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**AUTHOR****SERGIO DESTEFANIS**

Centre for Economic and Labour Policy Evaluation (CELPE),  
University of Salerno  
Center for Studies in Economics and Finance (CSEF)  
University of Salerno  
Interuniversity Research Centre "Ezio Tarantelli" (CIRET), Rome  
destefanis@unisa.it

**ORNELLA WANDA MAIETTA**

Department of Economics, Management and Institutions (DISES)  
University of Naples "Federico II"  
maietta@unina.it

# Property rights and efficiency in the care sector. Evidence from Italy

**ABSTRACT**

In this paper, we examine the main empirical contributions pertaining to the relationships between productive efficiency and proprietary forms in the care sector. International evidence indicates that non-profit organisations (NPOs) are likely to be less cost-efficient but more attentive to service quality. According to evidence from Italy, however, NPOs are as efficient as other organisations. Moreover, the efficiency of NPOs is positively related to the production of relational goods, highlighting the importance of intrinsic motivation. Finally, we discuss how our survey can contribute to future research and to policy debate on the provision of care services.

**KEY-WORDS**

CHILD CARE, NURSING, NON-PROFIT ORGANISATIONS, RELATIONAL GOODS

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## **1. Introduction**

In this paper, we examine the main empirical contributions on the relationships between productive efficiency and proprietary forms in the care sector. With this term, we refer to activities focused on the supply of services to persons (in particular, we are interested in care for children and elders) and characterised by rather important externalities. In analysing the role of proprietary forms, we focus on a relatively new and emerging form, the private non-profit organisation (NPO).

The number, characteristics and economic weight of NPOs have reached significant levels in OECD economies. As of 2010, NPOs employed 10.7 million workers in the US, and NPO jobs grew by an average of 2.1 percent per year between 2000 and 2010 (for-profit jobs declined on average by 0.6 percent per year during the same years). Even in the initial years of the recession from 2007 to 2009, NPO jobs increased by an average of 1.9 percent per year. In the same period, businesses averaged jobs losses of 3.7 percent per year (Salamon et al., 2013). In Europe, too, non-profit employment increased faster than the population as a whole during the years 2002-2003 and 2009-2010, reaching the target of 14.5 million jobs in 2010 (about 6.5 per cent of the working population in the EU 27). As in the US, the impact of the crisis on employment in Europe has generally been less significant for the social economy than for traditional private business, although NPOs, too, recorded a net loss of jobs (Monzon and Chaves, 2012).

One of the reasons for the buoyancy (or at least resiliency) of NPOs is their concentration in industries (social assistance, health, education, and care) that have been growing rapidly in the last decades. In the EU Skills Panorama (2014), a similar trend is predicted over the next years, especially in the care sector. There is concern, however, that perceptions of poor working conditions can lead to recruitment challenges in this industry. This worry chimes in with the considerations made by Salamon et al. (2013), according to whom during 2000–2010, in three key fields—social assistance, education, and nursing home care—employment growth was weaker than that in US NPOs than in for-profits. While on the one hand this may be attributed to the difficulties that NPOs experienced in accessing capital, on the other hand there are grounds to believe that NPOs' resistance to slashing employee benefits or skimping on the quality of services may have penalised them.

In spite of all these developments, very few researchers have studied the relationships between proprietary forms and productive efficiency in the care sector, above all for the lack of proper statistical information, and a global evaluation of the evidence related to this issue is still missing. Furthermore, most of the theoretical literature is concerned with the US institutional set-up. Here, we attempt to fill this gap by concentrating on the Italian empirical literature because we believe it can shed light on the nexus among proprietary forms, efficiency, and working conditions (more contingently, we hope our assessment may prove of some interest at a time when the Italian Third Sector is undergoing deep reform). An important point highlighted in our survey is the empirical connection between NPOs and the production of relational goods, not only within the field of labour relations (where their role has already been highlighted by Borzaga and Depedri, 2005;

Mosca, Musella and Pastore, 2007) but also in terms of the interactions between service providers and users (proxied in the empirical analysis by the reputation of a given NPO), and within provider networks (proxied by the number of cooperative actions performed by each NPO with other NPOs).

The remainder of this paper proceeds as follows. In Section 2, we present a few fundamental features of the care sector. Section 3 deals with the theoretical analysis of NPOs, while Section 4 relates the international (mainly US) state-of-art knowledge of the relationships between productive efficiency and property structure. The same topic is analysed using Italian data in Section 5, while Section 6 examines in detail the relationship between NPOs and relational goods. We end the paper with a few concluding remarks.

