

## **FACTORS INFLUENCING THE CHOICE OF PUBLIC-PRIVATE PARTNERSHIP (PPP) FOR THE PROVISION OF SOCIAL SERVICES**

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**Abstract:** *The aim of this paper is to investigate some elements that might influence the choice of PPP as a managerial form for the provision of social services at the local government level, given the contribution of this type of services to social sustainability. To this end, we apply the GLS method to a sample consisting of all 116 Italian provincial capitals over a three years period (no. 2,088 observations). The analysis highlights that: 1) the financial commitment of the municipality is not correlated with the use of PPPs; 2) the right-wing and 5 Star Movement political orientation of local government shows a negative correlation with the use of PPPs; 3) a larger population to be assisted does not lead to a higher use of PPPs. Finally, we suggest some desirable lines of future research in support of public management.*

**Keywords:** *public-private partnership; local government; social services; public management*

### **Introduction**

Sustainable development represents a topic toward which the institutional and academic world has paid increasing attention in recent years (Starik M., Kanashiro P., 2013; Zeemering E.S., 2018; Popović B. et al., 2019). The evolutionary path aimed at the implementation of sustainability at the global level was initiated by the first real initiative promoted at the international level in 1987, when within the report *Our Common Future* (also known as the Brundtland Report) of the World Commission on Environment and Development was recited the primitive definition of sustainable development, to be understood as «development that meets the needs of the present without compromising the ability of future generations to meet their own needs» (WCED, 1987).

Sustainability is generally conceived as a concept that can be declined in three dimensions: economic, environmental and social (Lozano, 2008; Purvis et al., 2018). It is interesting to consider that, over the past century, aspects related to economic sustainability have been explored in the literature in management studies focusing on economic equilibrium and efficiency, and relating to the corporate sphere. Elements of social sustainability have been

investigated with reference to welfare models and issues of wealth transfer and redistribution, in a public administration context. Factors related to environmental sustainability have been investigated more recently as a result of the global phenomenon of pollution.

These factors, however, have been mainly addressed in a separately parallel manner and, therefore, with different theoretical frameworks of reference. On the contrary, the concept of sustainability implies a focus on the interdependence between the three dimensions that traditionally constitute it and, therefore, greater complexity.

In this article, special attention is given to the social dimension of sustainability, because of its topicality, relevance and taking into account that it can be considered a precondition for the development of the other two spheres of sustainability (Boyer et al., 2016). Social sustainability expresses an intangible aspect of development (Tahvilzadeh et al., 2017). It concerns the pursuit of human well-being, the satisfaction of human needs (Rogers et al., 2012) and is configurable as a difficult and complex concept (Missimer, 2013).

This is a crucial dimension of sustainable development, since efforts to achieve sustainability depend on the adoption of socially oriented practices based on concepts such as equity, security and production of value in a socially responsible manner (Eizenberg, Jabareen, 2017). In spite of this, it should be emphasized that social sustainability is generally regarded as the least developed dimension of sustainability (Littig, Griessler, 2005; Cuthill, 2010; Dempsey et al., 2011) and more public management studies on it are needed because the availability of information in this sphere of sustainability is very limited (Missimer et al., 2017). The need to achieve social goals has led the public sector to consider public-private engagement models (Whyte, Olivier, 2016), among which a prominent position is held by the managerial tool represented by public-private partnerships (PPPs) that can play a decisive role in terms of achieving sustainability goals (Vorotnikov, Tarasov, 2019; Wang, Ma, 2021; Cheng et al, 2021) and, in particular, in contributing to the achievement of socially relevant sustainability goals (Kombo, 2014; Xu et al. 2015). Indeed, PPPs can be an effective tool through which the public actor has the opportunity to put in place the necessary investments to promote the social development of communities (Queiroza, Motta, 2012). The implementation of PPPs has the potential, among others, to promote socially sustainable management of natural resources (Björstig, 2017), alleviate poverty (Deladem et al., 2021), ensure access to affordable, reliable, modern and sustainable energy for all (Sudirman, Rifai, 2021), as well as provide inclusive tourism services and, thus, raise the accessibility profile of tourism destinations (Sonuç, Oral, 2017).

