



Social Participation and Non-Profit Organisations

Stella Volturo and Nicola De Luigi

Abstract This chapter examines the relationship between social participation and social capital in Italy, focusing on the role of non-profit institutions as infrastructures of civic engagement. Social capital is understood here as a relational resource grounded in networks of trust, reciprocity, and shared norms, which facilitate cooperation and contribute to social cohesion. Non-profit institutions are conceptualised as organisational arenas that may generate both bonding and bridging forms of social capital, although this potential is neither automatic nor uniform across contexts. The chapter highlights three key dimensions of complexity: (a) the coexistence of formal and informal modes of participation; (b) the partial decoupling between formal membership and feelings of belonging; and (c) the increasing proximity between non-profit and market-oriented logics. Empirically, the chapter analyses longitudinal and spatial data on the diffusion of non-profit organisations at national, regional, and provincial levels (2011–2021), drawing on ISTAT sources. The findings reveal persistent territorial disparities,

S. Volturo (✉) · N. De Luigi
University of Bologna, Bologna, Italy
e-mail: stella.volturo2@unibo.it
e-mail: nicola.deluigi@unibo.it

particularly between Northern and Southern regions, while also documenting significant growth in several Southern provinces. These patterns suggest that non-profit development reflects broader socio-economic and institutional ecosystems rather than inherent civic dispositions. The chapter argues that understanding such dynamics is crucial for interpreting contemporary transformations in civic cultures.

Keywords Social capital · Civic engagement · Non-profit organisations · Social participation · Territorial disparities

3.1 INTRODUCTION

Social participation is a key element in the construction of social capital in our societies (Putnam, 2000). It manifests in various forms of commitment and cooperation between individuals and groups, contributing to social cohesion and collective well-being. In this context, the non-profit sector plays a crucial role, providing fertile ground for organised social action and for individual contributions to improving the conditions of community life.

This chapter focuses on the role of non-profit organisations in this action in an articulated perspective based on theoretical and empirical analysis.

We first outline the main conceptual intersections between associative participation and social capital. We then concentrate on a diachronic interpretation of the distribution of non-profit organisations in Italy, based on data from the historical series 2011–2021. This longitudinal perspective allows us to show the main growth trends of the sector and territorial divergence between regions and macro-areas.

We then look more closely at the territorial dimension with a specific focus on the scale of the province. This approach enables us to capture variations within regions, offering a more detailed view of associative dynamics. We analyse the provinces with the highest and lowest densities of non-profit organisations, highlighting persisting disparities, and we postulate factors that influence their geographical distribution.

3.2 PARTICIPATING IN NON-PROFIT ORGANISATIONS

The end of the twentieth century marked a significant re-discovery of Tocqueville's ideas on civil society in the United States of America. According to Edwards et al. (2001), these ideas concentrate on a "strong and vibrant civil society", featuring articulated social infrastructure composed of dense relational networks that transcend traditional social divisions, whether due to race, class, sexual orientation or gender, and sustain well-participated democratic government.

In such a scenario, reciprocity and trust find concrete expression through networks of civic associations. Scholars such as Sirianni and Friedland (2001) see these interpersonal and inter-associative networks as a motor of major social, cultural and political innovation in the US context. They link the future of American democracy to the capacity of these networks to constantly modernise. This view is confirmed by the work of other pioneering scholars of social capital, including Putnam (2000), who links them to community vibrancy, and Fukuyama (1995), who links them more explicitly to economic prosperity.

Putnam et al. (1993) deepened the theoretical approach of Alexis de Tocqueville, expressed in *Democracy in America*, who attributed a crucial positive role to free associations that form in various spheres of social life, from politics and professions to schools and religion. Tocqueville considered them the "lymph of democracy" (Sciolla & Maraviglia, 2017). Trust is seen as a major element of the social capital of a community, capable of infusing civic spirit and solidarity through associative networks. These networks function as genuine civic training grounds where individuals, otherwise separate and weak, find the collective strength to influence public decisions that concern them. In these associations, the attitude of pursuing common objectives is transmitted and is reinforced by mutual support, continuous involvement of new actors and construction of a dense relational network. The fundamental principle that inspired Tocqueville was that by learning to trust and collaborate with one's neighbour, one gradually develops the capacity to cooperate with more distant groups, triggering a process of progressive social cohesion.

