

Trust and management control archetypes in public-private partnerships

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Abstract

Purpose – This paper aims to contribute to the management control systems (MCS) changes in public-private partnerships (PPSs) by developing a conceptual archetype explaining the relationship between trust and MCSs in PPPs, and highlighting how this relationship may evolve over time.

Design/methodology/approach – The paper adopts a longitudinal case study methodology focusing on a hospital built and operated under a project finance deal. The methods adopted include semistructured interviews, direct observation and internal documentation analysis. We conducted 15 semistructured interviews from 2019 to 2021. In analyzing different documents and interviews, we triangulated data to ensure solid interpretation.

Findings – The case shows how trust can take different configurations depending on the type of MCS used. The results highlight how different patterns of MCSs, about trust, can be combined to govern PPPs. The case also shows the temporal dynamics of how MCS and trust evolve at different organizational levels and how bureaucratic control matched with contractual trust and trust-based control matched with competence trust can coexist at different times and organizational levels.

Practical implications – Managers involved in PPPs will be aware of the role of different types of trust in shaping and managing the relationship between partners at different organizational levels. Furthermore, the findings could help policymakers to adopt more informed decisions and to promote practice-based trust at various organizational levels of PPPs.

Originality/value – The paper proposes a management control archetype based on bureaucracy- and trust-based patterns concerning the level of programmability of tasks, as well as defined risks.

Keywords Public-Private Partnership, PPPs, Trust, MCS, Management control system

Paper type Research paper



1. Introduction

Public-private partnerships (PPPs) have been promoted to sustain the growing needs of public sector investments, while producing value for money (Van Ham and Koppenjan, 2001). The success of PPPs requires the development of organizational forms, where risks and resources are transferred to a private partner (Van Ham and Koppenjan, 2001). PPPs also imply mutual coordination of activities and procedures aimed at an optimal allocation of risks (Steijn *et al.*, 2011). PPPs are considered hybrid organizational forms (Skelcher, 2009) embodying different logics in terms of ethos and values (Shaoul *et al.*, 2012), and specific mechanisms of governance, accountability and control (Broadbent *et al.*, 2008; Erkkilä, 2007; Mulgan, 2000).

Scholars have studied PPPs under different guises and perspectives to assess their nature, rationale and benefits (Hellowell and Vecchi, 2012; Hellowell *et al.*, 2015; Toms *et al.*, 2011) and analyze implications for risk management and allocation in PPPs (Khadaroo, 2014; Quiggin, 2004; Rodney and Gallimore, 2002; Tallaki and Bracci, 2021). Other studies analyzed how to assess value for money (Grimsey and Lewis, 2005; Rodney and Gallimore, 2002), leading to several implications for policy and practice (Broadbent and Laughlin, 2004; Hodge and Greve, 2018; Wang *et al.*, 2018). However, less attention has been paid to the internal functioning of PPPs. In fact, little is known about the operational dynamics of PPPs, including how management control systems (MCS) are employed (Ahmad *et al.*, 2020; Andon, 2012). MCSs can assume great relevance in the context of PPPs to manage interdependencies, encourage cooperation, reduce relational risks (Perera, 2016) and increase value for money (Chung, 2016). Previous studies have highlighted how MCSs vary according to the structure of organizations (Vosselman and van der Meer-Kooistra, 2006a, 2006b), other contextual and institutional variables (Damayanthi and Gooneratne, 2017; Speklé, 2001), as well as the PPP phases (Appuhami and Perera, 2016). MCS are influenced by the programmability of the task and activities, by the measurability of the output (Nuwagaba and Molokwane, 2020), and by the ability to program activities and define optimal contractual obligations (Speklé, 2001). This means that the specificities of PPPs can influence the type of MCS implemented. In the literature, particular attention has been paid to trust, which influences the relationships between partners and conditions the type of information requested and the MCS adopted (Safari and Thilenius, 2013; Appuhami and Perera, 2016). Trust can be also relevant in reducing relational risks and conflicts in PPPs (Zaheer *et al.*, 1998; Appuhami and Perera, 2016). English and Baxter (2010) discussed how the MCS of PPPs change in the long term in accordance with the interactions between the parties involved. Trust is inherently related to MCSs in a complex way (Minnaar *et al.*, 2017). Trust can change how MCSs are built and modeled, and not necessarily in stable and predictable ways (Höglund *et al.*, 2019). Nevertheless, research on how trust affects MCS in PPPs and vice versa is limited (Ahmad *et al.*, 2020; Appuhami and Perera, 2016), particularly in the operational period (Ahmad *et al.*, 2020; Caperchione *et al.*, 2017; Vosselman and van der Meer-Kooistra, 2006a, 2006b). Understanding the relation between trust and MCSs in PPPs in the operational period allows to increase our knowledge on the dynamics governing the organizational change that PPPs involve.

This paper aims to contribute to the debate about the dynamics of MCS and trust relationships in PPPs. We address two research questions:

RQ1. How do MCSs and trust in PPPs relate to each other?

RQ2. How and why does the control pattern change over time in relation to trust?

We attempt to answer these research questions through the development of a conceptual archetype drawing from the literature on accounting and organizational change in PPPs (e.g. Appuhami and Perera, 2016) and the literature on management control archetypes (e.g.

Speklé, 2001; Van der Meer-Kooistra and Vosselman, 2000). The conceptual archetype is then used to analyze an in-depth case study of a public hospital built and operated under a PPP deal.

The paper's contribution is twofold. First, we respond to the call for research on the internal complexity of and the role of MCSs in PPPs (Grossi *et al.*, 2020; Johanson and Vakkuri, 2017). Second, we develop a mixed MCS archetype to unveil the dynamic relationship between control practices and trust in the operational period of PPPs (Andon, 2012; Tallaki and Bracci, 2021; Toms *et al.*, 2011).