Furthermore, PPPs can ensure adequate levels of social performance of water utilities (Harutyunyan, 2015) and health services (Ferreira, Marques, 2021). Potentials of PPPs that, moreover, are confirmed in the 17th Sustainable Development Goal of the UN 2030 Agenda, which aims to strengthen the means of implementation and renew the global partnership for sustainable development (UN, 2015). In light of the value that the partnership formula can assume in the social sphere and given the role that local governments can play in the pursuit of social sustainability (Aderonmu, 2010; Boese, Phillips, 2017; Georgakopoulou, Delitheou, 2020; Carnemolla et al. 2021), the aim of this contribution is to investigate some elements that could influence the use of PPPs, as a managerial form for the provision of social services at the local government level.

The contribution is structured as follows. The next section contains the literature review from which the research questions arise. The third section is dedicated to the description of the methodology applied. The fourth section contains a discussion of the results achieved and, finally, in the fifth section some concluding remarks, as well as the limitations of the work and possible future lines of research, are developed.

### **PPP and social sustainability: literature review and research questions**

The topic of collaboration between government and private operators has been the subject of increasing attention in the literature (Cafferata, 1993; Rondo Brovotto, 1996; Metcalfe, 2003), becoming one of the topics on which the evolution in content of the discipline of public management has been based (Borgonovi, 2018). Since the 1990s, PPPs have become a key element of public policies worldwide, as they have the potential to bring not only cost benefits in the implementation of policy programmes, but also in terms of developing socially inclusive communities (Osborne, 2000).

The literature on the subject of PPPs lacks a consensus of opinion on what PPPs represent from a definitional point of view (Linder, 1999; Bloomfield, 2006; Cappellaro et al., 2009; Khanom, 2010). Wettenhall (2003), in this regard, emphasises the need to develop a classification system for partnership agreements, since there are many different forms of public-private mixes that are more or less appropriately brought under the term partnership. Hodge and Greve (2007), in highlighting the ambiguity that accompanies the notion of partnership, point out how there are essentially two currents of thought regarding the interpretation of the PPP phenomenon. In fact, according to the aforementioned authors, the literature on the subject is divided between those who maintain that PPPs are a particular instrument of governance, replacing the traditional methods of entrusting public services, and those who classify PPPs as a new expression of the language of public management behind which there would be references to contracting out and privatisation processes. Weihe (2005), in addressing the nebulous concept of partnership, emphasises the impossibility of identifying an all-encompassing and universal definition of partnership, capable of encompassing the different meanings attributed to this term over time. Also Khanom (2010), recognizing PPPs as a managerial instrument of the New Public Management paradigm, distinguishes PPPs as an inter-organizational agreement between different institutions (in which the partnership scheme is used as a governance instrument), PPPs as a means of defining financial agreements, and PPPs as a development strategy, thus confirming the existence of different approaches to the subject of PPPs in the literature with their different definitions.

This position is also supported by Kivleniece and Quelin (2012) who, in a contribution aimed at providing a framework on the mechanisms of value creation and distribution within public-private relationships, confirm the lack of conceptual clarity that accompanies PPPs, coming to embrace a broad notion that defines them as long-term collaborative relationships between one or more private actors and public entities, combining public sector management or supervision with the resources and expertise of a private partner for the direct provision of a public good or service.

Ultimately, PPPs can be qualified as complex and durable forms of cooperation between the public and private sectors based on the sharing of risks, costs, benefits, resources, responsibilities and aimed at providing public services (Wang et al., 2018).

The literature is also devoting increasing attention to PPPs on the topic of sustainable development, investigating the role of PPPs in implementing sustainability from different perspectives. One reason for this trend probably lies in the fact that, since sustainability requires the joint treatment of environmental, social and economic aspects, such complexity necessitates the involvement of several actors with different and complementary competences and objectives.