According to Putnam's types of social capital (Chap. 2), non-profit associations play a double role: they act as a cohesion device for members with similar interests (*bonding* social capital) and at the same time as an inclusive mechanism open to different community groups (*bridging* social capital) (Anheier & Toepler, 2023). The most recent international studies

tend to confirm this link between the non-profit sector and the generation of community social capital (Moulton & Eckerd, 2012; Lim et al., 2024). The key lies in the capacity to activate civic commitment based on shared social values and on genuine altruism.

Research using Putnam's approach in the Italian context has adopted indicators aggregated geographically to study social capital and its distribution (Cartocci, 2007; Cartocci & Vanelli, 2015). Territorial differences emerge as significantly "frozen in time": while areas of the centre-north show high *civicness*, southern areas, especially Campania, show much lower levels (Sciolla & Maraviglia, 2017). However, more recent research shows that, especially in recent years, the non-profit sector, in particular the so-called third sector, has also grown in the southern regions (Memo, 2023; Memo & Moro, 2023).

3.3 THE NON-PROFIT SECTOR AND SOCIAL CAPITAL

The non-profit sector is a complex, variegated organisational ecosystem that includes many diversified situations and experiences. It is therefore difficult to define its heterogeneity. Nevertheless, various scholars agree that although these organisations may differ in legal form, size and fields of action, they converge in a common objective, namely that of pursuing collective well-being outside the realm of financial gain (Della Queva et al., 2023; DiMaggio & Anheier, 1990).

In Italy, non-profit organisations (NPOs) operate in strategic sectors that have profound effects on the country's economic and social development. These range from health to social services, education, research, international cooperation, culture, sport and defence of rights. Their range of action is increasing to include the valorisation of commons, environmental protection, animal protection and the promotion of social cohesion of local communities (ISTAT, 2024).

With regard to the welfare state, NPOs play many, sometimes ambivalent, roles that may be in synergy with the public body, or critical and even conflictual (e.g. Busso & De Luigi, 2019).

The capacity of NPOs to help individuals and communities by offering a model of sustainable socio-economic development centred on people and regional potential has often been underlined (Barbetta, 1996; Stoppiello et al., 2022). However, various scholars sound a note of

caution, warning against acritical ideological support of the non-profit sector. Although it champions giving, gratuitousness and altruism, this should not hide its organisational complexity and the power relations implied (Busso & Gargiulo, 2016; Moro, 2014).

Any analysis must therefore capture the nuances and contradictions within the world of NPOs. It is useful to recall some elements of this variegated world in order to pinpoint certain dynamics that may escape a simplified interpretation of the relationship between this sector and social capital.

A first crucial element is the tension between formality and informality. The use of an indicator of the distribution of NPOs (section 4) is a practical choice to capture the phenomenon at the provincial level, although it does not fully reflect the dynamics of the more informal forms of collective action and cooperation (Einolf et al., 2016; Eliasoph, 2013). As shown by recent studies, informality can be a distinctive trait of social participation, particularly significant not only among young people (Pitti et al., 2023). This dimension has important implications at a practical level, since it intertwines with territorial characteristics and those of the social contexts in which it develops. In some cases, informality can be an adaptive and strategic mode of action to obtain participation in contexts characterised by limited resources or by antagonistic approaches to formal systems or to regulation (Cooper, 2014).