The paper is structured as follows. Section 2 provides a literature review on management control systems and PPPs. Section 3 presents the framework utilized and the mixed archetype conceptualized, and Section 4 outlines the research methodology. Section 5 develops the case study analysis, and Section 6 is dedicated to discussions. Some concluding remarks are offered in Section 7.

2. Management control systems and trust in hybrid organizations: the case of public-private partnerships

MCSs are aimed at supporting organizations in implementing strategies and achieving their goals (Merchant and Otley, 2006). Understanding how MCSs evolve over time is useful for governing accounting and organizational change in organizations. The relevance of MCSs is not restricted to the legal boundaries of an organization (Otley, 1994), given its transactional relationship (Vosselman and van der Meer-Kooistra, 2006a, 2006b) and the interfirm collaborations that it must establish for cooperation and coordination (Caiden and Sundaram, 2004). The broadening of organizational boundaries due to interorganizational relationships has led to the development of hybrid organizational forms (Caglio and Dittilo, 2008). PPPs are an example of a hybrid form of organization, in which partners operate across various types of interfirm transactional relationships. These relationships imply the need for the coordination of activities and resources. Moreover, in PPPs a traditional hierarchical structure that guarantees control and coordination is often not present. Control and coordination are not centrally orchestrated as in hierarchical relationships the independent partners have to define the best way to coordinate and control activities.

Trust is crucial in PPPs (English and Baxter, 2010), as it influences the interorganizational relationships (Cheng *et al.*, 2021) by acting as a social lubricant (Ysander and Arrow, 1975), reducing conflicts (Zaheer *et al.*, 1998) and relational risks (Perera, 2016). The relationship between trust and MCSs in hybrid organizations has attracted the interest of various scholars (Dekker, 2004; Langfield-Smith and Smith, 2003; Van der Meer-Kooistra and Vosselman, 2000; Tomkins, 2001). Van der Meer-Kooistra and Vosselman (2000) analyzed the ways in which interfirm relations can be framed and controlled. The authors discussed the factors that influence the choice of a management control structure and how trust is crucial when the context is characterized by unpredictability and strong dependencies between parties. Furthermore, Tomkins (2001) highlighted that trust is the driver of information requirements, and its absence increases the perceived uncertainty and the risk of conflicts. Uncertainty represents a risk in a PPP relationship, and how risk is shared influences the stability of PPPs (Tallaki and Bracci, 2021).

Trust and PPPs are usually analyzed through the lens of the principal-agent relationship, where the interaction between partners can generate relational risk (Perera, 2016). The management of multiple principal-agent relationships raises agency costs including:

- monitoring expenditures of the principal;
- bonding expenditures of the agent; and
- residual costs (Jensen and Meckling, 1976).

Increasing trust is one way to reduce relational risk (Perera, 2016) and the associated agency and transaction costs (Bhati, 2015; Zaheer *et al.*, 1998). Trust can also overcome the impossibility of designing an “optimal contract” (Robinson and Scott, 2009). Indeed, trust consists of:

[...] the actions of a partner based on the expectation that the partner performs a particular action important to the trustor, regardless of the ability to monitor or control the partner (Mayer *et al.*, 1995).

Sako (1992) proposed three types of trust: contractual trust, competence trust, and goodwill trust. Contractual trust concerns the written expectations defined by the contract; competence trust is related to the scope and level of expertise expected from the private sector partners and defined by the contract; goodwill trust regards the explicit provision that contractually defines the ways to manage uncertainty and practices to maintain discretion by the parties in relation to the objectives of both.

Trust is particularly important in situations where risk sharing and risk management are relevant aspects of an interorganizational relationship, as in a PPP (Das and Teng, 2001; Luhmann, 2018; Van Ham and Koppenjan, 2001). English and Baxter (2010) analyzed the contractual influences on trust in PPP organizations, showing the link between the form of contract used and the type of trust put in place. In this perspective, Cheng *et al.* (2021) argued for the role of contract design and how information disclosure is an important activity for cultivating specific types of trust in PPPs. Song *et al.* (2022) showed that the success of PPPs depends on the mix of MCSs implemented through a contract and trust. Appuhami and Perera (2016) investigated different forms of MCSs used to manage PPPs, including trust-based MCSs as a possible solution to reduce conflicts and relational risks. Abdullah and Khadaroo (2020) reported how trust can be complementary to or substitute MCSs in PPPs. On the other hand, Das and Teng (2001) highlighted that a focus on MCSs may undermine trust building in PPPs as it increases mistrust between parties. In essence, trust has a crucial role in PPP success with implications in the sphere of relations between the public and private partners (Barretta, Busco, and Ruggiero, 2008). Moreover, trust may increase the predictability of mutual behavior (Sako, 1992, p. 37) and mitigate opportunistic behavior (Van der Meer-Kooistra and Vosselman, 2000). The PPP context is highly uncertain, and the relationships between partners are often unpredictable; for these reasons, trust becomes an important element for MCSs in PPPs.

The above literature highlights broad patterns in the relationship between MCSs and trust, without providing a comprehensive and dynamic picture of how MCSs operate and interact with trust in the operational period of PPP. Further research is required to enhance our knowledge in this field (Biswas and Akroyd, 2022).