## **2. Markets for care services**

For various reasons, care services are provided and consumed in markets that differ starkly from the Walrasian benchmark. Hence, the first theorem of welfare economics does not apply, and competitive markets do not generally maximise social welfare.

First, in care services, contracts are generally incomplete. There are stark information asymmetry problems. Often, quality cannot be appraised with certainty, even after consumption, because similar to many health and education services, care services are credence goods (Sloan et al., 2001). Moreover, the consumption of care services produces positive externalities on the well-being of other subjects, but such externalities are usually difficult to quantify. Finally, in the markets for care services, there is market power. Contact with customers is characterised by important switching costs. Once a relationship with a service provider is established, it is costly to go to a new service provider. Therefore, producers have the possibility to influence prices.

In addition to these themes, which are classics in public economics by now, the importance for care services of other factors, amenable to considerations of fairness and altruism, is increasingly apparent. Many consumers are not in a position to acquire care services at market prices, or at any price for that matter. To obviate this situation, which is often faced by the producers of care services, producers cannot have objectives that are merely reducible to profit maximisation. Furthermore, the utility of agents engaged in the provision of care services seems not only to depend on the goods and services that they consume but also on their leisure. The importance of intrinsic motivation in the explanation of behaviour has come to the fore in economics, and, perhaps more so than in other ambits, the utility of care providers could depend also, for example, on the donations (of time and money) received by them.

For all of the aforementioned reasons, competitive markets are far from optimal for provisioning care services. The superiority of in-kind transfers emerges in the first place from the literature (Balestrino, 1999). However, this does not clarify whether public administration should engage

in the direct provision of care services or rather back the provision of these services by private producers. Obviously, in the second-best situation, solutions characterised by different proprietary structures are likely to lead to different outcomes in terms of social welfare. Hence, examine this issue in the light of Hansmann's (1980, 1996) important intuition: an industry should be ruled by the organisational form best able to secure efficient production. As can be seen in the following section, this means considering carefully the NPO.

### **3. Care sector and NPOs**

The NPO is a private firm characterised by the non-distribution of profits<sup>1</sup> that produces goods or services of collective interest (the emphasis on non-distribution emphasises that profits can be made but not distributed). We list three main topics for collecting arguments in its favour: contract failure, government failure, and organisation–worker relationships.

Suppose that a service is characterised by an important informational asymmetry. Hansmann (1980) first noted that NPOs are in a position to solve this failure because they are characterised by non-distribution of profits. Contract failure depends on the incentive for managers of for-profit firms to produce poor quality goods in order to obtain greater profits that can be appropriated by firm owners (and by the managers themselves in many cases). In an NPO, on the contrary, managers do not have any incentive to lie about quality because the greater achieved by doing so profits cannot be appropriated and must be reinvested into the firm.

Ben-Ner and Van Hoomissen (1991) presented a possibly stronger criticism of the idea of contract failure: the existence of informational asymmetries is sufficient by itself to justify the existence of NPOs. In the market of car repair services, there are definite informational asymmetries against consumers, but no NPOs have emerged. Other mechanisms operate in this market to protect consumers, such as reputation or some type of guarantee. According to Ortman and Schlesinger (2003), competition and reputation can solve the problem of informational asymmetry better than non-distribution of profits can. However, non-rivalry in consumption is also relevant for NPOs, leading us to the theory of government failure (Weisbrod, 1988). If the government chooses to assign to the production of a service the amount of resources satisfying the preferences of the median voter, the more heterogeneous the preferences in society, the higher is the number of unsatisfied constituents. In such a state of things, citizens can resort to three solutions: vote with the feet, use various levels of government, and develop the non-profit sector. An NPO could be an additional producer of public services and would grant the attainment of higher efficiency, in as much as it would be possible to profit more fully from the externalities of collective service.

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<sup>1</sup> Pure NPOs are at the extreme end of a spectrum that includes, besides pure for-profit firms at the other end, all types of organisations (cooperatives, associations of mutual character) constrained in some way in the distribution of profits. According to Borzaga (2003), the strength of these constraints allies such organisations to NPOs.

More convincingly, Bilodeau and Slivinski (1998) emphasised the importance of non-distribution of profits. The initial capital from an entrepreneur cannot credibly be bound to the firm in the for-profit case because when confronted with a high volume of donations, the entrepreneur can always choose to use part of the funds for other aims than the production of collective service. On the contrary, in an NPO, non-distribution of profits constrains the entrepreneur to use all of the initial capital towards fulfilling the firm's mission. The founder can therefore signal credibly her interest in service production, stimulating the other subjects to donate more than they did in the previous case.