With particular reference to social sustainability (the subject of this paper), PPPs can represent the instrument through which public and private resources are combined to achieve social objectives (Skelcher, 2005). They constitute a viable strategy through which the private sector's own ability to access capital can effectively be functionalized toward the pursuit of socially relevant objectives, thus contributing not only to economic progress but also to the improvement of living standards and the reduction of unemployment and poverty (Iftikhar et al., 2012).

PPPs related to social sustainability have been analyzed in the academic literature with reference to different fields of intervention.

Firstly, the use of the partnership model in health care should be noted. Ciccone (2010) argues that PPPs can be considered as an option for achieving results in social challenges such as infectious diseases. This is because of the expertise and funding provided by the collaborating parties. For this potential to become a reality, however, a balance must be struck between the different internal cultures that connote private sector companies and public institutions. Moreover, while PPPs can mobilize funding for global health, their deployment in health governance also raises outstanding issues, such as that of accountability. The ageing of the population constitutes an additional social issue that healthcare systems find difficult to address in light of existing budgetary constraints. In this sense, as stated by Moro Visconti et al. (2019) one potential avenue through which this issue can be addressed is the use of technology. However, while the public actor plays a crucial function in the protection of a primary public good such as health, it may not possess the skills that are indispensable for the management of technology-smart investments: in this perspective, a central role can be played by PPPs. Contextually, it should be noted that the ability of PPP-managed institutions to improve the quality and sustainability of health services depends, among other things, on the employment of qualified human resources, given that the managerial instrument of partnership, in itself, may not compensate for the effects resulting from inadequate recruitment and retention of staff or poor capacity building (Baig et al., 2014). According to Ferreira and Marques (2021), PPP hospitals can provide health care services with social performance levels at least equal to those of typical public hospitals. In this regard, as pointed out in a study by Wang et al. (2022), hospital PPP projects have the advantage of promoting innovation but, at the same time, they present a tension between economic benefits to which the private sector tends and pursuit of the public interest to which the public sector, by definition, tends. This circumstance is likely to undermine social sustainability, which is why a balance should be sought between opposing interests. As also to achieve social sustainability in health care, it is necessary to strengthen the supervision of PPP projects, create communication channels between partners and improve stakeholder participation.

Another area of intervention where PPPs can realize their potential in terms of supporting social sustainability is the construction sector.

In this regard, the contribution of Xu et al. (2015) is relevant as, in developing a model for determining the financing structure of PPP-based young-graduate apartments, they highlight the suitability of the partnership formula to address social concerns such as the need to provide public rental housing for young graduates. Similarly, in a context of a growing ageing population, the partnership model could be fruitfully employed to meet the demand of elderly housing (Ng et al., 2020). More generally, the issue of increased demand for social housing, which is exacerbated in times of economic crisis, faces a context of drastically reduced public investment in housing. It follows that the role that private and non-profit organisations can play in increasing the supply of social housing is promising and housing policies that emphasise the role of PPPs in housing provision are to be pursued (Propersi et al., 2012).

The transport sector is also an area within which PPPs are becoming increasingly important in terms of improving the sustainability of society. In this regard, Yuan et al. (2018) argue that in order to reduce social risks from the perspective of different stakeholders in transport PPP projects, a people-centred PPP approach should be used, prioritising interactions between different stakeholders. From the consideration of the role of stakeholders also moves the contribution of Rohman et al. (2017), where the authors argue that measuring the success of PPP projects in this sector based only on the economic and environmental dimensions cannot be considered acceptable from the perspective of the community, as the end user of PPPs: if PPP projects provide social benefits to the community (such as improved quality of life, access to public facilities, smooth traffic), the problem of stakeholder opposition can be minimized by increasing community support for PPP project development and ultimately promoting the success of the PPP project in both the short and long term. Indeed, it can be noted that achieving social legitimacy in such PPP programmes requires overcoming problems such as low social involvement and distrust between impacted and responsible stakeholders, by strengthening the relational governance through the inclusion of not only responsible stakeholders but also impacted stakeholders in the governance scheme of PPP programmes (Castelblanco et al., 2022).