3. Archetypes of management control systems in public-private partnerships: a conceptual framework

Greenwood and Hinings (2017) showed that the use of archetypes is useful in studying and understanding hybrid organizations. PPPs are typical organizational hybrid form that incorporates the use of resources and/or structures from both public and private sectors (Stafford and Stapleton, 2022) and combines different institutional logics (Reissner, 2019). Accordingly, archetypes can be used to analyze organizational dynamics of PPP. An archetype is an original model made of persons, objects, or concepts from which others are derived. In the literature, we find various archetypes of MCSs designed to govern relationships in outsourcing (Speklé, 2001; Van der Meer-Kooistra and Vosselman, 2000) and used by different authors in the context of hybrid organizations such PPPs (Abdul-Aziz, 2012; Anderson and Dekker, 2014; Perera, 2016). Speklé (2001), for example, analyzed the typology of activities and assets used in outsourcing and proposed two MCS archetypes: hybrid arms-length control and hybrid

exploratory control. [Speklé \(2001\)](#) focused on the characteristics of the transaction to define MCS archetypes. A first archetype is characterized by high programmability of activities and moderate asset specificity, with MCSs being based on market mechanisms. The second archetype refers to situations with low programmability and moderate asset specificity, where MCSs are based on general contracts, close relationships, and joint responsibility ([Speklé, 2001](#)). [Van der Meer-Kooistra and Vosselman \(2000\)](#), in defining a typology of archetypes, included the role of trust and proposed three management control archetypes relevant to outsourcing relationships: a market-based pattern, a bureaucracy-based pattern and a trust-based pattern. The authors considered the different characteristics of MCSs in different phases of a relationship: contact, contract, and operational period. The market mechanism is prevalent in the market-based pattern. The bureaucracy-based pattern presents features of programmability, high output measurability and moderate asset specificity, with a form of control based on the presence of detailed contracts used to monitor performance. The trust-based pattern presents features of low levels of task programmability, low levels of output measurability, and high asset specificity, where an MCS is based on trust. The MCSs archetypes developed in the outsourcing literature have been used in the context of PPP. [Abdul-Aziz \(2012\)](#) argued that the approach of control adopted differs depending on the phase of the PPP. They identified three MCS phases in PPPs: the selection partners (exploratory phase), the definition of the contractual agreement (contractual phase) and in the consolidation of control activities (operational period). The authors argued that bureaucratic control is dominant in PPPs, trust control has a significant role while market control is important in the first stage of partner selection. In a similar vein, [Appuhami et al. \(2011\)](#) focused on risk associated to PPPs and how different forms and archetypes of control are used for minimizing risk of opportunistic behavior in the three phases of PPPs.

In this paper, we draw on the archetype defined by [Van der Meer-Kooistra and Vosselman \(2000\)](#). The limit of the model is that it does not consider how trust can change concerning the dynamics of the relationship between the actors involved. Focusing on the concept of trust, [Lewis and Weigert \(1985\)](#) stressed the importance of adopting a multidimensional and dynamic perspective of trust. This is relevant to understanding the impact of trust in different contexts ([Höglund et al., 2019](#)). Trust is not static and can change across the lifespan of a PPP, which in some cases can exceed 30 years. Indeed, relationships change across time and how parties decide to organize and control their activities can also vary. Moreover, PPPs' activities can be characterized by either high or low programmability. In the context of PPPs, risk identification and quantification are difficult tasks ([Tallaki and Bracci, 2021](#)). Despite attempts to define all the risks associated with PPPs, some risks are difficult to predict, meaning that PPPs can be faced with situations with high and low programmability.

Considering the above, we conceptualize a "mixed archetype" based on [Van der Meer-Kooistra and Vosselman \(2000\)](#), as reported in [Figure 1](#). The mixed archetype refers to situations with high and low programmability concerning the level of risk prediction and definition and considers trust as a dynamic driver. In our model, we exclude the market-based pattern as it is not adequate in the context of PPPs where a long-term contract limits the possibility of routinely testing the market ([Linder, 1999](#)).

This mixed archetype is used to explain changes in the relationship between PPP partners and how the different types of trust (i.e. contractual trust, competence trust, goodwill trust) vary and interact with MCSs. Contractual trust concerns the contract; competence trust is related to the scope and level of expertise expected from the private partners and goodwill trust regards the explicit provision that contractually defines the ways to manage uncertainty.

The shift between bureaucratic and trust archetype is influenced, in addition to the programmability of activities, also by time, context, and relationships between the partners. Over time the relationship between the parties of the PPP can change as well as its context, which can span from a serene climate to a hostile one (Swärd *et al.*, 2023). For programmable tasks, a bureaucracy pattern can be used. In this case, uncertainty is low, the MCS is formal, and contractual trust is dominant, as the contract defines and incorporates all elements necessary to program and measure activities and tasks. Contractual trust is suitable in a bureaucracy-based structure, and there is an expectation that the other party will uphold its obligations (Sako, 1992). This requires a clear definition of the contract, activity planning, and of the associated risks to be allocated between partners (Grimsey and Lewis, 2005). As with a high level of contractual trust, there is low relational risk and there is only a minor need to gather information to monitor behavior, control, and avoid opportunism (Morgan and Hunt, 1994). A trust-based pattern of control is indicated for all tasks and activities with low levels of programmability and measurability. In this case, the level of uncertainty is high in this case, and contracts cannot define all elements related to tasks and activities. For this reason, a MCS could be also informal. Competence and goodwill trust may be more relevant than contractual trust for situations with low-programmability activities. Situations with a low level of programmability of activities may also occur at the beginning of a collaboration, where it is difficult to predict risks and activities. In this case, trust characterizes the relationship from the beginning of the collaboration and may come to substitute a bureaucracy-based MCS (Abdullah and Khadaroo, 2020).

While trust and control are related, the way they work together in a PPS to achieve its goals is not clear as they are alternatively seen as complementary or substitutive (Abdullah and Khadaroo, 2020). When an MCS is proposed as a complement to trust, the control structures and practices are themselves carriers or sources of trust and create the conditions to concentrate attention on activities (Mouritsen and Thrane, 2006). The control structure can change over time concerning the type of trust, however. Moreover, Höglund *et al.* (2019) explained that in the first phase of a collaboration, each organization establishes contractual trust, whereas other types of trust develop subsequently. Swärd *et al.* (2023) discussed how the control-trust dynamics in interorganizational relationships evolve over time and highlight that it remains unclear how and when this dynamic changes. However, the authors argued that the presence of “critical incidents” creates the conditions for an action-reaction cycle that changes trust between parties and the control system adopted. As explained by Edelenbos and Eshuis (2012), the path trust takes will depend on the initial conditions and the evolution of the relationships among actors.

