



## Why without pay? Intrinsic motivation in the unpaid labour supply

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### ABSTRACT

Economic theory explains the supply of volunteering alternatively as an ordinary consumer good or an investment good. This paper provides a simultaneous approach, considering both objectives, by using the psychological distinction between intrinsic and extrinsic motivations, in order to reconcile conflicting results reported in the literature. Following the simultaneity approach, the paper develops a theoretical model of unpaid labour supply within an agent's two-period utility maximization problem, taking into account the role of psychological motivation. The theoretical hypotheses are tested with a sample selection model for Italy, by using the 1997 Multipurpose Households Survey on everyday life issues carried out by the Italian National Statistical Office. A robustness analysis and endogeneity test for intrinsic motivation are also performed. Empirical analysis rejects the hypothesis that only a consumption or investment motive can explain Italian volunteers' behaviour, supporting the hypothesis that both motives interact in shaping regular unpaid labour supply, with a stronger impact of consumption motives. The relevant variables for frequently supplied unpaid labour are intrinsic motivation, age, household income, family responsibilities and activity sector.

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### 1. Introduction

A growing share of unpaid labour supply characterises advanced economies, especially in sectors related to education, health and social services. In Italy in the late 1990s, the non-profit sector accounted for 3.1 percent of the whole economy and 2.3 percent of total employment. Three million workers were employed in non-profit activities at zero wages, approximately one-third of whom were engaged in activities related to education, health and social services (Beraldo and Turati, 2007).

Many studies have attempted to explain unpaid labour supply using two approaches: one based on a consumption hypothesis and the other on an investment perspective. In the private consumption model, volunteers are motivated to give by themselves, as in the "warm glow" literature (Andreoni, 1990). In the investment approach, volunteering improves human capital and increases employability and future income (Menchik and Weisbrod, 1987). Though empirical evidence often supports both approaches, theoretical models do not consider the two motives simultaneously. Furthermore, some studies use a social preferences framework to analyse the unpaid labour supply. According to Fehr and Fishbacher

(2002), a person exhibits a social preference system if he cares not only about his own welfare but also about that of others. Social preferences have been classified as a category of intrinsic motivation (Meier and Stutzer, 2008) which occurs when people engage in an activity with no external incentive besides the activity itself (Deci, 1971).

Following Menchik and Weisbrod (1987), the paper provides a theoretical model and an empirical investigation of the unpaid labour that is regularly supplied in non-profit organisations. The focus is on the decision about how much to volunteer, not on the choice of whether to volunteer. In this way, we can investigate the role of intrinsic motivation when the consumption and investment motives are simultaneously modelled.

The contribution to the existing literature is threefold. First, to the best of our knowledge, previous studies have not theoretically modelled the simultaneity between investment and consumption motives in shaping the unpaid labour supply while also considering the role of intrinsic motivation. Second, we study the impact of family care responsibilities on the determination of the unpaid labour supply. Third, we investigate the specific activity sector in which a person is engaged, as suggested by Freeman (1997, p. S158).

Empirical evidence based on the dataset *Indagine Multiscopo sulle Famiglie, Aspetti della Vita Quotidiana* for 1997, collected by the Italian National Statistical Office (ISTAT), is obtained with a sample selection model. The consumption motive is measured by (among others) an "explicit" measure of intrinsic motivation, whereas the investment purpose (driven by extrinsic motivations) is measured

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by variables related to age as an (inverse) proxy of the discount factor and the activity sector as a proxy of the investment productivity of volunteering. The results show that both investment and consumption motives interact in shaping the unpaid labour supply, with a stronger impact on consumption purposes. Controlling for a set of observable individual characteristics and for endogeneity bias, it emerges that intrinsic motivation, age, household income and family care are significant variables influencing the probability of supplying regular unpaid labour. Moreover, the activity sector in which one exerts unpaid labour is also a relevant variable.

The following Section summarises the literature on volunteering, while in Section 3, the theoretical model is described. After a brief presentation of the data set (Section 4), Sections 5–7 contain the econometric analyses. The last section concludes.

## 2. Literature review

Evidence on the unpaid labour supply is not always decisive on some issues. Volunteering can be conceived either as a consumption or an investment good; income and age are thought to be relevant in distinguishing one from the other. Where income is concerned, *Menchik and Weisbrod (1987)*, *Day and Devlin (1996)* and *Vaillancourt (1994)* show that a consumption motive exists. The same occurs for Italian data in *Fiorillo (2009)*. Searching for a life cycle pattern in volunteering decisions, *Menchik and Weisbrod (1987)*, *Day and Devlin (1996)*, *Vaillancourt (1994)* and *Fiorillo (2009)* find that age has a significant impact on the likelihood of engaging in unpaid work, supporting the investment model. *Brown and Lankford (1992)* report the opposite finding. Two recent papers investigate the problem arising from the potential simultaneity between investment and consumption motives. *Prouteau and Wolff (2006)* find some evidence for the consumption model in a French volunteer dataset, but they include only volunteers with positions of responsibility. *Hackl et al. (2007)*, using Austrian data, give stronger support to the investment hypothesis for employed sole wage earners. Despite accounting for potential simultaneity in empirical investigation, neither paper supplies a simultaneous theoretical analysis.