There is also evidence demonstrating the ability of the PPP approach to improve the accessibility of water services (Kombo et al., 2014). As also must be highlighted how, given the aptitude of public-private cooperations to increase the accessibility profile of tourism destinations (Machado, 2020), the creation of PPPs oriented to the delivery of effectively inclusive tourism services is to be linked to the existence of a climate of trust between partners (which can be facilitated by collaborations among entities with similar values) and proper management of their different competencies (De Matteis et al., 2021). From what has been said so far and considering the functionality of PPPs in terms of contributing to social sustainability, it can be observed that their use is linked to the impossibility of the public sector to guarantee/improve essential social programs. This impossibility has led public decision-makers to explore different options for financing and delivering such programs (Bloom et al., 2000), including those involving private entities. In fact, policy makers have had to deal not only with concerns about the quality of services but, more importantly, with an increasing shortage of funds available for financing social services. This has resulted in the deterioration of social infrastructure and the search for other service delivery models than the purely public model (Mitchell, 2000): one of the options available is collaboration with the private sector, in the managerial form of the PPPs (Skelcher, 2005; Wang et al., 2018).

In this regard, some authors have investigated the correlation between the financial resources used for the provision of some public services and the managerial form delivery of the same services (Loikkanen, Susiluoto, 2005; Cuadrado-Ballesteros et al., 2013; Pérez-López et al., 2015; Andrews, Entwistle, 2015). The delivery model represented by PPPs, in this sense, may prove to be financially appropriate in the delivery of various essential social services (Alam, Rashed, 2010; Zavyalova, Tkachenko, 2018), provided that there is good PPP contract management capacity, adequate performance monitoring and, more generally, effective supervision of the partnership (Alonso, Andrews, 2022).

From the above, the first research question arise.

*RQ1: “Is there a relationship between the choice of PPPs for the provision of public social services and the financial commitment of the local governments?”*

Likewise, the way in which public services are provided could potentially also be influenced by political and ideological factors (Picazo-Tadeo et al., 2012). In fact, although there is no shortage of contributions pointing to a lack of significant correlation between contracting out and ideology (Bel, Fageda, 2007, 2010; Miralles, 2009; González-Gómez, Guardiola, 2009), there are studies that have shown how political and ideological motivations are likely to influence the contracting out of public services, as a form of privatisation that is increasingly accepted as an approach to the provision of public services (Morgan, Hirlinger, 1991; Kodrzycki, 1994; Fernandez et al., 2008; Bel, Fageda, 2009, 2017), especially when it comes to services that qualify as social services (Bel, Fageda, 2017). With regard to this particular type of public services, Petersen et al. (2015) state that while conservative ideology has no influence on contracting out at the aggregate municipal level, it has an important impact on contracting out of social services, given that local governments with conservative majorities are found to contract out such services significantly more than those with social democratic majorities: the authors go so far as to believe that the “social services [...] have become the current ideological battlefield of privatization”. Of the same opinion are Plata-Díaz et al. (2019) who, with reference to larger municipalities, observe a greater likelihood of local social services being contracted out by a conservative government than by a left-wing one. This is in line with more general assumption that right-wing governments are more likely to use private sector, including through the use of PPPs (Comendeiro-Maaløe et al., 2019), to provide public services than left-wing governments that instead tend to preserve public control (Elinder, Jordahls, 2013; Zafra-Gómez et al., 2016; Higuera-Molina et al., 2022).

From the above follows the second research question that this article seeks to answer.

*RQ2: “Is there a relationship between the choice of PPPs for the provision of public social services and the political orientation of local government?”*

Finally, another factor worthy of consideration is that related to the size and growth of a local authority's population, since the greater the pool of users to be satisfied, the greater the demand for public services and, consequently, the higher the level of local services and infrastructure that a local authority is called upon to guarantee (Narbón-Perpiñá, De Witte, 2018). In fact, the growth of the population to be served are relevant aspects to be taken into account in the provision of social services (Mitchell, 2000). It follows that it might be

an interesting element to understand whether the extent of people assisted with social services influences the choice on the use of PPPs for the delivery of said services. This gives rise to the third research question of this contribution.