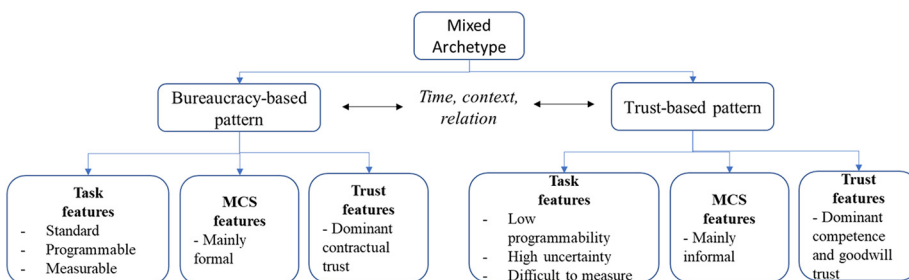


Figure 1.
Mixed management
control system
archetype

Source: Adapted from Van der Meer-Kooistra and Vosselman (2000)

4. Research methodology

We adopt a qualitative research methodology based on a longitudinal case study analysis, in response to the call to implement qualitative analysis in management studies (Vaivio, 2008). The latter is suitable for developing theoretical constructs and to explore and understand complex phenomena in their natural context over time (Yin, 2012), which aligns with the goals of this paper. The case study analyzed is referred to a public hospital. In 2006, this hospital promoted a PPP, under the form of Public Finance Initiative (PFI), for the construction and operation of facility management services. In 2012, the concessionaire finished the construction and operational period began. We used primary and secondary sources and had access to all documents from the call for tenders to the signing of the definitive contract. The hospital object of the case study is a University Hospital. Through a research agreement, it was possible to have full access to all available documents. Specifically, the research group had full access to the documents related to the construction period, the tender notice with all annexes, the contract stipulated with the concessionaire, annexes to the contract describing all the services and the expected qualitative and quantitative levels, as well as acts of communication between the partners. Furthermore, the research agreement allowed the research group to access internal reports aimed at measuring the performance level of various services. Document analysis allowed us to determine how risks were defined and shared, and the level of programmability of tasks and activities. We also conducted 15 semistructured interviews from 2019 to 2021 with persons involved in the PPP since the operational period began (Table 1).

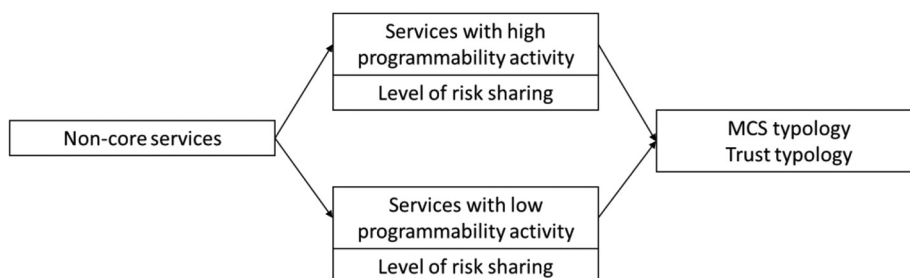
The interview questions were related to the type of MCS implemented, the relationship between the partners, as well as trust and changes in trust (Example of questions in the Appendix). All interviews were transcribed and analyzed by the various authors to avoid the problem of subjectivity in analyzing and interpreting data. One of the authors also participated in various meetings (internal or between partners)—direct observation was useful to better understand the relationship between partners and for the interpretation of data. In analyzing different documents and interviews, we triangulated data to ensure solid interpretation (Hopper and Hoque, 2006; Modell, 2005).

We also developed systematic coding for the interpretation of meaning (Miles *et al.*, 2014), based on our research question (Saldaña, 2013). More specifically, the attributes of MCSs are represented in relation to the programmability of activities and tasks for each noncore service involved in the PPP. Regarding trust, we focused on the three types of trust reported in the literature: contractual, competence, and goodwill. Figure 2 reports the coding scheme for the research question. Based on the analysis of the literature, it was established, in the archetype proposed, that the programming of the activity is decisive for the type of control approach used. First, document analysis was carried out to understand the services characterized by programmability and nonprogrammability and risks associated with each activity. Subsequently, the interviews helped to understand the type of control adopted for each service and the temporal development of the approach of control adopted. The coding of the interviews was carried out, highlighting the type of control adopted for each service and the widespread trust. Specifically, three trust codes were created (contractual, competence, and goodwill trust) assigned for answers attributable to each type, furthermore for the control system 2 codes assigned to the statements attributable to each type of control used (bureaucracy and trust control). The programmability of the service emerged from the document analysis was also confirmed by the interviews.