A second element of complexity emerges from an analysis of the relation between the formal act of joining an association (*membership*) and the sense of belonging to the same (*belonging*). In associative practice, these dimensions do not necessarily coincide (Hustinx & Lammertyn, 2003). Acquiring the status of member is determined by regulations and recognition procedures embedded in power relations that govern interactions between individuals, communities and associations. Membership commits subjects to the aims of the organisation and tends to be associated with the dimension of belonging. However, unlike the formal status, the sense of belonging emerges from deeper social relations and practices. According to Yuval-Davis (2006), it is expressed by emotional attachment and the sharing of ethical and political values. This affective and ethical/value-based dimension concerns the desire to be part of an association, irrespective of the formal status of a member. It follows that an individual can be formally enrolled in an organisation without feeling bound to it, just as he can feel a strong sense of belonging without being officially a member

(Claridge, 2020; Drezner & Pizmony-Levy, 2021). This imbalance suggests that the role of NPOs as a social connecting infrastructure can have different configurations according to the way in which membership and sense of belonging are articulated. Thus, the relation between density of associations and social capital is not necessarily linear, but depends on the relational dynamics and meanings attributed to participation.

A third question concerns the increasingly nuanced borders between the non-profit and profit sectors. There is a gradual drift of NPOs towards the market model, with a progressive reduction in the differences with respect to firms that operate for economic gain (Busso & Gargiulo, 2016). Already in the early 2000s, some scholars raised these questions. For example, Marcon (2002) drew attention to this transformation, especially in big international NPOs, whereas de Leonardis (de Leonardis, 2002, p. 51) warned about “privatistic appropriation and removal of the public statute” of goods and corresponding interactions, also in the third sector. More recently, Moro (2014) demonstrated that being an NPO did not necessarily mean renouncing the accumulation of resources. With the transition from non-profit to low-profit in the reform of social enterprises, the new regulations made it necessary to be wary of acritically conceiving the non-profit sector as a world driven exclusively by altruism and gratuitousness, a point also raised by Cartocci (2007).

The results of research conducted by Segre and Zamaro (2016) offer further insights. The authors showed that the density and economic performance of NPOs are closely linked to specific contextual factors. A key element is the so-called territorial *soft carrying capacity* or the capacity of an area to generate new organisational initiatives through the availability of existing skills, examples and experience. Urban and territorial contexts with higher demographic density, an articulated entrepreneurial fabric and positive economic indicators such as high income and employment rates generate structural conditions beyond mere civic propensity, configuring as institutional and socio-economic ecosystems, particularly fertile for the emergence of new organisational initiatives.

Thus, the proliferation of NPOs should be interpreted as a phenomenon that responds to articulated systemic logic, not only an expression of participative vocation but the result of territorial configurations that foster specific forms of collective organisation (Memo, 2023; Memo & Moro, 2023).

3.4 A GEOGRAPHY OF NON-PROFIT ORGANISATIONS IN ITALY

The data source used for the diachronic territorial reconstruction of the distribution of NPOs was ISTAT's *Registro degli Istituti Non Profit*¹ (years 2011, 2015, 2018 and 2021), which since 2016 has adopted ISTAT's permanent census strategy.² Specifically, the indicator “*Share of non-profit organisations*” per 10,000 of population at the province level was used, drawing from the ISTAT database “Bes dei Territori” (BesT).³

It seems important to mention two points before commenting on the national, regional and provincial trends. The first regards the partial divergence between NPOs in the ISTAT data (the former cover a variegated range of situations in terms of vocation, field of operation and legal form) with respect to the institutions referred to in the laws on the third sector, which have undergone major changes in recent years. Here, we do not intend to enter the debate on these aspects, except to recall the difference between NPOs, which also contemplate political parties, unions, trade/industry/professional associations and ecclesiastical bodies, and the third sector as defined by Enabling Act 106/2016, which paved the way for a more complete reform of the third sector. A second consideration of a methodological nature concerns the choice of using the overall indicator of the distribution of NPOs without differentiating their sectors. Although it would have been interesting to concentrate, for example, on voluntary organisations more directly linked to the themes of civic participation and social capital, this would have prevented the possibility of a detailed diachronic analysis at the province level due to a lack of disaggregated data. Regarding the study period, we concentrate on the years 2011, 2015,

¹The population of interest is composed on NPOs, defined as “legally-constituted economic units of a private nature, with or without legal personality, that produce goods and services for sale or otherwise, and that on the basis of the laws in force or the organisations’ statutes, cannot directly or indirectly distribute profits or other gains apart from the remuneration of work done for the founders of the organisations or their members”. According to this definition, examples of NPO are: recognised and non-recognised associations, foundations, social cooperatives and committees. Non-government organisations, voluntary organisations, non-lucrative organisations of social utility (ONLUS), political parties, trade unions, trade/industry/professional associations, civilly recognised socially active ecclesiastical bodies and social enterprises are also considered NPOs.