*Cappellari and Turati (2004)*,<sup>2</sup> *Carpenter and Myers (2010)* and *Cappellari et al. (2011)* explicitly introduce intrinsic motivation as a variable influencing volunteers' behaviour. *Meier and Stutzer (2008)* identify three categories of intrinsic motivation:

- (1) Volunteers benefit from intrinsic work enjoyment. Strictly following the psychological definition, "to be intrinsically motivated means to engage in an activity because the activity itself is interesting and enjoyable" (*Deci et al., 2008*, p. 11), whereas behaviour motivated by extrinsic motivation 'entails doing an activity because it leads to some outcome that is operationally separable from the activity itself. That is, extrinsic motivation concerns activities enacted because they are instrumental rather than because one finds the actions satisfying in their own right' (*Deci et al., 2008*, p. 12).
- (2) The warm glow. *Andreoni (1990)* defined this as an impure form of altruism, pointing out that people are often "motivated by a desire to win prestige, respect, friendship, and other social and psychological objectives" (*Olson, 1965*).
- (3) Social preferences. Social preferences imply that an individual has as an objective not only his own welfare but also other people's welfare (*Fehr and Fishbacher, 2002*) and can be interpreted as a category of intrinsic motivation.

<sup>2</sup> *Cappellari and Turati (2004)* identify intrinsic motivation from a question in which individuals are asked to rank a set of "values". Intrinsic motivation is a dummy that equals 1 for individuals who ranked "solidarity" as the most important value.

Using data on Italian volunteers, *Cappellari et al. (2011)* show that attending religious services (as a proxy of altruism and warm-glow motivations) has a significant impact on time donations. *Carpenter and Myers (2010)*, using data on volunteer fire-fighters in Vermont, demonstrate that altruism, measured by the experimental results of a dictator game, is positively associated with the probability of becoming a volunteer fire-fighter. *Meier and Stutzer (2008)* analyse the relation between life satisfaction and volunteering, measuring intrinsic motivation with the relative importance people assign to intrinsic goals (family and friends) compared to extrinsic goals (career and income) in life satisfaction. They find that both intrinsic and extrinsic motivation explains the unpaid labour supply, but only intrinsic motivation has a positive impact on life satisfaction. The authors suggest that "more research is needed in order to better understand which volunteer tasks are most rewarding and how such differences can be explained" (*Meier and Stutzer, 2008*, p. 55).

Some papers focus on female volunteers. *Carlin (2001)*, *Mueller (1975)* and *Schram and Dusing (1981)* show ambiguous results on the relevance of consumption and investment motivations in the unpaid female labour supply, using data from the US. Some important variables have been overlooked in both empirical and theoretical investigations of female behaviour. In particular, the female propensity to take on household duties could justify different choices of volunteer labour. The presence of young children or elderly family members influences the amount of voluntary labour supplied because the need for care within the family modifies the opportunity set available to the volunteer (*Taniguchi, 2006*; *Cappellari et al., 2011*).

*Freeman (1997)* shows that volunteers have individual characteristics that are correlated with a higher opportunity cost of time with respect to the choices of both whether to volunteer and how many hours to supply: they are characterised by higher hourly wages, income, age and education. The economic rationale explaining this evidence is that: "volunteers do very different things [...] Perhaps differences in the productivity of time spent in voluntary activities can help identify supply responsiveness in volunteering" (*Freeman, 1997*, p. S158). The specific activity sector in which one works could be quite important for female volunteers because the typical non-profit sectors (health, education and social services) generally have a higher share of female employment in the for-profit sector. *Menchik and Weisbrod (1987)* include activity sectors in their analysis, but *Banks and Tanner (1998)* show that these variables weaken the relation between wage and working hours supplied. The latter evidence suggests that volunteers make volunteering choices based on the ability to bear the associated cost, which may differ from sector to sector (*Govekar and Govekar, 2002*).

In sum, additional research is needed on the implications of overlapping motivations of consumption and investment, taking into account the role of intrinsic motivation. Moreover, household duties and the activity sector could help to explain volunteers' behaviours.

## 3. The model

Following the classification of *Meier and Stutzer (2008)*, people may volunteer for intrinsic reasons (social preferences, work enjoyment) and/or for extrinsic reasons (human capital and social network investment); these motivations may affect the degree of satisfaction generated by the activity itself. By introducing the role of motivations in a volunteer's choice, the behavioural distinction between investment and consumption may be summarised in the following working hypothesis: whereas consumption choices are driven by intrinsic motivation (the purpose is to consume the

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