ID	Interviewers' role	No. of interviews	Duration	Managed services
1	Hospital administrative director	1	90 min	All
2	Manager of PPP	2	150 min	All
3	Control manager of PPP	2	120 min	All
4	Manager of professions	1	90 min	Management of the hospitalization unit; cleaning clothing and rental of furnishings; sanitization and cleaning of internal spaces; hospital catering for patients and employees
5	Collaborator for controlling hospital catering and sanification	1	45 min	Sanitization and cleaning of internal spaces; hospital catering for patients and employees
6	Manager of hospital hygiene	1	80 min	Supply and sterilization of surgical instruments; sanitization and cleaning of internal spaces (waste management); disinfection, pest control service
7	Collaborator for controlling hospital hygiene	1	45 min	Supply and sterilization of surgical instruments
8	Manager of communication area	1	30 min	Reception service, call center
9	Mobility manager	1	80 min	Security service; internal logistics service
10	Technical service manager	1	100 min	Maintenance green areas; management and maintenance of electrical systems; building maintenance
11	Energy manager	1	60 min	Management and optimization of the energy service
12	Responsible for controlling maintenance activities	1	45 min	Maintenance green areas; management and maintenance of electrical systems
13	Responsible for controlling building maintenance	1	45 min	Building maintenance
	<i>Total</i>	<i>15</i>	<i>872 min</i>	

Source: Our elaboration

Table 1.
Details of the interviews



Source: Our elaboration

Figure 2.
Coding of services
according to
Saldaña (2013)

5. Case study

5.1 Context of analysis

In 2006, the regional government (healthcare in Italy is under regional jurisdiction) launched a call for tenders for the design, construction and multi-year management of noncore services relating to a new hospital. The cost of construction was approximately 180 million euros, of which approximately 50 million euros was funded by the concessionaire. The construction was completed in 2011, and in 2012 the 33-year operational period started. The concessionaire was granted the delivery of the noncore services as reported in [Table 2](#). The annual revenues of the various noncore services amounted to approximately 36 million euros, with Earnings Before Interests Taxes Depreciation and Amortization (EBITDA) of approximately 3.5 million euros per year.

5.2 Programmability of activities and tasks

The hospital engaged in a contract with the concessionaire to define the general aspects of the concession (contribution from the public partner, duration, total amount, etc.). The contractual specificities of the management of noncore services were delegated to additional executive acts (AEA), based on the provisions of the deeds constituting the successful bid. After the beginning of the operation the concessionaire was entrusted with additional ancillary services not included in the tender, considering the flexibility guaranteed by legislation. The additional services were governed in part by the AEAs and in part by subsequent separate contracts. In [Table 1](#), we describe the level of programmability and risk elements of the various noncore services offered. The distinction between highly programmable and low-programmability services is based on the possibility of clearly defining the risks associated with each activity and the ability to share these between the hospital and the concessionaire.

For services where the unit of measurement used depends on market factors (e.g. patient demand), a mechanism was introduced to ensure a minimum level of activity for the concessionaire. This mechanism made it possible to guarantee adequate remuneration of the invested capital in terms of the price defined and made it possible to define, contractually, specific qualitative criteria for the services. For other services that do not depend on market demand, the level of activity and the price were defined *a priori*. Furthermore, the contractual documents clearly defined the types of activities, their frequency, and minimum qualitative standards. For building maintenance services and for on-demand activities, the contractual documents did not define clear activities because, as reported by the area manager, such activities cannot be foreseen. The contract for building maintenance defined only a maximum annual budget, which was drawn according to the requests of the various departments.

5.3 Management control and trust: initial phase of the operational period

The initial phase operational period began in 2012. The hospital organized the control structure to manage the PPP contract in two organizational levels: the PPP manager and the operational managers. The PPP manager had the responsibility to control over the regular functioning of the PPP and the correct application of the contractual conditions through a direct relation with the concessionaire counterpart. The operational managers instead were responsible for the control over the quantity and quality of services provided through a direct relation with the concessionaire's subcontractors. The operational managers identified coordinators located in the various areas of the hospital to control over the compliance with the performance standards included in the AEA e contract.

The PPP organizational chart in [Figure 3](#) shows these levels of responsibility and how they interact with each other. The administrative level is responsible for all administration

No.	Noncore service	Unit of measure	Additional executive acts	Risk allocation	Elements for risk definition and sharing	Programmability of activities and tasks
1	Management of the hospitalization unit	Inpatient unit	Yes	Yes	Minimum guaranteed quantity, quantity-flexibility threshold, price, type of mattresses, type of other furnishings, cleaning frequency, qualitative details, sanctions	High Low*
2	Cleaning clothing and rental of furnishings	Inpatient unit	Yes	Yes	Minimum guaranteed quantity, quantity-flexibility threshold, price, type of clothes, cleaning frequency, sanctions	High
3	Supply and sterilization of surgical instruments	Inpatient unit/sterilization unit	Yes	Yes	Quantity of required materials, quantity-flexibility threshold, price per unit, type of materials, cleaning substitution, sanctions	High Low*
4	Sanitization and cleaning of internal spaces	Square meter	Yes	Yes	Spaces in square meters, price for square meter, type of materials, cleaning frequency by type of space, sanctions	High Low*
5	Disinfection, pest control service	Intervention hours	Yes	Yes	Minimum guaranteed quantity, price, type of mattresses, type of other furnishings, cleaning frequency, sanctions	High
6	Hospital catering for patients and employees	Food days	Yes	Yes	Minimum guaranteed quantity, quantity-flexibility threshold, price, type of mattresses, type of other furnishings, cleaning frequency, sanctions	High
7	Security service	Intervention hours	Yes	Yes	Numbers of hours and shifts, price per hour by type of service, the necessary qualifications for the personnel involved, sanctions	High
8	Internal logistics service	Inpatient unit	Yes	Yes	Numbers of hours and shifts, quantity-flexibility threshold, price per hour by type of unit, the necessary qualifications for the personnel involved, sanctions	High Low*
9	Reception service, call center	Intervention hours	Yes	Yes	Numbers of hours and shifts, price per hour by type of service, the necessary qualifications for the personnel involved, sanctions	High
10	Maintenance green areas	Square meter of green space	Yes	Yes	Type of maintenance, maintenance plans by year, frequency, sanctions	High

(continued)

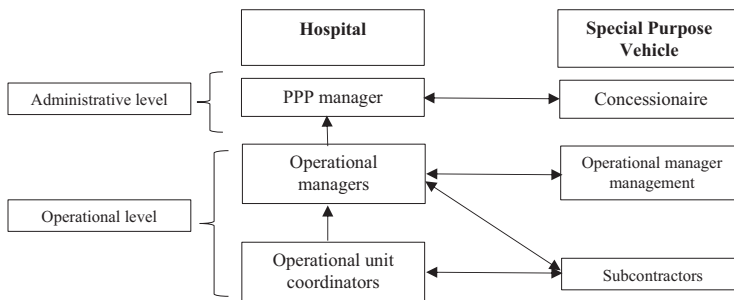
Table 2.
Programmability of
noncore service
activities and
associated risks

Table 2.