²The information in the statistical records of NPOs was supplemented with data deducible from taxation sources, enabling us to delve further into the dynamics of the revenue of major NPOs as well as 5 × 1000 received.

³<https://public.tableau.com/app/profile/istat.istituto.nazionale.di.statistica/viz/BES2023/Bes2023?publish=yes>.

Table 3.1 Non-profit organisations (NPOs) per 10,000 of population at national and regional level. Data for the years 2011, 2015, 2018 and 2021. Authors' analysis *Source* Best ISTAT

	2011	2015	2018	2021	Difference 2021–2011	
Total number of NPOs by year	301.191	336.225	359.574	360.225	+59.034	
Number of NPOs per 10,000 of population	50	56	61	61	+11	
Standard deviation of provinces from national mean	16	16	16	16	–	
Highest number of NPOs per 10,000 of provincial population	104	111	119	120	+16	
Lowest number of NPOs per 10,000 of provincial population	18	29	32	32	+14	
<i>Area</i>	<i>Region</i>	<i>Mean number of NPOs per 10,000 of population</i>				<i>Mean difference 2021–2011</i>
North	Aosta Valley	104	105	112	110	+6
West	Piedmont	68	73	78	78	+10
	Lombardy	53	57	62	62	+9
	Liguria	62	67	74	74	+12
North	Trentino-South	100	107	113	113	+13
East (former white area)	Tyrol					
	Friuli-Venezia Giulia	83	86	93	93	+10
	Veneto	63	65	68	67	+4
Centre- North (former red area)	Emilia- Romagna	58	62	63	62	+4
	Tuscany	63	70	74	72	+9
	Marche	69	74	76	77	+8
Centre- South	Umbria	69	75	79	81	+12
	Lazio	50	57	62	63	+13
	Molise	57	57	66	71	+14
South	Abruzzo	55	59	62	65	+10
	Sardinia	62	67	71	73	+11
	Campania	31	37	42	44	+13

(continued)

Table 3.1 (continued)

<i>Area</i>	<i>Region</i>	<i>Mean number of NPOs per 10,000 of population</i>				<i>Mean difference 2021–2011</i>
	Apulia	38	41	46	48	+10
	Basilicata	55	57	66	66	+11
	Calabria	41	43	51	54	+13
	Sicily	42	43	47	49	+7

2018 and 2021, chosen on the basis of data availability and data proximity to certain key moments in the recent history of Italy, moments that marked major socio-economic and political transformations that influenced the dynamics of civic participation.⁴

Regarding the numbers of the non-profit sector, a first consideration is that significant growth occurred in the decade between censuses 2001–2011, accompanied by a decrease in the public sector. At the end of 2011, there were 12,183 (–21.8%) public organisations and 301,191 (+28,0%) NPOs.⁵ In 2015 and 2021, the number of NPOs continued to grow, reaching 336,275 and 360,225, respectively.

This trend is clearly reflected in the analysis of the distribution of NPOs per 10,000 of population in Italy, which showed a significant positive trend. There were 50 NPOs per 10,000 of the population in 2011, 56 in 2015, 61 in 2018, and 61 in 2021.

Table 3.1 shows the evolution of NPOs in Italy, including significant regional variations in the period 2011–2021. Examination of the main geographical areas reveals some noteworthy internal trends and divergences.

Comparison of the highest values of the provinces in 2011 and 2021 showed an increase of 16 units. Between the regions with the highest densities in 2011, Trentino-Alto Adige remained in top position, though growth slowed. Similar trends with lower growth were shown by Friuli-Venezia Giulia and Piemonte, while Veneto and Lombardy maintained mean values above the mean of 2011.

