of a woman (Davies, Joshi, Peronaci 2000; Joshi 2002; Di Pino 2004). These considerations suggest that, from an economic point of view, childless and low-fertility elderly, who escaped (part of) these costs, should be better off than parents, at least in economic terms.

However, there are also possible routes leading to the opposite outcome. People with few or no children are usually found to spend more and save less during their working lives (Bloom and Pebley 1982). Besides, childless men are probably less motivated to increase their labour supply, as fathers usually do upon the birth of their children (Palomba, Sabbadini 1994). As a result, we might expect that the elderly with low parity have more assets and pension income than those with larger offspring. Further, the absence (or scarcity) of kin support may force low-fertility elderly to purchase assistance on the market, and this is expensive, even if, sometimes, publicly subsidized. Finally, low-fertility elderly may end up living in smaller households, with higher unitary costs, with less or no economic support from their grown up children in case of need. In short, the impact of the number (or the mere presence) of children on the relative economic well being of an elderly

is not self-evident. In any empirical study on this subject, one should keep marital status under control, because, due to selection at marriage (Sigle-Rushton, McLanahan 2002) and co-operation between long-term partners (Becker, 1981; Waite, Lehrer 2003), the presence of a spouse is often found to be beneficial (Wenger 2001), and the economic conditions are typically worse for the childless elderly who are unmarried or divorced.

3. Dataset

In order to assess how things currently stand in Italy in this respect, we will exploit the Italian Survey on Household Income and Wealth (SHIW), which is a cross-sectional survey¹ carried out every other year by the Bank of Italy, in order to collect detailed information on the (demographic and) economic characteristics of the Italian households. The SHIW is based on a representative sample of the Italian resident population, with a two-stage sampling procedure: first municipalities and then households. Each time, the survey covers about 22 thousand individuals and 8 thousand households, defined as a group of persons related by blood, marriage or adoption and sharing the same dwelling.

In 2000, and then again in 2002, the SHIW also asked a question on the number of non co-resident children: this, together with the number of co-resident children, gives us the total number of children still surviving at the time of the survey, which is what we need for our study. After properly inflating the monetary values of the year 2000, so as to translate them into their 2002 equivalent, we pooled the two surveys of 2000 and 2002, in order to increase the sample size, which finally resulted in 8,129 people aged 65 or more, plus those who happened to live with them. Unfortunately, another question of interest, on "subjective economic well being" (see below), was first introduced only in year 2002: in this case, no pooling is possible, and we will use exclusively the data coming from the 2002 survey (4,299 elderly people).

Notice that we only have information on the population living in private households, and we disregard completely the individuals who live in residential institutions or collective

¹ Actually, there is also a panel part in it, which is however too short, and concerns too few individuals, to help us address the topics that we want to investigate here. For more details, see http://www.bancaditalia.it/statistiche;internal&action=_setlanguage.action?LANGUAGE=en.

households. This introduces a potentially serious bias, because, among the elders, the chances of being institutionalised depend, among other things (health, in particular), on the fact of having at least one surviving child. (Grundy 1996; Kendig 1986). In Italy, however, this limitation appears to be relatively minor, because only about 1.1% of old men and 2.4% of old women live in collective households (ISTAT 2001, <http://dawinci.istat.it/MD/>). More generally, however, readers should keep in mind that we concentrate on persons who are still alive to infer something on the causal chain that leads to better or worse economic outcome in old age (65+). As age progresses, selection plays a more and more important role, which we cannot keep under control. If the connections that we are studying differ significantly between those who survive until late and those who die earlier, our results may be misleading, and we therefore caution our readers to interpret them with care.

4. Variables

Most of the variables that we will use for our analysis are self evident, but some need a few words of explanation. First thing to note is that our data source is cross-sectional: the several variables that refer to the past, and that we introduce in our models, derive from retrospective questions, which are unfortunately subject to recollection biases and selective omissions. Although we controlled as much as possible for these problems (e.g., by comparing the observable characteristics of those who did or did not answer certain questions) and did not detect any particular form of distortion, our results should be considered with care.

We distinguish basically between three types of persons. Our main interest is concentrated on those who are now aged 65 or more (elderly). We have some information on their background (second set of persons), which includes the number of living siblings they still have², and how educated their parents were³. The third group of persons is constituted by

² This variable depends basically on two different causes: how many siblings there were at the time of the elderly's youth (which is what interests us here), and how many of them have died since, which, in turn, depends on how old our subject is. This is a disturbing factor for us, which we keep (in part) under control by introducing the age of the elderly in our model.

³ These are the parents of the elderly that we are studying. The great majority of them have died at the time of the survey, or do not live with their children: in both cases, they are not sampled in the SHIW. We consider

the other members of the household in which the elderly live. When we talk of "grown up members" in these households, we refer to all those who are aged 20 or more.

For the elderly themselves, for their parents, and for all the other grown up family members, we consider education, which we translated into the number of years theoretically necessary to obtain the specific degree reported for each individual. We can therefore treat education as a standard discrete quantitative variable. We also computed a variable called "household education", which averages the number of years spent at school by all the grown up members in the household: we found this a very convenient way of synthesising the general social level of each household.

Fertility is not asked directly. The household roster gives us the number of co-residing children and, for the elderly who are household heads or spouses, we also know the number of children living elsewhere. However the elderly coded 4 (=parents) have by definition at least one child; the elderly coded 5 (=other relative) are frequently parents-in-law (and we *assumed* that they are, if the spouse is present, and if the age gap is compatible); in all the other cases (very few, actually), we *assumed* that no living child was available. In all cases, notice that we only consider living children, not total, ever-had children: given the low levels of mortality in Italy, both currently and in the recent past, this should not introduce too great a bias in our analysis.

Household income is net per year, always expressed in 2002 Euros, by inflating the values for the 2000 round: it is obtained as the sum of all types of net yearly personal income of all household members. In the regression, we sometimes found it more useful to consider its logarithm, instead, so as to minimise the impact of abnormally rich respondents.

Equivalent household income is household income divided by the OECD modified equivalence scale, which gives weight 1 to the first adult, 0.7 to all other adults, and 0.3 to all children (up to 14 years of age).

Poverty is relative income poverty. As a cut-off point, we chose 60% of the median household equivalent income: an arbitrary, but frequent choice.

them because they form the family background, but they should not be confounded with those who are parents *in* the SHIW. Note, incidentally, that "parents" in the SHIW can be identified in two ways: either by studying the household roster (in case of co-residence) or through the question on the number of children living elsewhere. The latter option, however, holds only for the household head and his/her spouse.