No.	Noncore service	Unit of measure	Additional executive acts	Risk allocation	Elements for risk definition and sharing	Programmability of activities and tasks
11	Management and maintenance of electrical systems	Square meter/number and type of object (e.g., elevators)	Yes	Yes	Types of materials, maintenance plans by object, price for MQ, type of other furnishings, maintenance frequency, sanctions	High Low*
12	Management and optimization of the energy service	Square meter	Yes	Yes	Minimum guaranteed quantity, quantity flexibility threshold, price, type of mattresses, type of other furnishings, cleaning frequency, sanctions	High Low*
13	Maintenance building	Not defined	No	No	Difficulty in predicting the types of interventions	Low

Notes: *In addition to the scheduled activities reported in Table 1, for services 1, 3, 4, 8, 11 and 12 the contract also provides for additional on-demand activities and other activities that are not indicated in the concession contract. These activities are remunerated separately and are also controlled differently from the main activities of the contract. These activities are characterized by low programmability. In fact, at the contractual level they have not been managed

Source: Authors' elaboration



Source: Our elaboration

Figure 3.
PPP organizational
chart

(e.g. billing, payment, contracts), while the operational level is responsible for the quantitative and qualitative aspects of each service.

The initial phase of the operations urged the PPP manager and the operational managers to set up some controlling and monitoring tools to make sure that the services received were aligned with the contractual agreements. As an example, procedural manuals were drawn up all services that defined the roles of the parties involved. Besides, a checklist of the activities to be carried out were developed, and a reporting system was implemented. The latter was aimed at evaluating the achievement of the quantitative and qualitative performance standards of the service. The basis for introducing the control system was therefore the contract. There were various initial meetings to share the control approach and set up the information exchange flow between the concessionaire and the hospital. According to the PPP manager and PPP control manager, the implementation of the control system was rooted in the contractual documents, which made it possible to have a shared vision among the partners. For example, for management and maintenance of electrical systems, the various objects of maintenance, the frequency, and the list of activities were included in an information system. Thus, the MCS practices in this period were mainly formal, based on performance measurement and the evaluation of contractual aspects, with prescriptive indications of the information to be provided to the PPP manager and the operational managers.

Our observations reveal that a bureaucratic-based MCS pattern was dominant in this PPP and that the contract was the reference basis for defining the quality levels of services and measuring performance. All interviewees confirmed that what they expected from the concessionaire was the fulfillment of contractual obligations. For example, with reference to the cleaning service, the PPP manager stated “the contract and the annexes provide that for the cleaning service the price, type of activity, and frequency are established by type of area to be cleaned, in our ERP we have included such information, and the control procedure for the cleaning is based on this, it is aimed at comparing what the concessionaire does with what is foreseen in the contract”. Clear and comprehensive contractual clauses were essential to delineate the boundaries of control and to ensure that both parties respect their rights and obligations. Contractual trust, in this sense, was a driver of information requirements (Tomkins, 2001). It played a crucial role in managing the relationship and the shared information at the beginning of the operational period. In this context characterized by a high level of contractual trust, the MCS followed a bureaucracy-based pattern, being mainly contractual as the hospital management believed that the concessionaire would have to respect the contract.

The control of all activities and reporting was based on contract elements. For highly programmable services, contractual trust dominated the relationship and the information

requirement between the partners involved. What drove the relationship with the concessionaire, as the interviewees emphasized, was the contract. It can be said that contractual trust, understood as the written expectations defined by the contract (English and Baxter, 2010), was the main driver of the relationship for high-programmability activities, which translated to bureaucratic management control based on contractual trust.

5.4 Management control and trust: development during the subsequent phase operational period

As described in the previous section, at the outset of the operational phase all actors focused their attention to the contractual arrangements and put trust on the expectation that their counterpart would respect the reciprocal legal obligations. The MCS, accordingly, followed a typical bureaucratic pattern.

However, as operations went on, new needs and events not foreseen in the contract emerged. Consequently, amendments to the contract were made to include new services such as building maintenance and new technology installation. All additional services were entrusted to the concessionaire to benefit from economies of scale and scope and a specific pricing was defined. For some service, such as building maintenance, a flat rate was quantified based on standard cost per type of maintenance and historical frequency of maintenance. On this basis, an initial budget was agreed upon without detailing specific activities given the uncertainties of their occurrences. For example, the initial budget for building maintenance and technological up-grades was set respectively at €700,000 and €450,000 per year, within a total budget for additional nonprogrammable services set in the contractual phase was about 6 million euros per year. For these services, the contract stipulates that they must be priced at cost, without an additional margin for the concessionaire. Thus, having already been guaranteed adequate remuneration for the capital invested for the services entrusted, the concessionaire simply becomes an intermediary for the additional activities. This mechanism ensured the hospital a fair allocation of risks, where the concessionaire is guaranteed fair remuneration with not profit margin for the additional activities. The maintenance services were managed through a procedure where both the operational manager and the concessionaire could manage the maintenance process. This mechanism was applied to all nonprogrammable services making possible to reduce the uncertainty. This can be considered an example of goodwill trust, defined as “the explicit provision that contractually defines the ways to manage uncertainty in relation to the objectives of both” (Sako, 1992). Goodwill trust emerged in those activities characterized by low programmability, where little information is available. Consequently, at the operational level the MCS tended to turn toward a more trust-based model, using less pre-defined standards, but more based on collaboration and partnership. The MCS was more directed toward the result, and the MCS also adopted some informal means. In this case, the MCS extended the use of the ERP designed specifically to control the concession. Regarding extra activities, the maintenance manager states that:

[...] we don't use the SAP system (the ERP software designed for the control of the concession). We request a quote via email. This quote is made and evaluated by the collaborators, generally a part of their competence. After approval, it is sent to the PPP manager who then proceeds to order, the concessionaire carries out the work, one of the collaborators checks the execution, and approval is sent to the PPP manager for payment.