⁴ For more details on the reasons for this choice, see Chap. 7.

⁵ In 2001, they numbered 235,232.

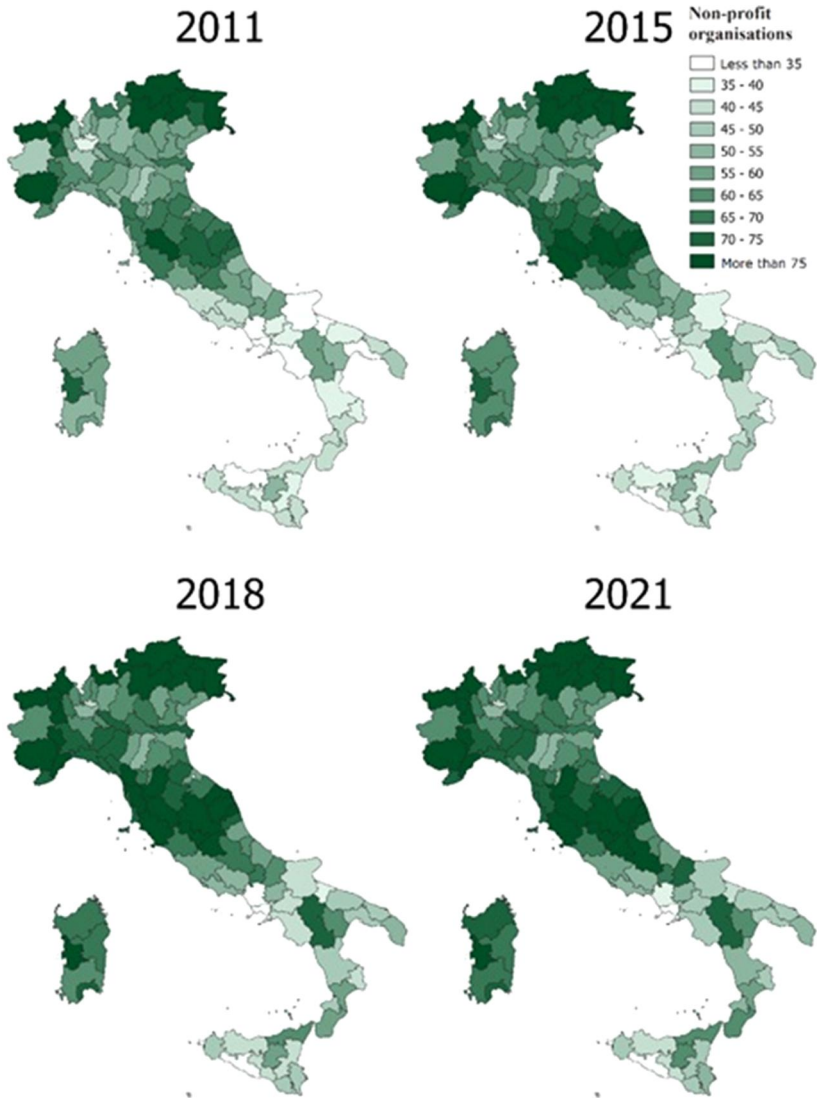


Fig. 3.1 Non-profit organisations (NPOs) by province. Mean number per 10,000 of population for the years 2011, 2015, 2018 and 2021. Authors' analysis. *Source* BesT ISTAT. Map of provinces with names: see Appendix, Sect. A

Although there was a significant increase in the density of NPOs in the centre and south of Italy with respect to 2011, in 2021, some southern regions continued to have lower values than the northern areas.

Observing the overall temporal trend, all macro-areas recorded an increase in the number of NPOs per unit of population between 2011 and 2021, albeit at different rates. The north-east continued to be the area with the highest mean values in all four years, followed by the north-west. The centre-north showed good growth, though slightly less than the north, whereas the centre-south and south, that were initially in lower positions, nevertheless improved over the period.