Household assets are the sum of personal assets of all household members, and they include, among other things, the (estimated) monetary value of own homes less residual mortgage and less other types of debt, if any. In order to obtain a per-capita evaluation of the worth of assets, however, we decided *not* to use the OECD modified equivalence scale in this case, and we simply divided the household total by the number of household members. The idea is that assets do not benefit from the same economies of scale that are possible in consumption, and, as a reserve capital, the potential service they render is better approximated by a strict per-capita measure.

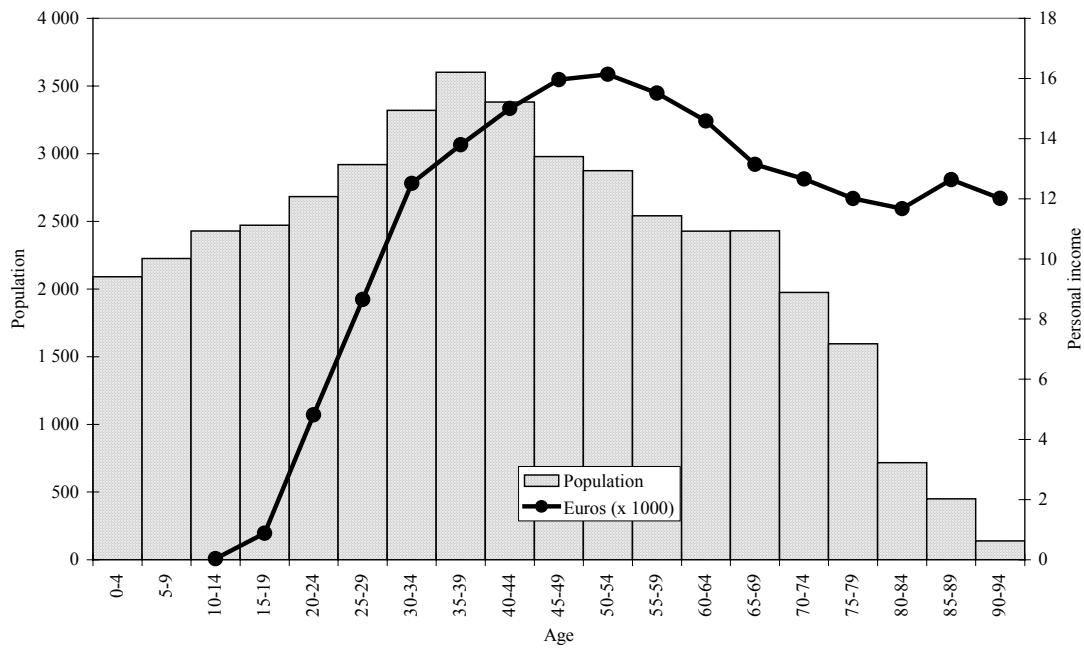
In both cases (income and assets) we are implicitly assuming that households pool their economic resources to satisfy their actual and potential needs, which we feel corresponds fairly closely to the Italian reality.

The question on subjective evaluation of the household economic condition (asked in 2002 only, question number E09) reads "Given the available income, how does your household manage to satisfy her needs?", and the possible answers are "1) very hardly; 2) hardly; 3) with some difficulty; 4) with relative ease; 5) easily; 6) very easily". In order to minimise random fluctuations, we treated answers 5 and 6 as if they belonged to the same category.

5. Descriptive statistics

Let us first take a general look at the socio-economic characteristics of our sample, focusing in particular on the older segment (65+).

Figure 1: Sample frequencies and average personal income (Italy, 2000-2)

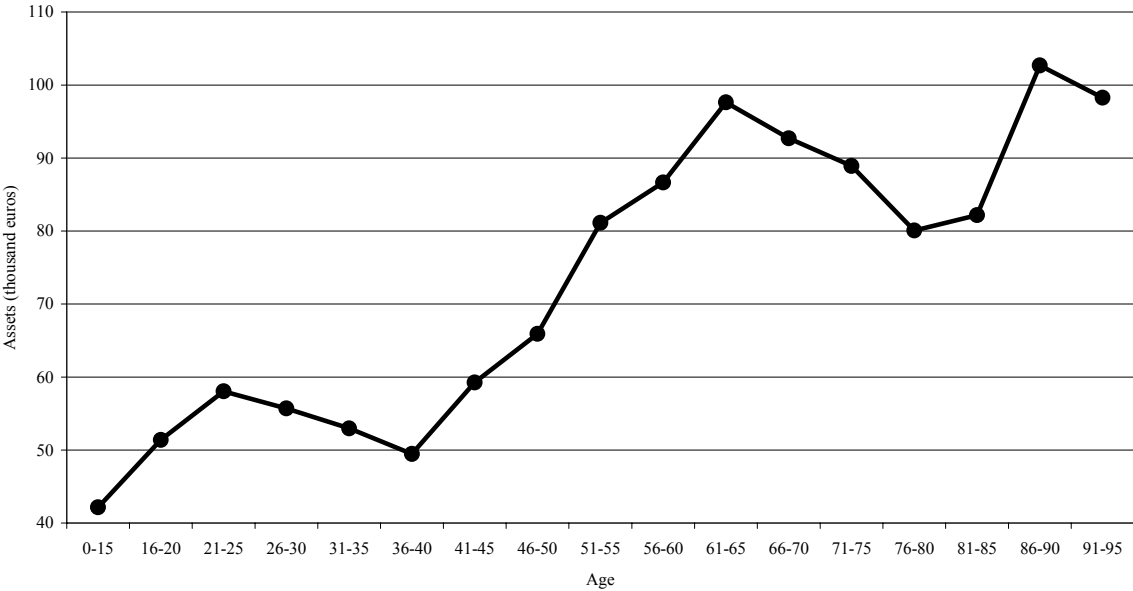


Source: own elaborations on SHIW data, 2000 and 2002. Monetary values in 2002 prices (Thousand Euros)

There are about 4 thousand elderly in each survey (more than 8 thousand overall), although frequencies decrease with age. The elderly in Italy are not economically bad off, on average: their average personal income exceeds 12,600 Euros per year (in 2002 prices), and is only slightly lower than that of the population of working age.

Beyond income, the elderly frequently own the house they inhabit (in more than 70% of cases), and have savings of various kinds, so that, overall, the worth of their assets, not far from 90 thousand euros, is considerably higher than that of the rest of the population (fig. 2).