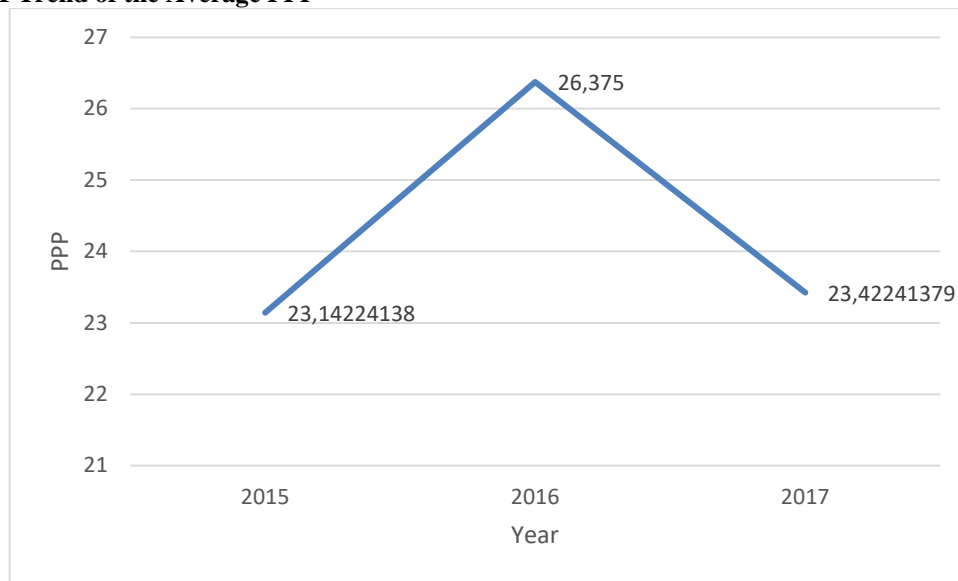
*RQ3: “Is there a relationship between the choice of PPPs for public social service provision and the size of the assisted population at the local government level?”.*

**Variables and statistical analysis**

To develop the empirical analysis, we consider as the dependent variable - for each of the 116 Italian provincial capitals - the percentage indicating the use of PPPs for the provision of public social services at the local government level (the source of this percentage is the State general accounting Department). The analysis has a three-year time horizon (2015-2017) because of data availability. Following, we show some statistics related to the above mentioned dependent variable (PPP).

Firstly, we calculate the mean of the PPP per each year considered, obtaining the following graphic.

**Figure 1 Trend of the Average PPP**



Secondly, in the following table we add some other significant statistics of the dependent variable.

**Table 1 Statistics**

Year	Mean	Median	Standard Deviation
2015	23,1422414	6	30,6312434
2016	26,375	9,5	32,0436438
2017	23,4224138	5	30,624699

The results highlight a variability higher than the average over the years. In fact, this is demonstrated by the high values of the standard deviation. The following table summarises the independent variables - representing possible influencing factors on the use of PPPs, as derived from the literature review - and their respective sources.

**Table 2 Independent variables definition**

Code	Variable	Source
tw	Total number of women in municipal government	ISTAT
dens	Population density	ISTAT
nap	Number of assisted persons	ISTAT
se	Social expenditure in local authorities	ISTAT
ni	Number of immigrants	ISTAT
CL	Center Left	Ministry of the Interior
CR	Center Right	Ministry of the Interior
CI	Civic List	Ministry of the Interior
5SM	Five Star Movements	Ministry of the Interior

The data in the following table show that in all cases there is no correlation between the independent variables (in fact, almost all correlation values are very low).