The interviewees confirmed that for low-programmability activities it is difficult to adopt only formal procedures for monitoring and control. The operational managers, not having a contractual basis for the new activities, reported that the important thing was the result. The operational managers engaged in daily interactions with the concessionaire and were able to

appreciate the skills and competencies provided. Over time, operational managers became more flexible, even in the management of noncompliance, adopting a more flexible stance, with personal consultation, coordination, solution-based approaches, and information sharing. This increased the level of trust at the operational level, in terms of competence. One of the hospital operational managers offered the following statement:

I have to say that the concessionaire is flexible, and this aligns with our needs [...]. The relationship is characterized by transparency, trust, partnership, collaboration, responsibility [...]. We know very well that we are the customer and that they must honor contractual relationships [...] and they are our partner to provide quality service.

This was also possible by the flexibility of the concessionaire. The operational managers have specified that the concessionaire was collaborative, flexible, had the necessary skills and particularly a problem-solving approach.

While the operational managers modified the control approach more based on competence trust, this was not the case for the PPP manager. The PPP manager continued, and to some extent increased, the bureaucratic control over the special purpose vehicle (SPV), given the increasing cost of the concession. For programmable activities the MCS the hospital used is bureaucratic and based on contractual specificities, with a focus on processes, for nonprogrammable activities the approach used was based on the degree of achievement of objectives, with a focus on results.

The PPP manager while maintaining a strong bureaucratic control approach, tended to focus mostly on the cost of PPP and in breaking the budget. This was partly due to the central government pressure on hospitals to reduce and revise the costs of noncore services, and using standard costs as a benchmark to achieve. Furthermore, the regional government required the hospital to reduce its deficit through tight control over outsourced services.

A lack of mutual trust began to develop between the PPP manager and the concessionaire. The PPP manager continued to claim that the contract, as interpreted by the hospital, represented the main element for evaluating the quality and performance of services. The PPP manager continued to stress formal control, detailed performance measurement and evaluation, asking for increased direct supervision and information. The bureaucratic-based pattern was therefore the main driver for the PPP manager as she argued that:

[...] the contract is what counts, and we expect that everything will be delivered accordingly. We need to control the performance carefully as the concessionaire always tries to apply the contract to its favor to maximize its profit, and does the minimum required.

Conflicts and legal litigations started to emerge between the hospital and the concessionaire over differing interpretations of the contract. Three lawsuits were initiated, related to the rate of inflation to be applied, the calculation basis for the inflation rate (whether to include the margin dedicated to the return on invested capital), and the unit of measurement for certain services, which was deemed inadequate by the concessionaire.

6. Discussion

The case study highlights how two control patterns can coexist in the context of PPPs: bureaucratic-based and trust-based patterns. The driving factor for selecting a particular MCS was mainly represented by time and organizational level. We observed that initially the hospital had the urgency to make the contract effective and assuring that the no-core services were delivered as agreed. Consequently, the MCS was bureaucratic based on specific standards and KPI and rooted in contractual trust. As the time passed-by, at the operational level, managers and the concessionaire started to develop a more flexible and

result-oriented approach to better manage uncertainties and no-programmable activities. Table 3 shows how the MCS developed over time in relation to organizational level and type of trust.

The results show that mutual coordination at the operational manager level (Bram Steijn *et al.*, 2011) and interaction between operators increased trust (Sako, 1998; Sako and Helper, 1998), and in particular competence trust. The latter is conditioned by interaction and collaboration (Baumann *et al.*, 1994; Hardy *et al.*, 1998; Sako, 1998). In interorganizational relationships, organizational coordination and interaction involve different levels of interdependency (Aggarwal *et al.*, 2011). In fact, in the case study, the interaction in the workplace between the operational managers, subcontractors, and the concessionaire was very frequent. At the PPP manager level, the interactions were limited to the administrative issues (e.g. invoicing, payments) and the compliance with the contractual conditions. This explains why the PPP manager strengthened the contractual side of the MCS, while at the operational level, competence trust became crucial for the MCS as the operational phase went on. In bureaucratic MCSs, control activities are traced back to contractual trust; this confirms that trust could be the driver for information requirements (Tomkins, 2001). In the case at hand, the MCS based on contractual trust made it possible to verify that the activities carried out were in line with the contractual agreements, thus guaranteeing value for money and optimal risk sharing as provided for in the contract (Demirag and Khadaroo, 2008). The type of trust between partners impacted the accounting practices employed. The latter were based on a specific economic budget and stringent KPIs, which were monitored monthly. Any variances were discussed, particularly when they were related to contractual agreements.