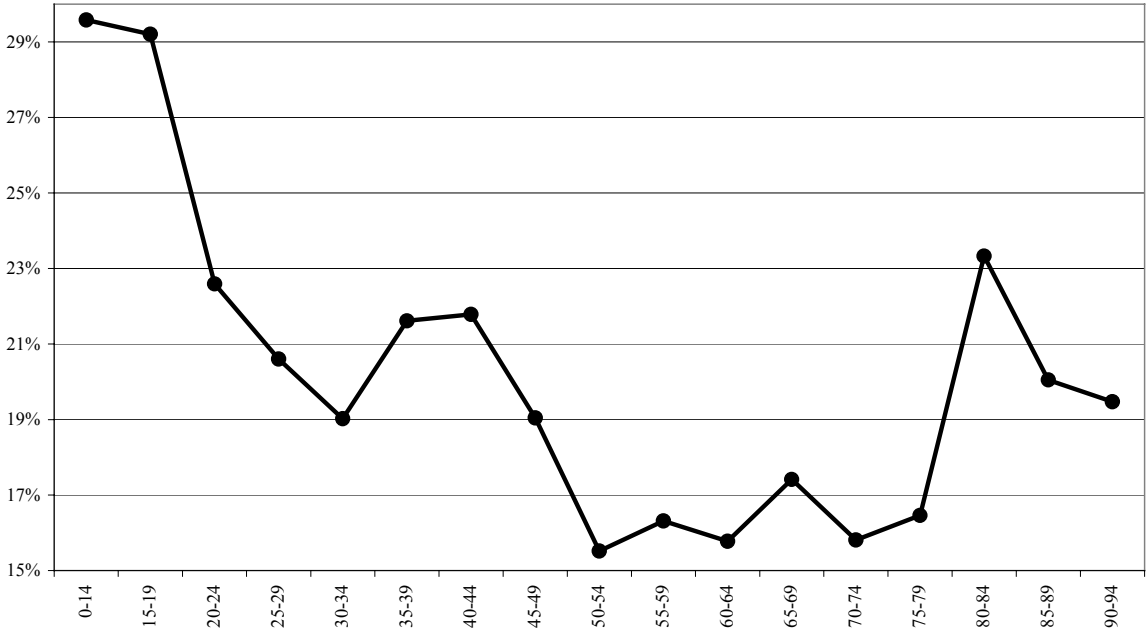
Figure 2: Per capita household assets by age (Italy, 2000-2)



Source: own elaborations on SHIW data, 2000 and 2002. Monetary values in 2002 prices (Thousand Euros).

But while their average economic position appears to be good, one should also consider the variability of the situations. The elderly, for instance, are not totally sheltered from poverty, especially not past the age of 80 (Figure 3).

Figure 3: Proportion poor by age (Italy, 2000-2)



Source: own elaborations on SHIW data, 2000 and 2002.

There is also considerable variation according to gender (men earn almost twice as much as women, on average) and relation to the household's head (Table 1).

Table 1: Basic characteristics of the elderly (65+) by gender and position in the household (Italy, 2000-2)

Code	Position in the hhld	Number		Age		Hhld size	
		Male	Female	Male	Female	Male	Female
1	Head	2 858	2 258	73.0	75.2	2.2	1.4
2	Husband/wife	422	1 594	72.4	71.3	2.6	2.3
3	Child	0	1		70.0		2.0
4	Parent	178	471	77.6	79.1	3.7	3.3
5	Other relative	76	277	77.1	79.0	3.9	3.6
6	Other non rel.	7	28	79.1	80.4	3.9	4.3
	Total	3 541	4 629	73.3	74.5	2.4	2.1

Code	Position in the hhld	Personal income		Equiv. income		Per-head wealth	
		Male	Female	Male	Female	Male	Female
1	Head	19 324	13 107	16 425	13 838	99 656	90 578
2	Husband/wife	12 382	4 449	15 875	15 677	79 488	88 507
3	Child		9 544		14 027		63 900
4	Parent	9 402	7 142	15 769	16 130	76 395	69 215
5	Other relative	9 034	7 481	15 265	16 847	59 019	71 917
6	Other non rel.	9 653	9 148	16 451	16 822	41 979	80 652
	Total	17 758	9 158	16 301	14 903	95 097	86 509

Source: own elaborations on SHIW data, 2000 and 2002. Monetary values in 2002 prices (Euro)

The great majority of the elderly are either head or spouse of the household head, but there are also a non-negligible (12.7%) proportion of other positions, basically parent, or parent-in-law. Their presence causes a problem with our analysis, for the following reason: according to SHIW rules, the reference person in the household (first in the household roster - here simply called household head) is the one who contributes most to the household budget, i.e. the one who earns more. So "heads and spouses" are selected in more than one sense: they are younger than average (about 73, as against about 80 in the other categories), they live in smaller households (2.3. vs. 3.8 for men; 1.8 vs. 3.4 for women), they earn more than average (especially the women who are head of their household: 13 as against 7 thousand euros per years), and they live in households with comparable equivalent incomes (slightly lower for female heads, actually), but higher wealth. The bias reverberates on co-residing (adult) children: if they earn relatively little,

they are coded with "3"; if they are the main breadwinners, they appear as "1", while their elderly parents are coded "4". Unfortunately, the questions on the family background (number of living siblings, a few characteristics of their ascendants, including education) and fertility (number of living children outside the household) have been asked of heads and spouses only. Therefore, in the analysis that follows, we will be forced to choose between a "complete" study with a biased sample (i.e. with full information on family background and number of living children, but focused on relatively rich elderly), and an incomplete one with a representative sample (no family background and only indirect estimate of the presence of children, but with all the elderly included). In practice, however, this is probably less a problem than it appears, as the analyses below, conducted in part on all of the elderly and in part and on various sub-samples, will show.

Finally, for the 2002 round only, let us consider the question on subjective well being. About 28% of the interviewed elderly manage to make ends meet only hardly, or very hardly (table 2). Their distribution is only partly coincident with that based on equivalent household income, the "hard" economic indicator used for the first part of our analysis: the correlation between the two series is about .47.

Table 2: How the elderly (65+) manage to make ends meet (Italy, 2002)

	All elderly		Only heads or spouses	
	N	%	N	%
Very hardly	577	13%	356	13%
Hardly	643	15%	362	14%
With some difficulty	1.349	31%	825	31%
With relative ease	1.272	30%	812	30%
Easily or very easily	458	11%	309	12%
Total	4.299	100%	2.664	100%

Source: own elaborations on SHIW data, 2002.