The above approaches share as a common limit the inability to tackle problems of agency internal to the firm. Why, in this type of organisation do managers and workers share the objectives of the owners with whom they decide to cooperate instead of assuming opportunistic behaviours? According to Young (1983), James (1989), and Rose-Ackermann (1996), non-profit organisations are chosen by altruistic or ideology-minded entrepreneurs (who can also originate from religious, trade-union, or political groups) as the form that best suits the social priority given by the public to the services provided, their intrinsic character, as well as for the promotion of their values across society and the acquisition of new backers. Once one focuses on this particular feature of NPOs, it is easier to realise that one of their most distinguishing features is that most of them aim to reform the distribution of opportunities in a given society according to the preferences of the founding group (Borzaga, 2003). Since this redistributive task often means providing goods and services at very low or zero price, a basic condition for the survival and growth of these organisations is their capability to attract donors and workers agreeing to supply resources at very low or zero cost. Among other things, this implies that non-profit organisations cannot rely on the usual array of monetary incentives to elicit workers' effort. They must rely on the selection of workers ready to share the *mission* of the organisation (Besley and Ghatak, 2005). Francois (2000) showed that for-profit firms cannot rely on intrinsically motivated workers, that is, workers who have ideological or ethical motivations, such as wanting to help their neighbours. In firms of that type, there is the clear incentive of taking advantage of the additional efforts of workers to increase profits: therefore, managers cannot credibly commit to use these efforts to improve production.

Internal problems of agency are closely related to the issue of organisational efficiency of NPOs. Hansmann (1996) recognised that in NPOs, the lack of stakeholders interested in the appropriation of residual surplus *could* lead to attenuation of property rights and, hence, to reduction of productive efficiency (the motives highlighted by Leibenstein (1966)'s famous analysis of X-efficiency are highly relevant here). Yet, as Turati (2001) pointed out, this outcome may not arise because even if property rights are attenuated, managers (and workers) in the non-profit sector are highly interested in their reputation. The importance of intrinsic motivation could then successfully counterbalance the lack of a class of stakeholders interested in the appropriation of residual surplus.

Internal agency problems and organisational efficiency of NPOs are linked to a further issue as well: the production of relational goods. An influential body of works (see in particular, Gui, 2000, 2003; Ben-Ner and Gui, 2003; Gui and Sugden, 2005; Bruni, 2006, 2012) has argued that the output

of organisations engaged in the provision of care services does not simply amount to the merit goods they distribute but includes the *relational goods* produced in this manner. This argument is based on the conception of economic interactions as encounters (rather than exchanges), including not only traditionally considered inputs and outputs but also relational consumption and capital goods. Relational consumption goods are the intangible outputs of affective and communicative nature of encounters, and they acquire value through the sincerity or genuineness of these encounters. In contrast, relational capital goods are the accretions (stemming from the encounters) to the human capital (knowledge, emotions) of the encounters' participants. Importantly, the accumulation of relational capital goods modifies the socio-economic environment of a society, contributing to the accumulation of its social capital (defined by Gui, 2003, as the capability of a social context to foster collaboration among its members, not only in the form of informal reciprocity but also in initiating collective action to respond to common problems—and within the sphere of economic activity—helping to overcome the problems due to lack of trust and information<sup>2</sup>).

In addition, the literature highlights that NPOs engaged in care services are likely to be a field of election for the production of relational goods and their association with efficiency in the provision of services. First, in many of these activities, the role of face-to-face encounters is particularly important. Secondly, an essential condition for the emergence and continuation of initiatives of associative or cooperative nature (which make up the bulk of NPOs) is a human environment, often including pre-existing groups that share common values and goals and are tied together by reciprocal knowledge and confidence. Therefore, on the one hand, NPOs rely on relational capital goods, both highly personalised and extended to groups of various sizes. On the other hand, the activity of NPOs contributes toward increasing the existing stock of relational capital goods, creating new opportunities of contact between already connected individuals, and opening new connections, with the effect of thickening collaborative networks in the context where they operate<sup>3</sup>. The relevance of the considerations of gratuity and donation (rather than of profit) for NPOs also means that they are likely to engage in encounters that yield stronger connections (and hence more relational capital goods) and more communicative and affective outputs (and hence relational consumption goods) than would for-profit firms<sup>4</sup>. Rewards in terms of relational goods could also provide an explanation for the effort devoted by NPO managers and workers in the provision of care services.

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<sup>2</sup> Bruni (2006) provides a similar definition of social capital: a network constituted by relationships of trust, cooperation, and reciprocity. Both Gui and Bruni's definitions are in line with the bulk of social capital literature, as outlined in Fiorillo (2007).