Focusing on the provinces (Fig. 3.1), the panorama of NPOs in Italy showed an intricate pattern, featuring significant differences between different areas of the country. Analysis of the data for the ten-year period showed some consolidated patterns as well as some interesting changes. The northern provinces, especially the alpine and prealpine ones, were distinguished by a particularly consolidated non-profit ecosystem. Trento remained in top position, recording an increase from 101.8 to 120 NPOs in the period 2011–2021. Provinces such as Aosta, Bolzano and Gorizia showed a similar trend, with more significant growth in the first years of the decade, followed by a levelling off.

The southern provinces showed different dynamics. Naples, Caserta, Barletta-Andria-Trani, Foggia, Taranto and Agrigento were stably in the lowest positions. However, read diachronically from 2011 to 2021, an increment was also evident in these provinces (e.g. NPOs in the province of Naples increased from a mean of 18 to 32 per 10,000 of population).

Interestingly, Monza and Brianza—a province in northern Italy—entered the group of provinces with the lowest numbers of NPOs in 2021. This “anomaly” partly defies the consolidated pattern of exclusively southern provinces in the lowest positions, introducing an element of complexity for the interpretation of the data.

3.5 CONCLUSIONS

Analysis of the distribution of NPOs in Italy confirmed their role as an indicator of civic participation and of social cooperation networks. In line with the literature (Memo & Moro, 2023; Segre & Zamaro, 2016), the data showed that the non-profit sector developed more intensely in contexts where public intervention was strong and socio-economic well-being

was widespread. This link helped explain the lower development of the non-profit sector in southern Italy, where institutions are historically weaker and the socio-economic context less favourable.

Territorial differences in the distribution of NPOs should not be interpreted as a simple north-south divide, but as a reflection of organisational ecosystems shaped by different institutional and socio-economic settings. In this view, the signs of growth of NPOs in southern regions suggest the emergence of new participation and civic commitment that call for further empirical research, possibly using diversified methods.

REFERENCES

- Anheier, H. K., & Toepler, S. (2023). *Nonprofit organizations: Theory, management, policy* (3rd ed.). Routledge.
- Barbetta, G. P. (ed.). (1996). *Senza scopo di lucro: Dimensioni economiche, legislazione e politiche del settore nonprofit in Italia*. Il Mulino.
- Busso, S., & De Luigi, N. (2019). Civil society actors and the welfare state. *Partecipazione e Conflitto*, 12(2), 259–296.
- Busso, S., & Gargiulo, E. (2016). «Convergenze parallele»: Il perimetro (ristretto) del dibattito italiano sul Terzo settore. *Politiche Sociali/Social Policies*, 3(1), 101–122. <https://doi.org/10.7389/83120>
- Cartocci, R. (2007). *Mappe del tesoro: Atlante del capitale sociale in Italia*. Il Mulino.
- Cartocci, R., & Vanelli, V. (2015). Una mappa del capitale sociale e della cultura civica in Italia. In *L'Italia e le sue regioni. L'età repubblicana – Società* (Vol. 4, pp. 17–36). Istituto dell'Enciclopedia Italiana Treccani.
- Claridge, T. (2020). Identity and belonging: An aspect of the relational dimension of social capital. *Social Capital Research*. <https://doi.org/10.5281/zenodo.8053300>
- Cooper, D. (2014). *Everyday utopias: The conceptual life of promising spaces*. Duke University Press.
- de Leonardis, O. (2002). *In un diverso welfare: Sogni e incubi*. Feltrinelli.
- Della Queva, S., Nicosia, M., & Stoppiello, S. (2023). Il settore non profit nelle Aree interne del Mezzogiorno: Una prima analisi descrittiva. *Autonomie Locali e Servizi Sociali*, 3, 367–386. <https://doi.org/10.1447/112667>
- DiMaggio, P., & Anheier, H. K. (1990). A sociological conceptualization of nonprofit organizations and sectors. *Annual Review of Sociology*, 16, 137–159. <https://doi.org/10.1146/annurev.so.16.080190.001033>
- Drezner, N. D., & Pizmony-Levy, O. (2021). I belong, therefore, I give? The impact of sense of belonging on graduate student alumni engagement. *Nonprofit and Voluntary Sector Quarterly*, 50(4), 753–777.