6. Regression models

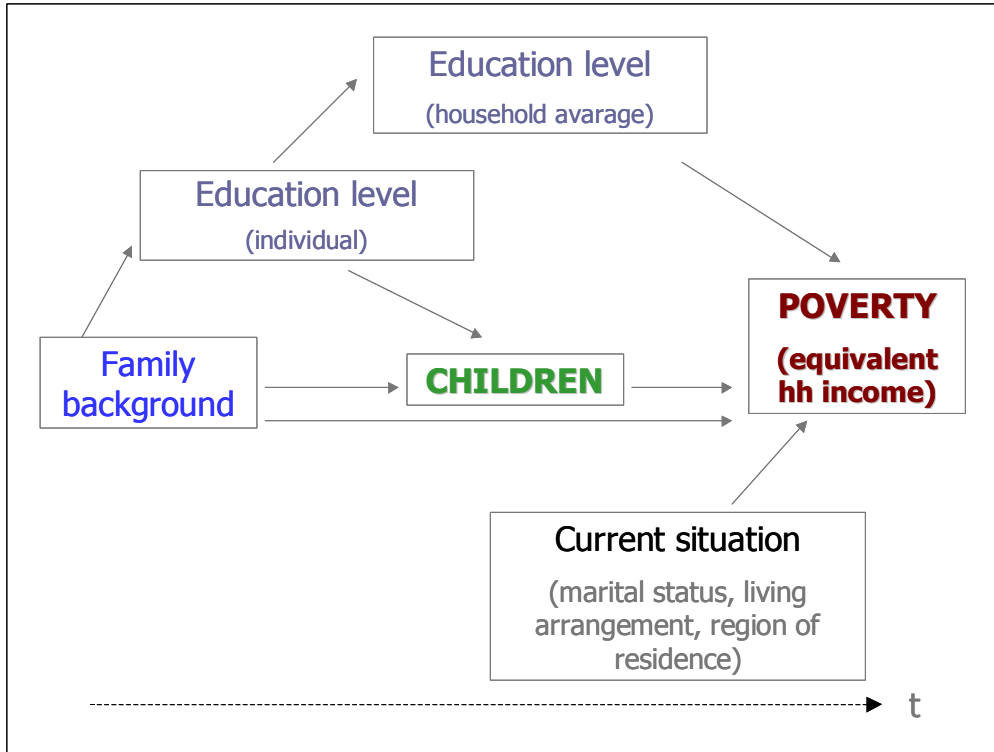
The temporal dimension is crucial in our analysis on the connection between the current economic situation of the elderly and their past demographic behaviour, including fertility. Let us distinguish between two types of past. The remote past refers to the time when our elderly were young or adolescents: we are interested in their family background at that time (parents' education and number of siblings). At a later stage, more or less grown into adulthood, these people took a few decisions with long-lasting impact, notably in the fields of education, marriage, and fertility⁴. These decisions are reflected in the current situation of our elders, in terms, for instance, of living arrangements and economic conditions.

There are a number of interactions, at various levels, in these trajectories: most of them, unfortunately, are not documented in our data, or not well, and will go unnoticed, like past labour activity, for instance. But for some of them we have something to say. Since our main interest is on the (causal) connection between (past) fertility and (current) economic conditions, and since these have some covariates in common, the ideal would have been to perform an instrumental analysis, and consider only the net effect of the former on the latter. This, unfortunately, proved impossible, because all the instruments we tried for fertility were also closely linked to the current economic conditions, thus violating one of the basic conditions for the validity of this methodology.

We therefore resorted to a path analysis: the direct link between (past) fertility and (current) economic conditions does not emerge as clearly as we would have liked, but one can better grasp the general, and complex, picture of the interconnections between the various dimensions considered here. Figure 4, where the basic elements appear more or less in chronological order, should help readers understand the type of interpreting scheme that we have in mind.

⁴ And work, obviously. However, since labour market participation interacts with fertility in a complex and bidirectional way, we decided not to include this sphere into our analysis. Besides, we have very few pieces of information on the working history of our focus group (only detailed information on their *current* activity, if any).

Figure 4: Path analysis: theoretical framework



6.1 Complete analysis, selected elderly (dropping cases with missing answers)

Let us start with the 5,177 elderly who are heads or spouses, and who answered the question on family background: this is our complete, but potentially biased analysis, because, as mentioned, the elderly coded "1" or "2" in the household roster tend to be richer than average. Table 3.1 gives us a picture of the socio-demographic background of this group. Panel A says that the educational level reached by our elderly (expressed in number of years profitably spent at school) depends very much on the education of their parents (average between numbers of years both parents spent at school) and, negatively, on the number of siblings they have. This confirms the importance of the intergenerational transmission of behaviours and values, but also stresses the role of opportunities and constraints: more siblings, some 70 or 80 years ago, meant fewer resources to invest in the formation of the "human capital" of each child.

Table 3.1: Modelling the social background of aged heads or spouses, who answered the question on family background (n=5177) (Italy, 2000-2)

A) Education	Coef.	Std. Err.	t	P> t	Beta
Edu_ancestors	.7563179	.0138604	54.57	0.000	.6014422
Siblings	-.1668836	.0224345	-7.44	0.000	-.0819903
_cons	4.17983	.0815461	51.26	0.000	.
R2 = 0.3799 sqrt(1 - R2) = 0.7875					

B) Children	Coef.	Std. Err.	t	P> t	Beta
Education	-.024535	.0060272	-4.07	0.000	-.0706838
Edu_ancestors	-.017373	.0075138	-2.31	0.021	-.0398015
Siblings	.114768	.0100504	11.42	0.000	.1624439
Age	-.0032526	.0033645	-0.97	0.334	-.0136852
_cons	2.108355	.2584363	8.16	0.000	.
R2 = 0.0423 sqrt(1 - R2) = 0.9786					

C) Edu_hhld	Coef.	Std. Err.	t	P> t	Beta
Education	.8380734	.0059646	140.51	0.000	.8901206
_cons	1.414248	.0441414	32.04	0.000	.
R2 = 0.7923 sqrt(1 - R2) = 0.4557					

Panel *B* says that the number of living children these 5177, now elderly, individuals had in their adult years depends negatively on their own and on their parents' education, but positively on the number of their siblings. Once again the importance of family background stands out very clearly - at least for the generations considered here. Notice that these are all elderly people, with complete fertility: the variable "age" is introduced to control not for timing, but for possible generational effects (and also for the mortality of siblings), which, however, do not appear to be meaningful, or, at least, not in the simple (linear) way that we consider here.