<sup>3</sup> The same idea, although developed in a sociological context, can be found in Donati and Solci (2011) and Donati (2014). There too, social capital is a precondition for the emergence of relational goods and is, in turn, regenerated by them.

<sup>4</sup> Similar arguments have been developed in Albanese (2007), who, however, focused on the comparison between for-profit and cooperative firms.

In the following sections, we see how the empirical literature deals with these issues. We focus on Italian empirical literature because of its treatment of the nexus among efficiency, working conditions, and relational goods.

#### **4. Proprietary forms and efficiency in care sector: Background literature**

The seminal works by Preston (1988, 1993) consider how the costs, positive social externalities, and quality of child care vary between for-profit and non-profit organisations across various US states (in the US, child care is not provided by the public sector but is supplied privately, either by for-profits or by NPOs). By social externalities, Preston means care and education of the children, and productivity of the mothers, and she approximates them through the percentage of non-white children and the percentage of children from one-parent families, as well as through some dummies tied to the presence of services for child development, for the solution of conjugal problems, for financial aid, and charitable services. For the quality of the service supplied by schools, instead, reference is made to variables of quality of work (maximum wage paid, turnover, staff–student relationships, plus some dummies for the presence of psychologists, dietologists, and social workers); dummies for the centres that offer physical examinations (hearing, oral communication, vision), psychological, dental examinations; and dummies for the selection of workers and the involvement of the parents.

It turns out that for-profit child care has lower production cost but its services are of significantly lower quality. In the states where child care is not subjected to federal regulation, NPOs offer services with a greater level of social positive externalities. In the states that instead guarantee federal control, the level of the social externalities is similar between for-profit and non-profit institutions, but the quality of teaching services is better in NPOs. According to Preston, the results imply not so much a different degree of efficiency but rather a differentiation of the service supplied (and of the target), with non-profit child care having higher quality.

In contrast, Vitaliano and Toren (1994) analysed a two-year panel of 164 skilled nursing facilities and 443 combination skilled and health related facilities in New York state to find based on a stochastic cost frontier that the average level of cost inefficiency is 29 per cent. They found no difference in efficiency between for-profit and non-profit homes. Excessive managerial and supervisory personnel and diseconomies of size were correlated with inefficient facilities.

Evidence closer to that of Preston is available from other studies. Santerre and Vernon (2005) believe that non-profit institutions are associated with higher costs and quality than for-profit institutions. By analysing 2,939 US nursing homes in 1996, they found results consistent with the aforementioned expectations and concluded that better quality of care per dollar can be obtained by developing NPOs in the care sector. Lindrooth, Burton and Weisbrod (2007) studied how US for-profit and religious non-profit hospices respond to an exogenous Medicare reimbursement incentive that encourages the maximisation of patients' length of stay. Hospices have the incentive to selectively admit patients with longer expected lengths of stay and admit patients sooner after a



hospital discharge. They found that for-profit hospices are significantly less likely to admit patients with shorter, less profitable expected lengths of stay. Using data from markets in the rural US, Ballou (2008) inquired whether non-profit and government nursing facilities can be located in markets where for-profit firms cannot profitably enter. Nursing home care is provided in the US by for-profit, private non-profit, and government organisations. The results showed that non-profit nursing facilities are not more likely than for-profit firms to enter markets that are likely to be unprofitable—indeed, they appear to enter markets that are very similar to those entered by for-profit firms—but government nursing facilities are more likely to enter unprofitable markets. The results have implications for the efficient provision of access to long-term care for isolated populations and other underserved groups. Ben-Ner and Ren (2008), Ben-Ner, Mandic and Ren (2012) analysed the performance of all 369 Minnesota nursing homes included in federal and state datasets, in addition to the organisational structures of a subsample of 105 homes that responded to a survey. After controlling for quality differences, they found that for-profits are more efficient, serving more residents than NPOs and government organisations. However, for-profits provide lower quality services on a wide array of attributes, especially those that are less observable by nursing home residents and their families.

The evidence presented by Knox, Blankmeyer and Stutzman (2003, 2006) is somewhat different. Analysing a sample of Texas nursing facilities through quality-adjusted translog cost-and profit-function regressions, they found that for-profits are more cost-efficient than NPOs. They also concluded that quality influences costs and profits only slightly, and efficiency differences reflect agency costs and various organisational goals. In other words, quality appears to be homogeneous among facility classifications. Given these significant differences, policymakers may want to consider the role of relative economic performance when granting non-profit status to nursing facilities because non-profit governance boards may allow their organisations to pursue the ‘socially superior’ goal somewhat divergently.