**Table 3 Correlation matrix**

	CL	CR	5SM	tw	dens	nap	se	ni
CL	1.0000							
CR	-0.7619	1.0000						
5SM	-0.3315	-0.1602	1.0000					
tw	0.0376	-0.2068	0.2242	1.0000				
dens	0.2130	-0.1727	-0.1835	0.0400	1.0000			
nap	0.0834	-0.1283	-0.1144	0.0274	0.6130	1.0000		
se	-0.0492	-0.0655	0.1465	0.0814	0.0280	0.1357	1.0000	
ni	0.0789	-0.0587	-0.1016	-0.0835	0.4883	0.6831	0.0958	1.0000

Since the correlation matrix shows that the variables are not correlated, we expect that there will be no problems of multicollinearity. To verify this, we use the condition index (table 3)

**Table 4 Collinearity Diagnostics**

Dimension	Condition Index
1	1.00
2	1.8426
3	2.1737
4	2.2966
5	3.7434
6	4.1350
7	4.7915
8	7.2064
9	17.4097



As it is easy to see in the table the condition indexes are small enough and, in any case, less than 30 and this means that we have a low degree of collinearity and therefore we can conclude that our variables are not collinear.

With this sample, we create a balanced data panel (for local government  $i$  ( $i=1, \dots, n$ ) at the time  $t$  ( $t=2015, \dots, 2017$ )), which we use to estimate our models (Hsiao, 2003).

### **Model, analysis and results**

The focus of this research is to analyse the public-private partnership. Therefore, we developed a model, we consider the dependent variable “PPP” (for local district  $i$  ( $i=1, \dots, n$ ) at the time  $t$  ( $t=2015, \dots, 2017$ )) and all previous variables like independent variables (for local district  $i$  at the time  $t$ ). We have:

$$PPP_{it} = k + tw_{it} + dens_{it} + cl_{it} + cr_{it} + ci_{it} + ms_{it} + npa_{it} + se_{it} + ni_{it} + u_{it}$$

The methodology that we use to estimate the previous panel is the GLS (General Least Square) method. First of all, we can use this method because we haven't a lagged dependent variable. Then, our units of observation, local districts, differ in many significant ways (e.g. the size) and this is a common source of heteroscedasticity, which is a strong assumption that may not hold in applied problems like the one we are dealing with where the units of observation have an important spatial component. Some relatively recent contributions, such as Anselin and Lozano-Gracia (2008) or Baltagi et al. (2008), are typical examples of empirical applications that require the use of spatial heteroscedasticity and autocorrelation consistent estimators. Therefore, we can use to estimate the OLS (Ordinary Least Squares) method (Baulager-Coll et al, 2016). But we choose the GLS method because we have, also, random effect over the individuals (local districts). For this reason, we assume that the heterogeneity is distributed as a random variable with mean zero and variance  $\sigma^2$ . This last hypothesis takes, obviously, effect on the variance-covariance matrix of the error term that will not be diagonal. Therefore, to obtain estimate correct and efficient we must use the OLS method transformed, the GLS method, in which make a “almost” differentiation that is we subtract to each observation to its mean over time. On the other hand, as the Aitken's Theorem tells us, the use of the method of the minimum generalized squares (GLS), makes the estimators BLUE (Best Linear Unbiased Estimator) even in the presence of heteroscedasticity and/or autocorrelation of errors.

In our model we insert the temporal dummy variables ( $\tau$ ), through which we can capture the cyclical variations of the period and the geographic control variables (nw= North-West, ne=North-East, c = Central, si= South and Island)) to verify the consistency of the geographic distribution of the sample elements Then the models become:

$$PPP_{it} = \beta_0 + \tau_t + nw_i + ne_i + c_i + si_i + \beta_1 cl_{it} + \beta_2 cr_{it} + \beta_3 ci_{it} + \beta_4 ms_{it} + \beta_5 tw_{it} + \beta_6 dens_{it} + \beta_7 npa_{it} + \beta_8 se_{it} + \beta_9 ni_{it} + u_{it}$$