Panel *C* confirms that there is a very close connection between the general educational level of the household (average of all grown up persons) and the personal education of the elderly that we are considering. In part this is spurious (the individual is him/herself part of the household), but we verified that the relationship holds also if run "properly" (i.e.,

education of the elderly vs. education of the *other* adult members in the household - not shown here). We keep the relation in this form because we need household variables in this analysis.

We can now move to table 3.2, which "explains" the economic outcome for these elderly, considering the three indicators we introduced before: relative poverty, (log of) equivalent household income, and per-capita assets. In all the three cases, the results are very consistent, and can be summarised as follows. First, those who live in the South of Italy are worse off: in part, this would be mitigated if one took regional price levels into account (because it is cheaper to live in the South), but this finding is consistent with what is amply know of geographical economic differences in Italy. Second, a higher educational level is beneficial: both that of the current household (average of all grown up members) and that of the ancestors. Third, the higher the percentage of males among the grown up members of the household, the better the economic conditions of the household, because, as we saw before, personal income is higher for men than for women.

Table 3.2: Modelling the economic conditions of aged heads or spouses, who answered the question on family background (n=5177) (Italy, 2000-2)

A)	Poverty	Coef.	Std. Err.	t	P> t	Beta
	Children	.0095181	.0035055	2.72	0.007	.0384287
a)	married	-.1128495	.025763	-4.38	0.000	-.1512518
a)	sepdiv	-.023686	.0456262	-0.52	0.604	-.007452
a)	widowed	-.1239752	.0228252	-5.43	0.000	-.1568011
b)	Onlyspouse	-.0212683	.0182917	-1.16	0.245	-.0297694
b)	Otheradlts	-.0767648	.026898	-2.85	0.004	-.0398572
	Child_in	.0386186	.0177302	2.18	0.029	.0415053
	percmale20	-.0841566	.0191926	-4.38	0.000	-.0648098
	Edu_hhld	-.0152919	.0015783	-9.69	0.000	-.1674689
Edu_	ancestors	-.0033293	.0018097	-1.84	0.066	-.0307947
	Siblings	-.0013641	.0023289	-0.59	0.558	-.0077955
c)	Center	.0034669	.0117906	0.29	0.769	.0040918
c)	South	.2151741	.0112224	19.17	0.000	.2770751
	_cons	.3279567	.0239214	13.71	0.000	.

R2 = 0.1440 sqrt(1 - R2) = 0.9252; Reference poverty = .1495

B)	Eq_Income	Coef.	Std. Err.	t	P> t	Beta
	Children	-61.02745	122.2228	-0.50	0.618	-.00664

a)	married		1610.168	898.2539	1.79	0.073	.0581581
a)	sepdiv		-267.7571	1590.807	-0.17	0.866	-.0022702
a)	widowed		3672.094	795.8247	4.61	0.000	.1251602
b)	Onlyspouse		619.7026	637.7593	0.97	0.331	.0233755
b)	Otheradlts		2740.392	937.8271	2.92	0.003	.0383439
	Child_in		-2253.484	618.1838	-3.65	0.000	-.0652678
	percmaile20		4032.198	669.1698	6.03	0.000	.0836821
	Edu_hhld		1271.617	55.02951	23.11	0.000	.3752908
Edu_ancestors			466.354	63.09736	7.39	0.000	.1162475
	Siblings		-9.0114	81.20066	-0.11	0.912	-.0013878
c)	Center		-857.0807	411.0909	-2.08	0.037	-.0272609
c)	South		-3864.205	391.2802	-9.88	0.000	-.134093
	_cons		4072.325	834.045	4.88	0.000	.

R2 = 0.2443 sqrt(1 - R2) = 0.8693; Reference eq. income = 16062

C)	Assets		Coef.	Std. Err.	t	P> t	Beta
	Children		-2929.323	2074.429	-1.41	0.158	-.0202703
a)	married		-14580.31	15245.63	-0.96	0.339	-.033493
a)	sepdiv		-33727.34	27000	-1.25	0.212	-.0181865
a)	widowed		26503.34	13507.15	1.96	0.050	.0574514
b)	Onlyspouse		-2819.618	10824.38	-0.26	0.794	-.0067642
b)	Otheradlts		-16304.41	15917.29	-1.02	0.306	-.014509
	Child_in		-73633.64	10492.14	-7.02	0.000	-.135634
	percmaile20		48838.05	11357.5	4.30	0.000	.0644609
	Edu_hhld		12315.7	933.9894	13.19	0.000	.231163
Edu_ancestors			7554.935	1070.921	7.05	0.000	.1197695
	Siblings		-343.1453	1378.18	-0.25	0.803	-.0033609
c)	Center		-1874.366	6977.249	-0.27	0.788	-.0037916
c)	South		-24373.13	6641.011	-3.67	0.000	-.0537904
	_cons		7969.692	14155.84	0.56	0.573	.

R2 = 0.1195 sqrt(1 - R2) = 0.9383; Reference assets per head = 100381

Note: Letters (a) to (c) denote different modalities of the same variables, i.e. a) Marital status (ref.=Never married); b) Presence of other adults in the hhld (Ref.=None); c) Region of residence (Ref.=North).

Fourth: children are systematically associated with a worse economic performance of the elderly, in all possible senses. If we consider the number of living children (regardless of where they live), we can see that, *ceteris paribus*, the more one has, the more likely it is for him/her to end up in poverty, and to have a lower household equivalent income and fewer assets⁵. If at least one of these children lives in the same household⁶ as his/her elderly

⁵ The last two coefficients are not statistically meaningful, but their sign is as indicated in the text.

⁶ Obviously the fact of having at least a child available and co-residing are correlated. It has been observed that the greater the number of children an individual has had in their life, the greater his/her chance of living with one of them in old age (Légaré and Martel 2003).

parent, than there is an *additional*, and strong, negative effect: a higher risk of poverty, and fewer resources in terms of income and value of assets.

Other covariates exert a more nuanced effect. Take marital status for instance: in terms of flow variables (poverty risk and equivalent income), the widowed are apparently the best off, closely followed by the married. The separated come third, with lower equivalent income, but also less frequent poverty⁷, and the unmarried, our reference category, are always the worst off⁸. When it comes to assets however (Table 3.2, panel C), it is only the widowed who are clearly better off than all the remaining categories.

Household dimension affects economic well being, but our data suggest that it is better to split this variable in two. Remember that our standard of reference is a single elderly: now, as we saw before, the presence of children, even if they are grown up, always exerts a negative impact on the economic sphere. Apart from own children, the presence of other grown up members in the household is mainly beneficial in terms of income (higher equivalent income and less poverty), but not in terms of assets⁹.

