

## A Note on the Choice between Formal and Informal Care for Elderly People

MATTEO LIPPI BRUNI\* and CRISTINA UGOLINI\*\*

Given the social and financial implications associated with the expected growth in the demand for Long-term Care (LTC), there is a mounting interest in understanding the determinants of family decisions regarding living arrangements of the elderly, in order to implement effective policy measures aimed at containing costs and at enhancing the quality of care. The literature is predominantly empirical, although it offers also several theoretical models (KOTLIKOFF and MORRIS, 1988; Stern, 1995; HOERGER et al., 1996; PEZZIN e SCHONE, 1999; ENGERS and STERN, 2002).

This paper builds on the existing body of research in two ways. First, we extend to a different institutional setting a strand of literature where the large majority of studies relates to the United States, and whose results are not easily generalisable to different systems. For the Italian case, we are aware of the existence of only of two studies, whose major shortcoming is the lack of information on disability which severely limits the scope of their conclusions (WOLF and PINELLI, 1989; TOMASSINI and WOLF, 1999). On the contrary, our study examines living arrangements choices by Italian households using for the first time detailed information on the health conditions of the elderly person – their need for assistance with activities of daily living (ADLs) such as walking or dressing, and instrumental activities of daily living (IADLs) such as shopping and money management –, in addition to the socio-economic status of the family and to family attitudes towards current welfare state services and expenditures.

Second, we focus on an increasingly important issue, which is often neglected in the literature: the role of paid caregiving when elderly people are assisted at home. In the traditional approach, informal and home care tend to coincide, disregarding the actual role of paid caregiving when the elderly person is assisted at home. One of the peculiar features of welfare systems that characterise

\* lippi00@economia.unibo.it. Department of Economics, University of Bologna, Italy

\*\* cristina.ugolini@unibo.it. Department of Economics, University of Bologna, Italy

Mediterranean countries, is the intense involvement of women in both elderly and child care. However, because of the increasing female participation in the labour force, it is becoming more and more frequent for families to delegate to a third person the role of primary caregiver also in case of home care. Since the late 1980s Italy, and more in general Southern Europe, experienced significant migration flows from ex-socialist countries, mostly undocumented and illegal, with a high female component that joined the informal labour market. Migration further increased in the nineties, in particular from Mediterranean African countries, and it is documented that two third of women are engaged in housework (domestic or personal care work), frequently taking the place of the adult child as primary caregiver for disabled elderly people. Such process has been favoured by the fact that social norms about filial responsibility still tend to attach a consistent amount of social stigma to the institutionalisation of the elderly. For many Italian families, the possibility to delegate caregiving by buying services on the black market, which ensured a substantial reduction in out of pocket expenditures with respect to professional services, contributed significantly to reduce nursing home admission rates.

Besides providing new empirical evidence that substantially improves the accuracy of available data concerning the Italian case, the main methodological contribution of our study is that it explicitly considers the possibility for families to hire paid helpers in order to provide home care as a substitute for informal care or institutionalisation of the disabled elderly. The empirical evidence proposed by the paper provides insights on some of these issues. In particular, in order to understand how to design policy measures that favour an appropriate allocation of resources among the different types of care, it is crucial to properly identify the determinants of household decisions over residence and caring arrangements when facing disabilities.

At this scope, the paper estimates the effects of various disabled elderly and family characteristics on the choice of living arrangement and type of care. Our dataset consists of interviews drawn from a cross-sectional survey carried out on a sample of 1405 families of the Italian region Emilia Romagna (around 4 millions inhabitants). The survey was conducted by a professional firm through face-to-face interviews between October and December 2002. The questionnaire contains information on family composition, socio-economic status, working and health conditions of its members and on attitudes towards health and social expenditures. A specific section of the questionnaire is devoted to register the existence of a disabled person aged 50 or more inside the family unit, or of other disabled close relatives (parents, grandparents, etc.) even if they do not live with the respondent, i.e. they live independently, with other relatives or in a living

assisted facility (nursing homes and similar). We record a total of 339 families with at least one dependent relative.

Given the characteristics of the dataset, we assume common preferences among family members and consider that the living arrangement decision is taken once-and-for-all. We model family choice as a two stage process, using a bivariate probit model with selectivity bias (VAN DE VEN and VAN PRAAG, 1981):

$$\begin{aligned} & \sum_{y_{1i}=1, y_{2i}=1} \log \Phi_2[\alpha_1 x_{1i}, \alpha_2 x_{2i}, \rho] \\ & + \sum_{y_{1i}=1, y_{2i}=0} \log \Phi_2[\alpha_1 x_{1i}, -\alpha_2 x_{2i}, -\rho] \\ & + \sum_{y_{1i}=0} \log \Phi[-\alpha_1 x_{1i}] \end{aligned}$$

Each household chooses the living arrangement for the disabled elderly person who belongs to his family and we hypothesise that the decision is taken in two steps. In the first step, the household decides whether to institutionalise the dependent person in a living assisted facility (residential care) or to provide care at home (home care). For those who stay at home, in the second stage, the household decides whether to provide care directly (informal home care) or to hire an external person as primary caregiver (paid home care).