Shimizutani and Suzuki (2007) evaluated the quality and efficiency of the home help long-term care sector in Japan, relying on data from a self-conducted survey (with 442 respondents). They compared the quality of service and efficiency of for-profits, non-profits, and public-owned providers with different lengths of operation through a translog cost function. Similar to the findings of Vitaliano and Toren (1994), the efficiency of for-profit, non-profit, and public providers did not differ significantly. Equally (and perhaps more surprisingly), they found no statistically significant differentials in the quality of services provided by for-profit and non-profit providers.

Summing up, the international empirical evidence seems to indicate that NPOs are likely to be less cost-efficient but more attentive to service quality. Indeed, the problem of informational asymmetry seems to be more important in child care, where families have to choose for themselves, often without any kind of informational support, than in health services, where users can rely on more refined information-gathering systems, as well as on the services of professional purchasers of health services such as private-insurance managers.



## 5. Proprietary forms and efficiency in care sector: Italian evidence

Fazioli and Filippini (1997) studied the efficiency of Italian child care (*asili nido* or kindergartens). Kindergartens, according to the authors, provide a merit good, which should be guaranteed by the welfare state. The main issue faced by the authors was estimation of the impact of contracting-out the provision of kindergarten services to private providers. In a sample of 244 kindergartens distributed throughout Italy (in cities with more than 20,000 inhabitants), they estimated translog cost function and efficiency, allowing for the quality of the service provided.

Output was measured in terms of the number of children enrolled. As a proxy for the quality of output and input, Fazioli and Filippini (1997) took the ratio between teachers and pupils, and the attendance of training courses by teachers.

**Table 1 - Cost function regression results of Fazioli and Filippini (1997) <sup>(a)</sup>**

Key Variables	<i>N</i> = 244
Number of enrolled children	0.93 (30.06)
Number of kindergartens in same municipality	0.08 (2.12)
Teacher/pupil ratio	0.09 (3.23)
Training courses	0.11 (3.09)
Contracting-out	-0.09 (-2.98)
<i>R</i> <sup>2</sup> <i>adj.</i>	<i>0.98</i>

<sup>(a)</sup> T-ratios in brackets (from White-corrected variance-covariance matrix).

Source: Fazioli and Filippini (1997: 71).

It turns out that costs increase with the quality of the service supplied by kindergartens. Moreover, with other factors equal, contracting-out increases the efficiency of kindergartens. The only unexpected result was in terms of the competition effect, which was measured as the number of kindergartens by municipality, which actually *increases* production costs. The values of this coefficient were, however, low. Unfortunately, given the data used by Fazioli and Filippini, there is no way to distinguish whether contracting-out was related to private non-profit or for-profit providers.

Barbetta and Turati (2003) considered a sample of 497 junior high schools (grades 6-8) located in Piemonte, Northern Italy. We included them in our survey because compulsory education includes a component of care service. Furthermore, Barbetta and Turati measured service quality through indicators similar to those utilised by Preston (1988, 1993). Their general model can be expressed as follows:

$$G = f(T, TD, A, S, Z) \quad (5.1)$$

where G represents the number of graduates in the final examination (a few of them may be disabled or foreign students—source data do not allow them to distinguish graduates with different characteristics), T represents the total number of teachers, TD the total number of teachers taking care specifically of disabled and disadvantaged students (as a proxy for the quality of teaching), A the total number of employees with administrative duties, S the total number of other non-teaching personnel, and Z a vector of environmental variables that may influence schools' production, namely, cultural background and income.

Barbetta and Turati adopted both stochastic frontier analysis (SFA) and data envelopment analysis (DEA-VRS, output-oriented) to determine efficiency scores. Their main first-stage results, with number of graduates in the final examination as output, can be summed as follows:

**Table 2 - SFA regressions of Barbetta and Turati (2003) <sup>(a)</sup>**

Key Variables	Model SF 1	Model SF 2
	<i>N</i> = 497	<i>N</i> = 497
Teachers	0.73 (15.81)	0.70 (16.36)
Teachers for disabled	0.07 (1.93)	0.10 (2.72)
Administrative staff	0.05 (1.37)	0.05 (1.39)
Other non-teaching staff	0.07 (2.09)	0.06 (1.82)
% population holding a B.A.	0.10 (3.49)	-
Nr. bank branches	-	0.06 (5.73)
Log-L	-297.5	-284.4
$\lambda^{(b)}$	3.12 (7.52)	3.51 (7.83)

<sup>(a)</sup> MLE. Asymptotic t-ratios in brackets.

<sup>(b)</sup> Ratio between inefficiency and noise components of residuals.

Source: Barbetta and Turati (2003: 540).