At this point we can proceed with the estimation of the model and we use the econometric program STATA. Obtain the following table:

**Table 5 Estimation**

Variable	Model
Const	47.72851*** (11.37686)
tau2015	-2.39974 (4.202171)
tau2016	2.384497 (4.004846)
tau2017	
cl	-14.29405 (8.774674)
cr	-16.0666* (9.323965)
ci	
5SM	-26.16329** (10.89596)
NW	0.2103442 (5.956235)
NE	0.8866382 (5.731356)
C	2.723767 (5.759877)
SI	-8.151571 (5.989751)
tw	-8.852504 (17.51671)
dens	-0.0010338 (0.0017111)
nap	-0.0002571* (0.0001532)
se	-0.0157768 (0.0135146)
ni	0.0099232 (0.0076426)

Notes: standard errors (in bracket). \*\*\* denotes a level of significance at 1%, \*\* denotes a level of significance at 5%, \* denotes a level of significance at 10%.

## Discussion

The analysis carried out led to the results presented in the previous section, which are discussed below in relation to each of the three research questions guiding this research work. With reference to the first research question, i.e. whether there is a relationship between the choice of PPPs for the supply of public social services and the financial commitment of the local governments, the results show that financial commitment is not correlated with the use of PPPs. This result does not confirm what has emerged from the recalled literature. In fact, from the analysis of the latter, it was possible to deduce that the greater the need for financial commitment to the provision of public services and, in particular, public social services, the greater the use of PPPs is expected to be in the provision of these services (among others, Bloom et al., 2000; Mitchell, 2000; Zavyalova, Tkachenko, 2018).

This result, therefore, shows that in our case the amount of financial resources required for the provision of social services is not associated with a higher recourse to collaborations with the private sector and thus to the managerial form of PPPs. Our result can be considered surprising. Indeed, one would also expect a financial implication in the use of PPPs. Consequently, rather than a lack of correlation between the financial resources employed and the use of PPPs, one would expect:

either a positive correlation, in the event that the use of partnership with private entities by the local authority allows the latter to recover efficiency;

or a negative correlation, considering the possibility of coordination expenses of different entities, linked, for example, to bodies in charge of coordination or information sharing tools.

In relation to the second research question that focused on the existence or otherwise of a relationship between the choice of PPPs for the provision of public social services and the political orientation of local government, our results show that the right-wing political orientation of local government shows a negative correlation with the use of PPPs. This means that, based on the analysis, the more a government is politically represented by right-wingers, the less it resorts to PPPs for the provision of social services. A result that proves to be in line with what emerged from the analysed literature. In fact, a fairly shared consideration in the literature is that according to which the presence of conservative majorities in the government of public administrations, including local ones, entails a greater likelihood of recourse to pure contracting out for the provision of public services and, in particular, of social public services (among others, Elinder, Jordahls, 2013; Petersen et al, 2015; Plata-Díaz et al., 2019); unlike left-wing parties that tend to maintain public control of such services (Zafra-Gómez et al., 2016; Higuera-Molina et al., 2022). More controversial, however, is the interpretation of a further result achieved, namely the presence of a negative correlation also between local governments led by the 5 Star Movement and the use of the partnership formula in the delivery of social services. In fact, given that the 5 Star Movement cannot be hinged in traditional party schemes, it can be said that it represents a hybrid in the Italian political landscape, as it gathered within itself actors from different political and cultural backgrounds who no longer recognized themselves in the canonical left-right political opposition.

It follows that the explanation for the result achieved and mentioned above is more articulated than in the cases of right-wing or left-wing government majorities. For example, this could mean, on the one hand, that in the area of social policies and in the choice of the model for the delivery of social services, the 5 Star Movement tends towards the total outsourcing of these services, as is generally the case in governments with right-wing majorities. On the other hand, this political movement might lean towards keeping the public management of social services completely public, as is generally the case in governments led by left-wing parties. It is not possible here to make further considerations in this regard that would allow us to understand which mode of delivery the 5 Star Movement-led administrations tend toward, given that the data referenced in this contribution concern the managerial form of social service delivery of PPPs and not other alternative models of delivery of the aforementioned services. However, what emerges from the research is that municipalities governed by the 5 Star Movement are not oriented towards the use of PPPs in the provision of social services.