Our explanatory variables include characteristics of disabled elderly people and of their families and can be broadly grouped into five categories: the dependent elderly (DE) characteristics, family characteristics, economic characteristics, spatial characteristics, family opinions (Table 1).

Our empirical results highlight that the severity of disability plays a major role in the decision of whether or not institutionalise the disabled elderly, as opposed to family characteristics, economic variables and public services availability. With the only exception of age that has a similar impact in the two cases, severity related variables predominantly determine the choice between residential and home care, while they play no significant role between informal and paid home care. As expected the more severe the dependency state, the more likely it is to observe institutionalisation and the result is consistent for all the three variables included in the estimation (age, length of disability and number of severe ADLs and IADLs). Remarkably, gender does not display any effect in any of the estimated models. Such indication does not support conventional wisdom according to which, other things equal, women are relatively more able than men to live independently even when their health state progressively deteriorates. Income is

Table 1: Variables Definition

Variable	Definition
<i>DE characteristics</i>	
Age_DE	Age of DE in years
Sex_DE	= 1 if DE is a female
LTC spell	Spell of disability in years
Lived alone	= 1 if DE lived alone before disability
Num ADL	Number of ADLs and IADLs in which DE is not self-sufficient
Heavy help	Public support for > 40 days
<i>Family characteristics</i>	
Family size	Number of family members of PR
Residence choice	= 1 if PR's residence choice was influenced by the will to live close to other relatives
Universal access	Public sector should provide universal coverage for LTC
Need-based access	Public sector should provide fundamental LTC
<i>Economic characteristics</i>	
House ownership	= 1 if PR and his family have the house ownership
Family income	Family income in Euro (PR + PR spouse, if present)
<i>Spatial variables</i>	
Towns < 25.000	= 1 if PR lives in a town with less than 25,000 inhabitants
Towns > 5.000	= 1 if PR lives in a town ranging between 5,000 and 25,000 inhabitants.
<i>Family opinions</i>	
Opinion_LTC	= 1 if PR declared a bad judgement for the quality of existing public LTC services
Cash Care 1	= 1 if PR supports cash transfer to the family without justification of how the benefit is spent
Cash Care 2	= 1 if PR supports cash transfer to the family only for external paid helper

significant in both stages and displays the expected sign, since wealthier households have a larger probability to opt for the more costly alternatives in each stage, i.e. residential and paid home care, respectively. Differently from household income, housing tenure has no impact in any of the attempted specifications. People currently receiving strong public support are much more likely to be institutionalised. The marginal effect is large, confirming that the variable

can be interpreted as a proxy of a particularly high need of medical care. Contrariwise to what it is usually suggested by theoretical and empirical literature household size is poorly significant. A more relevant role is played by family attitudes. The variable *Residence choice* can be interpreted as a proxy of the strength of family ties and those who declared that the desire to reside close to their relatives was the most important determinant in their residence choice, are more likely to keep the elderly dependent at home. On the contrary, we observe no differences in the probability of providing care directly rather than hiring someone for this purpose. In the second stage, assisting elderly dependent people by means of formal care is an increasingly followed strategy also when families opt for the home care solution. Our analysis suggests that functional status still influences the older person's amount of need for help, but family size, family income and family attitudes turn to be better predictors of the choice between formal and informal care.

Moving to the conclusions, two results seem particularly worth underlining. First, the lack of traditional family unpaid care givers – captured in particular by the variable *lived alone* – forces the family to prefer to spend out-of-pocket for the services of paid professionals, instead of delegating the elderly care to the nursing home. Second, economic status produces a larger impact on the decision of whether to hire a caregiver or not rather than on the decision to institutionalise the elderly. Our results suggest that in Italy social norms about filial responsibility still tend to consider the elderly institutionalisation with a consistent amount of social stigma and the institutionalisation of the elderly is the choice of last resort, adopted only when functional or cognitive impairments does not allow to maintain the home care option. Besides, with the ongoing transformation of the Italian family, the overall level of informal caregiving is likely to be significantly reduced or even entirely replaced by a third person that provides formal services living with the elderly at home 24 hours a day.

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