**Table 3 - DEA results of Barbetta and Turati (2003)**

Models	Entire sample (497)		Public (423)		Non-profit (61)		For-profit (13)	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
SF 1	0.63	0.18	0.63	0.17	0.65	0.20	0.40	0.18
SF 2	0.63	0.18	0.64	0.17	0.64	0.20	0.39	0.19
DEA 1	0.42	0.19	0.41	0.18	0.52	0.26	0.50	0.25
DEA 2	0.51	0.26	0.50	0.26	0.54	0.27	0.52	0.29

Source: Barbetta and Turati (2003: 541).

The second-stage regressions, explaining the efficiency scores, include NP and FP dummies, school size (as measured by the number of students, N) and the number of disabled (D) and foreign (F) students.

**Table 4 - Second-stage analysis (Tobit models) of Barbetta and Turati (2003)<sup>(a)</sup>**

Key Variables	Mod. 1 DEA	Mod. 2 DEA	Mod. 1 SF	Mod. 2 SF
	<i>N</i> = 497	<i>N</i> = 497	<i>N</i> = 497	<i>N</i> = 497
NP	0.05 (2.87)	0.03 (1.70)	0.11 (3.92)	0.08 (2.95)
FP	-0.06 (-0.82)	-0.14 (-1.28)	-0.08 (-1.27)	-0.10 (-1.67)
N	0.01 (5.90)	0.01 (2.53)	0.01 (8.39)	0.01 (8.07)
N <sup>2</sup> /1000	-0.01 (-2.85)	-0.01 (-2.14)	-0.01 (-4.34)	-0.01 (-4.56)
D	-0.01 (-2.59)	-0.01 (-3.01)	-0.01 (-4.45)	-0.01 (-4.25)
F	-0.00 (-1.48)	-0.01 (-2.06)	-0.01 (-1.78)	-0.01 (-2.48)
Log-L	161.73	177.93	289.95	259.82
Model $\chi^2(6)$	109.26	45.15	236.07	198.61

<sup>(a)</sup> MLE. Asymptotic t-ratios in brackets

Source: Barbetta and Turati (2003: 541).

Non-profit schools are more efficient than public ones, which outperform their for-profit counterparts. Foreign and disabled students negatively affect efficiency, indicating that a higher quality of output is costly in terms of resources. School size is another important determinant of efficiency.

Destefanis and Maietta (2001, 2003) considered a sample of 268 Italian operating units (OUs) providing ‘communal services’ from the FIVOL-FEO dataset (see Borzaga, 2000, and Depedri, 2003). Here, we focus on what they dub as group A) in their results: all OUs that provide *old people care and nursing* and that have non-zero beds among their inputs. Destefanis and Maietta adopted a single-stage parametric approach based on the following production function:

$$y = f(\mathbf{x}, S, I, OE) \quad (5.2)$$

where  $y$  is the natural log of the numbers of users;  $\mathbf{x}$  is a vector of the natural logs of inputs (paid workers, nonpaid workers (volunteers), beds);  $S$  represents structural characteristics (technology, etc.);  $I = (FP, PA)$  represents the dummies FP and PA, which are 1 if the OU is for-profit or public administration; and OE includes other determinants of organisational efficiency related to labour and managers’ satisfaction and motivation. Their main results can be summed up as follows (determinants of organisational efficiency are not included in the first column):

**Table 5 - Production function regression results of Destefanis and Maietta (2001, 2003) <sup>(a)</sup>**

Key Variables	All OUs	All OUs	NP OUs Only
	<i>N</i> = 73	<i>N</i> = 73	<i>N</i> = 46
Beds	0.22 (2.22)	0.23 (2.38)	0.25 (2.37)
Paid workers	0.48 (5.15)	0.49 (5.45)	0.49 (4.47)
Unpaid workers	0.08 (2.26)	0.07 (1.53)	0.07 (1.16)
FP	0.02 (0.15)	0.01 (0.04)	
PA	0.21 (1.34)	0.31 (2.08)	
Customary duration of relationship	0.33 (2.12)	0.38 (2.46)	0.45 (2.59)
Selection procedure: experience in same sector		0.06 (2.17)	0.08 (1.90)
<i>R</i> <sup>2</sup> <i>adj.</i>	0.64	0.65	0.63

<sup>(a)</sup> T-ratios in brackets (from White-corrected variance-covariance matrix).

Source: Destefanis and Maietta (2001: 37).

Technical efficiency of the three organisational forms did not differ significantly, unless the determinants of organisational efficiency are considered explicitly. In the latter case, a significant role of the selection procedures adopted in hiring paid labour was found, showing that problems of internal agency are highly relevant in this field. Interestingly, when allowance was made for some obstacles they met in personnel selection, public administration OUs turned out to be more efficient than their counterparts. This evidence is consistent with proprietary forms being important because of their different work organisations.