Finally, the third research question concerns the existence of a relationship between the choice of PPPs for the provision of public social services and the size of the population served at the local government level. In this regard, our results indicate that the presence of a larger population to be assisted and served through the implementation of social services does not lead to a greater use of PPPs. Contrary to the literature considered, the analysis carried out indicates that the greater the number of people served, the less recourse to PPPs. Indeed, some authors link the greater size of the population to be assisted to the need to guarantee a greater level of public services (Narbón-Perpiñá, De Witte, 2018) and, consequently, to the need to seek alternative ways of financing social services (Mitchell, 2000) such as PPPs.

Considering the particular type of local public services investigated (social), this result could also depend on: 1) the local authority's desire to offer greater guarantees of social

equity through direct management of these services; or 2) the choice of local authorities to entrust services entirely to the private sector, presuming their greater efficiency.

## **Conclusion**

Academic research on sustainability, over time, has mainly focused on environmental and economic issues (Colantonio, 2007). Therefore, social sustainability has emerged as the least investigated sphere of sustainability (Littig, Griessler, 2005; Cuthill, 2010; Dempsey et al., 2011). This has resulted in the need to pay more attention to the practical and operational aspects of implementing social sustainability (Woodcraft, 2012), by which is meant process aimed at promoting and developing conditions of well-being to meet the needs of current and future generations (Dempsey et al., 2011; Woodcraft, 2012). The 17th Sustainable Development Goal of the United Nations 2030 Agenda has given new attention to the role assumed by PPPs in implementing sustainability (Thadani, 2014; Gharaee, 2019). Specifically, PPPs can play an important role in the effective achievement of socially relevant goals (Skelcher, 2005; Kombo, 2014; Xu et al. 2015). Hence, the research objective that this contribution set out to achieve, namely to investigate whether there is a relationship between the choice of PPPs for the provision of public social services and the financial commitment, policy orientation and size of the assisted population at local government level.

The results discussed in the previous section allow for some concluding reflections both with regard to possible new lines of future research on the topic and with regard to useful insights for public managers and policy makers. In particular, the analysis carried out together with the limited scientific production on the topic of social sustainability lead to some concluding reflections on the appropriateness of developing the following lines of research:

on the link between the managerial choice of PPPs and the financial resources used for social services, investigating, for example, whether there are different results compared to those obtained in the present research (no correlation between PPP and financial resources spent on social) depending on the type of service provided (elderly, disabled, minors, etc.). It would be useful to understand whether, depending on the type of social service provided, there is a relationship between the resources committed by the local authority and the use of the PPP;

on the political reasons behind the choice of the managerial form of PPPs for the delivery of social services. For example, by means of questionnaires or case studies on local governments that decide to use PPPs for social services in general or for some of them and, in the latter case, analysing the reasons why this managerial form is avoided in some cases and not in others.

With regard to public managers and policy makers, the following insights can be drawn from the analysis conducted:

issue of partner choice. Considering that these are social services (which greatly impact the lives of the assisted) the choice of private partners becomes important. In the choice one must consider, first of all, the reference values and skills that will be brought into the partnership (De Matteis et al., 2021);

issue of partner coordination. For the effectiveness of the social services provided, the coordination of the partners involved and of these with the assisted persons is relevant

(Caldwell et al., 2017). Hence the need to develop appropriate bodies (e.g., committees) and/or tools aimed at coordination (e.g., digital tools for real-time information sharing). The main limitation of this work is the availability of data dating back to the three-year period 2015-2017. In contrast, this situation has the advantage of ensuring the use of data unaffected by the pandemic phenomenon - which certainly has repercussions from a social point of view - ultimately allowing the development of an analysis unaltered by extraordinary factors.

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