6.2 Semi-complete analysis, larger sample (cases with missing answers kept)

Our second step consists in including in the analysis also the elderly who are heads or spouses (as before), but who did not answer the question on their parents' education. This increases the size of our sample to 7119, and makes it more representative: the general socio-economic status is now lower than before, and, for instance, the reference equivalent income decreases from about 16 to about 15.4 thousand euros per year. On the other hand, this deprives of a useful variable, which reduces the goodness of fit of our models.

⁷ This could be interpreted as follows: it is costly to separate, and only those who are relatively well off could afford it in the past (remember that we are talking about elderly who, for the vast majority, separated or divorced when they were younger, some time before the survey). As a result, they are relatively worse off than the married, but not so much as to disproportionately fall in poverty.

⁸ Notice, however, that the (economically) negative "effect" of being unmarried is partly balanced by the fact that, in most cases, the unmarried are childless.

⁹ Notice that we distinguish between the spouse and other adult members. The impact of the spouse is generally minor, because this effect is already captured, in large part, by the fact of being married. It is true that one thing is to be married, and another thing is to live with one's spouse, but, not surprisingly, the two variables are interconnected because the vast majority of married persons share the same dwelling.

The results, presented in tables 4.1 and 4.2, are basically the same that we saw before for the 5,177 individuals with complete information: all the variables have the same sign and virtually the same absolute value. One exception may be noted though: the presence of other grown up members in the household, either the spouse or someone else, now definitely reduces the value of the assets in per-capita terms.

Table 4.1: Modelling the social background of all aged heads or spouses (n=7119 (Italy, 2000-2))

A) Education	Coef.	Std. Err.	t	P> t	Beta
Siblings	-.2547718	.0239114	-10.65	0.000	-.1253032
_cons	6.347549	.0680583	93.27	0.000	.
R2 = 0.0157 sqrt(1 - R2) = 0.9921					
B) Children	Coef.	Std. Err.	t	P> t	Beta
Education	-.039224	.004352	-9.01	0.000	-.106819
Siblings	.1168754	.0090668	12.89	0.000	.156542
Age	.0009039	.002887	0.31	0.754	.0037988
_cons	1.84888	.2233697	8.28	0.000	.
R2 = 0.0399 sqrt(1 - R2) = 0.9798					
C) Edu_hhld	Coef.	Std. Err.	t	P> t	Beta
Education	.8462955	.0051298	164.98	0.000	.8903463
_cons	1.353569	.0366442	36.94	0.000	.
R2 = 0.7927 sqrt(1 - R2) = 0.4553					

Table 4.2: Modelling the economic conditions of all aged heads or spouses (n=7119 (Italy, 2000-2))

A) Poverty	Coef.	Std. Err.	t	P> t	Beta
Children	.0117621	.0029775	3.95	0.000	.047017
a) married	-.1111475	.031729	-3.50	0.000	-.1411
a) sepdiv	-.0026838	.0407942	-0.07	0.948	-.0008058
a) widowed	-.11437	.0209475	-5.46	0.000	-.1379169
b) Onlyspouse	-.0236182	.0297926	-0.79	0.428	-.0304082
b) Othercases	-.0181511	.0238526	-0.76	0.447	-.0111561
Child_in	.0608273	.0117255	5.19	0.000	.0612729
percmales20	-.0742251	.0168903	-4.39	0.000	-.0543432

	Edu_hhld		-.0191339	.0011331	-16.89	0.000	-.1979845
	Siblings		-.0017354	.0020977	-0.83	0.408	-.0092914
c)	Center		.0037102	.0110232	0.34	0.736	.0039901
c)	South		.2225084	.0096874	22.97	0.000	.2797191
	_cons		.3370459	.0217649	15.49	0.000	.

R2 = 0.1520 sqrt(1 - R2) = 0.9209; Reference poverty = .1729

B)	Eq_Income		Coef.	Std. Err.	t	P> t	Beta
	Children		-69.37951	92.58032	-0.75	0.454	-.0084509
a)	married		3543.38	986.5518	3.59	0.000	.1370721
a)	sepdiv		-48.3793	1268.415	-0.04	0.970	-.0004426
a)	widowed		2124.325	651.3206	3.26	0.001	.0780603
b)	Onlyspouse		-2655.945	926.3419	-2.87	0.004	-.1042
b)	Othercases		-1866.202	741.6508	-2.52	0.012	-.0349521
	Child_in		-2615.402	364.5804	-7.17	0.000	-.0802809
	percmale20		3156.279	525.1717	6.01	0.000	.0704163
	Edu_hhld		1409.386	35.23131	40.00	0.000	.4443883
	Siblings		-33.73187	65.22539	-0.52	0.605	-.0055033
c)	Center		-962.332	342.7436	-2.81	0.005	-.0315368
c)	South		-4107.225	301.2096	-13.64	0.000	-.157336
	_cons		6363.289	676.7378	9.40	0.000	.

R2 = 0.2387 sqrt(1 - R2) = 0.8725; Reference eq. income = 15414

C)	Assets		Coef.	Std. Err.	t	P> t	Beta
	Children		-2258.154	1517.233	-1.49	0.137	-.0181136
a)	married		50091.24	16167.9	3.10	0.002	.1276063
a)	sepdiv		-29445.04	20787.15	-1.42	0.157	-.017741
a)	widowed		8123.686	10674.03	0.76	0.447	.0196581
b)	Onlyspouse		-81732.61	15181.16	-5.38	0.000	-.2111655
b)	Othercases		-66066.61	12154.39	-5.44	0.000	-.0814847
	Child_in		-69919.6	5974.85	-11.70	0.000	-.1413357
	percmale20		33347.9	8606.667	3.87	0.000	.0489943
	Edu_hhld		14911.61	577.381	25.83	0.000	.3096251
	Siblings		-203.9886	1068.933	-0.19	0.849	-.0021916
c)	Center		-1794.489	5616.983	-0.32	0.749	-.0038727
c)	South		-25549.72	4936.312	-5.18	0.000	-.0644533
	_cons		31742	11090.58	2.86	0.004	.