More generally, if one believes that the lack of a class of stakeholders interested in the appropriation of residual surplus is outweighed for NPOs by the importance of intrinsic motivations, it could be interesting to see whether there is a relationship between technical efficiency and measures of these intrinsic motivations. Managers and workers employed in NPOs seem to be sensitive to non-monetary rewards, which include the consumption of relational goods<sup>5</sup>. However, NPOs characterised by greater stocks of relational capital goods should also be more productive. If these arguments are correct, we should find a correlation between NPOs' technical efficiency and the amount of relational goods they produce. The FIVOL-FEO dataset allowed Destefanis and Maietta (2001, 2003) to shed some light on this issue, which will be taken up in the next section.

<sup>5</sup> Evidence in favour of this view is provided in Borzaga and Depedri (2005), and in Mosca, Musella and Pastore (2007). These contributions, however, relate only to the field of labour relations and do not deal explicitly with the role of relational goods in the interactions between service providers and users, as well as within provider networks.

## 6. Efficiency and relational goods in care sector: Italian evidence

As seen in Section 3, NPOs, when providing their services, are likely to engage in encounters that yield thick, strong connections (relational capital goods) and communicative and affective outputs (relational consumption goods). Naturally, there is no contradiction between the provision of services (usually, some merit goods) and the production of relational goods. Rather, the former fosters and sustains the latter. Gratuity is related to the motivations of the organisation members (altruism, self-satisfaction, self-interest, etc.) and not to disregard toward the results of the organisation's action. For instance, an Italian practitioner said the following in this regard: "...the issue of the gift relates more to the volunteer worker and his/her motivations than to the recipient of the volunteer action: the latter is above all interested that the service he/she needs be of good quality and given in such a way as to respect his/her dignity; in other words he/she expects a good service rather than a good gift [authors' translation]"<sup>6</sup>. This 'good service', however, is not an end in itself but is likely to bring about encounters characterised by greater amounts of relational goods.

We believe it is useful to give to these ideas a formal content (albeit an elementary one). Consider

$$R = (M; P; \mathbf{F}; \mathbf{W}), \quad (6.1)$$

where  $R$  is the (quantity of) relational good,  $M$  is the (quantity of) merit good,  $P$  is the (quantity of) effort for promoting the values of the organisation,  $\mathbf{F}$  is a vector listing the individual characteristics of the organisation, and  $\mathbf{W}$  is a vector representing a few environmental factors. The idea contained in (6.1) is that the organisation can produce relational goods by providing services to the public, as well as by promoting among the public the founding values of the organisation. Because both relational consumption and capital goods are related to same types of encounters, we do not distinguish between the two kinds of relational goods in equation (6.1). Furthermore, the production of relational goods depends on a few environmental factors (determining the responsiveness of the public) and on the individual characteristics of the organisation (its intrinsic capability to produce connections and other relational goods). The latter must surely include the effort and resourcefulness shown to the public, which, in the absence of more direct indicators, can be proxied by organisational efficiency (or its determinants).

$M$  and  $P$  are functions of a set of input quantities ( $\mathbf{X}$ ), vector of structural characteristics ( $\mathbf{S}$ ), and organisational efficiency of the decision-making unit (OE):

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<sup>6</sup> Nervo (1999: 7): "... la questione del dono riguarda più il volontario e le sue motivazioni che il beneficiario dell'azione volontaria: a questi interessa soprattutto che la prestazione di cui ha bisogno sia di buona qualità e sia data in modo che rispetti la sua dignità; si aspetta cioè un buon servizio, più che un buon dono".

$$M = g(\mathbf{X}_M; \mathbf{S}_M; OE) \quad (6.2)$$

$$P = h(\mathbf{X}_P; \mathbf{S}_P; OE) \quad (6.3)$$

We let the inputs and structural characteristics differ across the production of M and P. In any case, NPOs care about their organisational efficiency because their ultimate aim (the production of relational goods) is best achieved if they maximise their production of M and P for the given resources and because, for given M and P, higher organisational efficiency is likely to be associated with the production of a greater amount of relational goods. Moreover, notably, unpaid work (found in Section 5 to have little impact on the production of M) may find its *raison d'être* in the provision of P.

Relying on the FIVOL-FEO dataset, Destefanis and Maietta (2001, 2003) tested whether the outputs and the efficiency of non-profit OUs significantly affect the two proxies of relational goods (only available for NPOs; unfortunately, no comparative analysis can be made with for-profit firms or public administration): a (self-assessed) categorical measure of reputation and the number of cooperative actions with other non-profit OUs. While a self-assessed measure of reputation has obvious drawbacks, it could still be a useful indicator of the relational outputs produced by the OU. As for the other proxy, a high number of cooperative actions with other non-profit OUs signifies the existence of thick, strong connections across NPOs, which are also likely to extend to the members of the community.