- Edwards, B., Foley, M. W., & Diani, M. (eds.). (2001). *Beyond toqueville: Civil society and the social capital debate in comparative perspective*. University Press of New England.
- Einolf, C., Prouteau, L., Nezhina, T., & Ibrayeva, A. (2016). Informal, unorganized volunteering. In D. H. Smith, R. A. Stebbins, & J. Grotz (Eds.), *The palgrave handbook of volunteering, civic participation, and nonprofit associations* (pp. 223–239). Palgrave Macmillan. https://doi.org/10.1007/978-1-137-26317-9_10
- Eliasoph, N. (2013). *The politics of volunteering*. Polity Press.
- Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. Free Press.
- Hustinx, L., & Lammertyn, F. (2003). Collective and reflexive styles of volunteering: A sociological modernization perspective. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 14(2), 167–187. <https://doi.org/10.1023/A:1023948027200>
- ISTAT. (2024). *Struttura e profili del settore non profit*. https://www.istat.it/wp-content/uploads/2024/10/REPORT_Istituzioni-non-profit_2022.pdf
- Lim, S., Min, B. H., & Berlan, D. G. (2024). The nonprofit role in building community social capital: A moderated mediation model of organizational learning, innovation, and shared mission for social capital creation. *Nonprofit and Voluntary Sector Quarterly*, 53(1), 210–235. <https://doi.org/10.1177/08997640221146965>
- Marcon, G. (2002). *Le ambiguità degli aiuti umanitari: Indagine critica sul Terzo settore*. Feltrinelli.
- Memo, G. (2023). *Terzo settore e Mezzogiorno*. Rubbettino Editore.
- Memo, G. & Moro, G. (2023). Introduzione, Autonomie locali e servizi sociali: Quadrimestrale di studi e ricerche sul welfare, 3, 341–346.
- Moro, G. (2014). *Contro il non profit*. Rome-Bari.
- Moulton, S., & Eckerd, A. (2012). Preserving the publicness of the nonprofit sector: Resources, roles, and public values. *Nonprofit and Voluntary Sector Quarterly*, 41(4), 656–685. <https://doi.org/10.1177/0899764011419517>
- Pitti, I., Mengilli, Y., & Walther, A. (2023). Liminal participation: Young people’s practices in the public sphere between exclusion, claims of belonging, and democratic innovation. *Youth and Society*, 55(1), 143–162. <https://doi.org/10.1177/0044118X221084362>
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon & Schuster.
- Putnam, R. D., Leonardi, R., & Nanetti, R. (1993). *Making democracy work: Civic traditions in modern Italy*. Princeton University Press.
- Sciolla, L., & Maraviglia, L. (2017). La forza di una relazione: Attività volontarie e fiducia. In R. Guidi, K. Fonovic, & T. Cappadocci (Eds.), *Volontari e attività volontarie in Italia. Antecedenti, impatti, esplorazioni*. Il Mulino.

- Segre, E., & Zamaro, N. (2016). Su alcune determinanti della diffusione e della performance delle istituzioni nonprofit. In G. P. Barbetta, G. Ecchia, & N. Zamaro (Eds.), *Le istituzioni nonprofit in Italia: Dieci anni dopo* (cap. III). Il Mulino.
- Sirianni, C., & Friedland, L. (2001). *Civic innovation in America: Community empowerment, public policy, and the movement for civic renewal*. University of California Press.
- Stoppiello, S., Della Queva, S., & Nicosia, M. (2022). Non profit e sostenibilità integrale: Qualche spunto di riflessione. In P. Venturi & A. Baldazzini (Eds.), *Generazioni: La sfida della sostenibilità integrale. Atti della XXI edizione – 2021 Le Giornate di Bertinoro per l'economia civile*. AICCON.
- Yuval-Davis, N. (2006). Belonging and the politics of belonging. *Patterns of Prejudice*, 40(3), 197–214. <https://doi.org/10.1080/0031322060076933>

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