R2 = 0.1133 sqrt(1 - R2) = 0.9416; Reference assets per head = 93239

Note: Letters (a) to (c) denote different modalities of the same variables, i.e.a) Marital status (ref.=Never married); b) Presence of other adults in the hhld (Ref.=None); c) Region of residence (Ref.=North)

We will not comment these results once again. Let us just note that the exclusion of individuals with incomplete information on family background appears to be selective in terms of their own characteristics (those who provide complete information appear to be of

higher socioeconomic status, on average), but not in terms of the connections we are studying here. In particular, marriage appears to be "protective" in economic terms (or the married are favourably selected from the start: we cannot distinguish between these two interpretations with our data), and children - especially co-residing children - are rather a burden than a help, even in their adult years.

6.3 Incomplete analysis, all elderly

Let us now move to the analysis of the economic situation of all the elderly in our sample, i.e. including those who are not household heads, or spouses. We improve in terms of representativeness, with 8,129 elderly individuals now under scrutiny, but lose in terms of family background (no information on parents or siblings), and therefore in the completeness of the analysis. We also lose in terms of fertility, because, as readers may remember, for all the elderly coded "3" or higher in the household roster, we no longer *know* how many children they have: we can at best *infer* if they have at least one, and if they live with him or her. One of our variables, therefore, changes from "number of children" to "being or not being parent". Our results, presented in Table 5, are now less complete, but also somewhat different from before, which is worth considering.

Table 5.1: Modelling the social background of all the elderly (n=8129) (Italy, 2000-2)

A)	Parent	Coef.	Std. Err.	t	P> t	Beta
	Education	-.0042698	.0010676	-4.00	0.000	-.0448156
	Age	-.003821	.000637	-6.00	0.000	-.0672124
	_cons	1.122647	.0486119	23.09	0.000	.

n = 8129 R2 = 0.0056 sqrt(1 - R2) = 0.9972						

B)	Edu_hhld	Coef.	Std. Err.	t	P> t	Beta
	Education	.7988181	.0057605	138.67	0.000	.8384048
	_cons	1.95722	.0399945	48.94	0.000	.

n = 8129 R2 = 0.7029 sqrt(1 - R2) = 0.5450						

Table 5.2: Modelling the economic conditions of all the elderly (n=8129) (Italy, 2000-2)

A)	Poverty	Coef.	Std. Err.	t	P> t	Beta
	Parent	-.0200475	.0116637	-1.72	0.086	-.0208698
a)	married	-.0149187	.0251442	-0.59	0.553	-.0196883
a)	sepsdiv	.0367783	.0382907	0.96	0.337	.0110007
a)	widowed	-.0547436	.0191978	-2.85	0.004	-.0693789
b)	Onlyspouse	-.0582292	.0215192	-2.71	0.007	-.0778518
b)	Otheradlts	-.0615202	.0147601	-4.17	0.000	-.0572754
	Child_in	.0512194	.0101537	5.04	0.000	.0599039
	percma1e20	-.0749777	.0158144	-4.74	0.000	-.0545658
	Edu_hhld	-.0190545	.0010429	-18.27	0.000	-.1983673
c)	Center	.003739	.0100434	0.37	0.710	.0041939
c)	South	.2302094	.0088694	25.96	0.000	.2935751
	_cons	.3106287	.0190658	16.29	0.000	.

R2 = 0.1494 sqrt(1 - R2) = 0.9223; Reference poverty = .1661

B)	Eq_Income	Coef.	Std. Err.	t	P> t	Beta
	Parent	189.1652	359.0687	0.53	0.598	.006071
a)	married	789.5419	774.0687	1.02	0.308	.0321229
a)	sepsdiv	-1033.538	1178.787	-0.88	0.381	-.0095305
a)	widowed	1007.94	591.009	1.71	0.088	.0393814
b)	Onlyspouse	-1201.002	662.4728	-1.81	0.070	-.0495033
b)	Otheradlts	-1074.186	454.3926	-2.36	0.018	-.0308313
	Child_in	-2152.661	312.585	-6.89	0.000	-.0776173
	percma1e20	3519.84	486.8485	7.23	0.000	.0789721
	Edu_hhld	1350.172	32.10472	42.06	0.000	.4333351
c)	Center	-1270.358	309.1886	-4.11	0.000	-.0439286
a)	South	-4597.088	273.0469	-16.84	0.000	-.1807346
	_cons	7625.216	586.9456	12.99	0.000	.

R2 = 0.2339 sqrt(1 - R2) = 0.8753; Reference eq. income = 15509

C)	Assets	Coef.	Std. Err.	t	P> t	Beta
	Parent	-12843.7	5796.441	-2.22	0.027	-.0275102
a)	married	30375.42	12495.78	2.43	0.015	.0824792
a)	sepsdiv	-31662.52	19029.14	-1.66	0.096	-.0194858
a)	widowed	6451.001	9540.65	0.68	0.499	.0168216
b)	Onlyspouse	-63243.83	10694.29	-5.91	0.000	-.1739767
b)	Otheradlts	-52712.83	7335.253	-7.19	0.000	-.1009745
	Child_in	-57911.37	5046.055	-11.48	0.000	-.1393571
	percma1e20	36299.07	7859.188	4.62	0.000	.0543536
	Edu_hhld	13946.3	518.266	26.91	0.000	.2987282
c)	Center	-4299.743	4991.227	-0.86	0.389	-.0099231
c)	South	-31697.24	4407.792	-7.19	0.000	-.0831691
	_cons	44824.36	9475.054	4.73	0.000	.

$R^2 = 0.1107$ $\sqrt{1 - R^2} = 0.9430$; Reference assets per head = 90364

Note: Letters (a) to (c) denote different modalities of the same variables, i.e. a) Marital status (ref.=Never married); b) Presence of other adults in the hhld (Ref.=None); c) Region of residence (Ref. North)

When the analysis is carried out on all the elderly (65+), being a parent in itself is no longer associated with a higher risk of poverty or a lower equivalent income, although assets remain lower. What appeared in the previous tables was therefore most probably due to the implicit sample selection that derived from considering only household heads and their spouses. On the other hand, our data confirm that if an elderly still has (grown up) children living with him or her, the average prevalence of poverty increases (by about 5%), equivalent income diminishes (by about 2 thousand euros per year), and so do assets per head (by about 58 thousand Euros). This seems to reinforce the idea that, in Italy, it is the elderly parents who support their grown up children in economic terms, rather than vice versa. The analysis of the average earnings of the young adults, who do or do not live with their parents (not shown here), shows that those who live independently have, perhaps not surprisingly, higher earnings. Once again, this is consistent with the idea that a young adult would rather live on his or her own, and accepts to remain in his or her parental home only if forced by lack of resources, and not in order to sustain their poor, elderly parents.