Consistent with the above model, Destefanis and Maietta (2001, 2003) tested whether the OUs' outputs, number of users and number of actions of promotion<sup>7</sup>, organisational efficiency, and territorial proxy (South, equal to one when an OU belongs to a southern region) contribute towards determining their production of relational goods. The organisational efficiency of OUs was calculated (from the production function regression results in Table 5, third column) as  $OE = 0.08 * (\text{Selection procedure: experiences in same sector})^8$ .

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<sup>7</sup> The latter is another variable retrievable from the FIVOL-FEO dataset: a categorical variable taking values 1, 2, 3 if the Care of Users/Promotion of Organisation Values is non-existent, provided occasionally, provided systematically, respectively. To some extent, this categorical indicator is also related to the quality of services provided by the OU.

<sup>8</sup> All other variables included in the production function regressions are not related to organisational efficiency but rather to the technology of the OU. Also note that the number of users never turns out significantly in the production of relational goods (and is not included as a regressor in the reported estimates).

**Table 6 - Destefanis and Maietta (2001, 2003)**  
**Relating organisational efficiency to production of relational goods** <sup>(a)</sup>  
*(proxied by Number of cooperation actions)*

Key Variables	<i>N</i> = 46	<i>N</i> = 46	<i>N</i> = 46
OE	12.64 (2.17)	14.50 (2.10)	
Promotion	2.07 (1.42)		2.62 (1.58)
South	-1.88 (-0.63)	-1.45 (-0.51)	-0.55 (-0.21)
R <sup>2</sup> adj.	0.05	0.04	0.01

*(proxied by Reputation)*

Key Variables	<i>N</i> = 46	<i>N</i> = 46	<i>N</i> = 46
OE	5.18 (1.35)	6.12 (1.53)	
Promotion	1.03 (1.04)		1.26 (1.27)
South	3.00 (3.57)	3.22 (3.73)	3.55 (4.63)
R <sup>2</sup> adj.	0.23	0.22	0.21

<sup>(a)</sup> T-ratios in brackets (from White-corrected variance-covariance matrix).

Source: Destefanis and Maietta (2001: 38).

These results show that relational goods are indeed related to efficiency and (to a lesser extent) to promotion. Both efficiency (in particular) and promotion are more closely related to the number of cooperative actions than to reputation, a result supportive of the idea that NPOs care about organisational efficiency because it leads to thicker, stronger collaborative networks.

Thus, according to the evidence in Destefanis and Maietta (2001, 2003), even in the absence of a stakeholder class interested in appropriating the residual from production, NPOs do not seem to indulge in opportunistic behaviour. Their interest in the production of relational goods is likely to be a reason of this efficiency-seeking behaviour on the part of workers and managers.

## 7. Concluding remarks

The international empirical evidence seems to indicate that NPOs are likely to be less cost-efficient but more attentive to service quality. Indeed, the problem of informational asymmetry seems to be more important in child- or elder care, where families have to choose for themselves, often without any kind of informational support, than in health services, where users can rely on



more refined information-gathering systems, as well as on the services of professional purchasers of health services such as private-insurance managers.

According to the Italian evidence, however, NPOs are as efficient as other organisations. If one believes that the lack of a class of stakeholders interested in the appropriation of residual surplus is outweighed for NPOs by the importance of intrinsic motivations, there should be a relationship between technical efficiency and measures of these intrinsic motivations, including the production of relational goods. Destefanis and Maietta (2001; 2003)'s results show that the production of relational goods is indeed positively related to the organisational efficiency of NPOs.

Our survey can contribute towards improving future research and clarifying the policy debate on the provision of care services in the following ways. The evidence we reviewed shows that even in the absence of a stakeholder class interested in appropriating the residual from production, NPOs do not indulge in opportunistic behaviour. Intrinsic motivation is among the drivers of this efficiency-seeking behaviour on the part of workers and managers. Any reform of the Third Sector should take this into account and avoid upsetting this governance system. While the degree of competition existing in the market, too, is a potentially very important factor, little evidence is available for its role in Italy's context. It is also to be lamented that virtually no evidence exists for Italy of the relationships among efficiency, proprietary forms, and service quality. More studies using Italian data are needed, allowing for measures of competition, input and output quality, and production of relational goods. Moreover, it should be noted that further non-US evidence in this field could still be highly valuable, given its relative scarcity.

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