The other variables preserve basically the signs we saw before. Notice, however, that the presence of other grown-up persons in the household (the spouse, or somebody else, or both figures) lowers per capita assets (by about 50 to 60 thousand euros) and equivalent income (by about 1000 euros per year), but protects from poverty (the average prevalence is about 6% lower). In short, there are fewer extremes in this group: fewer are very rich (and outliers on the right of the income distributions inflate the average) and fewer are very poor. Notice, also, that the separated and divorced start to emerge as a group with economic difficulties: more poverty, lower income, fewer assets. None of the coefficients is particularly meaningful, statistically speaking, but they all point in the same direction.

6.4 Subjective economic well being: all elderly, 2002 only

Finally, the 2002 round of the SHIW included a question on subjective economic well being, which can be treated in the same way as before, if we take the liberty of considering the answers to this question as a simple discrete variable¹⁰. We have now information on 4,299 elderly individuals (all the elderly of the 2002 round), and the results are shown in table 6.

Table 6.1: Modelling the social background of all the elderly (n=4299) (Italy, 2000-2)

A)	Parent	Coef.	Std. Err.	t	P> t	Beta

	Education	-.0048469	.0014564	-3.33	0.001	-.0513125
	Age	-.0045267	.0008555	-5.29	0.000	-.0815858
	_cons	1.190599	.0654557	18.19	0.000	.

R2 = 0.0079		sqrt(1 - R2) = 0.9961				

B)	Edu_hhld	Coef.	Std. Err.	t	P> t	Beta

	Education	.8102961	.0078848	102.77	0.000	.8430883
	_cons	1.855435	.0548579	33.82	0.000	.

R2 = 0.7108		sqrt(1 - R2) = 0.5378				

The tables confirm some of the preceding findings, and introduce some new. Apparently, it is the separated and divorced who live in the worst subjectively perceived economic conditions. This sort of "depression" matches only loosely our findings on objective economic conditions described above, where they appeared to be just slightly worse than average, and is possibly related to their feeling of loneliness. The same effect can be traced among widowers and widows: in "objective" terms they are slightly better off than the never married, our reference category (cf. Table 5), but it is more frequently for them to judge their own economic resources are insufficient. Indeed, the presence of other grown up members in the household is beneficial in this respect, although we saw before that they lower the equivalent household income (but protect from poverty see Table 5). Instead, the

¹⁰ Remember that the answers range from 1 ("can make ends meet only very hardly") to 6 ("can make ends meet easily or very easily"). We tried alternative specification of the dependent variable, to account for possible non linearities, but results (not shown here) did not change much.

presence of (grown up) children in the household is, once again, "harmful" in this respect, and is associated with a deeper feeling of insufficiency of the available economic means. Note that this is different from "being a parent", which, in itself, is scarcely related to this indicator, and, in case, tends to show a generally better feeling of economic security among parents than among non parents.

Table 6.2: Modelling the subjective economic background of all the elderly (n=4299) (Italy, 2000-2)

C) SUBJ_ECON	Coef.	Std. Err.	t	P> t	Beta
Parent	.0839027	.0516654	1.62	0.104	.0258321
a) married	.0542099	.1120616	0.48	0.629	.0217855
a) sepdiv	-.491371	.166358	-2.95	0.003	-.0442459
a) widowed	-.055536	.0837711	-0.66	0.507	-.0215149
b) Onlyspouse	.0004156	.09551	0.00	0.997	.0001688
b) Otheradlts	.2112788	.0647111	3.26	0.001	.0581195
Child_in	-.2095652	.0434331	-4.83	0.000	-.0738476
percmale20	.3506123	.0677263	5.18	0.000	.0785736
Edu_hhld	.121755	.0045309	26.87	0.000	.3814136
c) Center	-.0887437	.0423552	-2.10	0.036	-.0306067
c) South	-.6290257	.0382638	-16.44	0.000	-.2402302
_cons	2.355637	.0821779	28.67	0.000	.

R2 = 0.2413 sqrt(1 - R2) = 0.8710: Reference value = 3.1

Note: Letters (a) to (c) denote different modalities of the same variables, i.e. a) Marital status (ref.=Never married); b) Presence of other adults in the hhld (Ref.=None); c) Region of residence (Ref.=North)

7. Conclusions

Several caveats surround our analysis, and it is perhaps worth reminding a few of them here: selectivity may operate at various levels; the true causal chain is unknown, and the one that we suggest here may be, at least in part, abusive; the data are not longitudinal, and the tentative time sequence that we imposed on them does not necessarily correspond to reality; etc.

However, a few, and in our opinion important conclusions stand out from this study. The first is that the natural tendency to concentrate on the elderly for whom our database provides more information may be misleading: these elderly (household heads and their

spouses) are selected in various respects, in terms of household composition, marital status, and socio-economic characteristics. The alternative is to try to keep all the elderly under observation: this leads to analyses based on fewer explanatory and less focused dependent variables, and proves therefore less precise. We tried both of them, and ventured a few inferences from what changes and what remains constant as one progressively shifts from the former to the latter type of analysis. We also kept under control three types of economic outcome (poverty, equivalent income, and assets) which do not always change consistently among the various subgroups.

In Italy, having had children in one's adult years does not yield very significant economic benefits: in the short run costs are probably high (a topic not discussed here); in the long run (that is, in one's old age), benefits do not accrue in any significant way. Income may not be particularly low, but assets surely are. Our study, in this respect, seems to confirm the results that have emerged in other developed countries: a childless old age is not a deprived condition, or at least not in economic terms (Rempel 1985).

If parenthood in itself is scarcely beneficial, even when one's children become of age, co-residing with one's (grown up) children is very frequently observed in relatively bad economic situations, where equivalent income is lower, poverty higher, accumulated capital scarcer, and the subjective appreciation about the adequacy of one's economic resources is negative. We would argue that this situation emerges mainly when the young adults fail to find their own way (a job, a house, etc): in these cases, it is their aged parents who support them economically - a case that is observed much more frequently than its opposite, when a relatively rich young adult hosts his/her parents in his home, and transfers resources "upwards".

Our data do not permit us to tell whether the situation that emerges from our analyses depends on a sort of cultural norm regulating the private economic exchange between generations or, as several economists would argue (ISAE 1999), on a system that gives too much to the elderly (through a generous pension and social security system) and too little to the young generations, whose space, for instance in the labour market is, in several respects, severely limited.

What we can tell for sure is that, in these conditions, children appear basically as a liability throughout one's life, up into old age. Inferences on the connections between the children's economic status that emerges from our research and the Italian extremely and persistent low fertility may not be totally misplaced.

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