In addition, the results show how different control archetypes can coexist at different organizational levels. At the PPP manager level, certain events (lawsuits) confirmed a demand to strengthen contractual control: these events could represent a “critical incident” that hindered the trust-control relationship regarding competence and goodwill trust as discussed by Swärd *et al.* (2023). At the company level, this led to the coexistence of two control approaches: a bureaucratic control focusing on the contract and a trust-based control, where informal controls emerge and where collaboration and joint coordination are valued. As an example, informal meetings between the operational managers and the concessionaire’s operational counterpart were a regular practice to address specific issues, emerging needs or underperforming services. Besides the informal meetings, formal moment of discussion of KPIs reports of the services provided were the norm and were held

	Time			
	Beginning of the operational phase		Consolidation period of the operational phase	
	Level of management		Level of management	
	PPP manager	Operational managers	PPP manager	Operational managers
MCS pattern	Bureaucracy	Bureaucracy	Bureaucracy	Trust-based and bureaucracy
MCS characteristics	Formal control	Formal control	Formal control	Formal with flexibility, personal interactions, coordination and solution-based approach
Form of trust	Contractual	Contractual	Contractual	Contractual and competence-based
Source: Authors' elaboration				

Table 3.
MCS over time in
relation to
organizational level
and trust

at a monthly or bimonthly basis. The combination of two approaches of control at the operational level highlights that trust-based control has not completely replaced bureaucratic control. This result supports the complementary perspective of control, which considers that trust complements and not substitute MCS (Abdullah and Khadaroo, 2020). When trust substitutes MCS the dominant control becomes informal, and the trust is configured as competence and goodwill trust. In our case, particularly at the operational level, bureaucratic control was not a complete substitute as managers continued to use a trust-based bureaucratic approach with greater flexibility for both programmable and nonprogrammable activities.

7. Conclusions and final remarks

This paper highlights the importance of employing a multidimensional perspective of trust (Lewis and Weigert, 1985) in developing MCSs (Van der Meer-Kooistra and Vosselman, 2000) and the dynamics of the trust-control relationship over time (Svärd *et al.*, 2023). The results show that trust (contractual and competence-based – in our case, goodwill trust is not verified) enhances the relationship between partners as it reduces conflict (in our case, at the operational level). This is relevant for the success of PPPs in the operational phase, in terms of value for money and relational risk minimization.

The paper contributes to the literature by proposing a mixed archetype for MCSs based on trust in the PPP context, in response to calls for further studies to understand the role of trust in different contexts (Höglund *et al.*, 2019). The paper also highlights how a mixed MCS based on contractual and competence trust can develop in PPPs (Cheng *et al.*, 2021; Song *et al.*, 2022). Bureaucratic control (based on contractual trust) and trust-based control (based on competence trust) can coexist at different times and organizational levels. Although this may lead to conflicts, it allows to satisfy different organizational needs as the complexity of a PPP unfolds. Trust and MCS dynamics in PPPs operate at different organizational level. While operational managers focus mainly on the functioning of the activities searching for, in the long term, a trust-based control. PPP managers, considering their responsibility, tend to strengthen bureaucratic control based on contractual trust.

This paper also contributes to the literature on the operational stage of PPPs, as called for by Andon (2012) and Toms *et al.* (2011). The MCS archetype allowed us to provide a dynamic analysis, as trust and MCSs can change over time, affecting the relationships among actors and the effective and efficient functioning of PPPs. In doing this, the paper contributes to understanding the intricacy of the relationship between the organizational and accounting changes that PPPs imply to control and coordinate the interfirm relationships. As the case show, PPPs lead to changes in the organizational structures and role, together with the implementation of ad-hoc control systems that required an adaptation through time due to the types and level of trust among the multilayered network of actors.

Possible limitations are related to the potential presence of additional forms of trust not considered in the analyzed case and which may impact the results. Additional studies are required to further elucidate the relationship between trust and MCSs in PPPs, considering other form of trust such as goodwill trust which regards the explicit provision that contractually defines the ways to manage uncertainty. As trust is a dynamic element that can change, affecting the relationship with MCSs, longitudinal case studies are recommended. The mixed archetype offers a lens through which to grasp the evolutionary dynamics of the trust-control relationship over time. In this way, the paper offers a tool for analyzing changes in interorganizational trust and control. Moreover, further research could analyze risk management and associated tools in relation to the

trust and MCS. Risk management could be useful to define responsibilities of each partner. MCS integrated with a risk management system increase the awareness of all actors involved regarding responsibilities, and consequently this could improve trust between parties and reduce opportunistic behavior. Also, future research about the use of digital technologies and how they could enhance the quality of control and increase trust in PPPs are required. For example, the use of data mining could improve the quality of information exchanged, and the control activity. Artificial intelligence algorithms can also improve the control process, notwithstanding the risks in terms of accountability and transparency (Bracci, 2023).

The research has different practical implications. In building and maintaining trust it is important to balance control mechanisms in relation to various responsibilities at the organizational level and between partners. Moreover, contractual trust turned out to be a crucial in relationships between actors involved, as it contributes to the stability and predictability of transactions. When contractual trust is breached, for example through failure to fulfill contractual promises, legal disputes can arise. To this end, it is important to have a detailed contract that reduces subjective interpretations. Furthermore, technological support could be useful in facilitating communication and transparency between parties, consolidating contractual trust and offering the possibility for these to focus on the quality of their activity (rather than on control), opening up the possibility of developing trust in competence. Finally, from a managerial point of view, it is important that the top managerial figures for the management of relationships between the concessionaire and the public administration have good soft skills to manage the evolving nature of trust and MCSs relationship.

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Appendix. Semistructured interview: Sample outline of questions

- (1) How was the management control system designed?
- (2) What role did the contract, and its attachments play in defining and designing the control system?
- (3) How does the control system address and mitigate the risks associated with the concessionaire?
- (4) What issues were encountered during the implementation of the control system, especially those related to the relationship with the concessionaire?
- (5) How were these issues resolved?
- (6) Do you believe that the implemented control system meets the contractual control requirements?

- (7) Are there different control procedures for each service?
- (8) How are the qualitative objectives of various services defined?
- (9) Are these objectives shared with the concessionaire?
- (10) How are the performance levels of various services evaluated?
- (11) If objectives are not achieved and there are qualitative nonconformities, what procedure is followed?
- (12) Is there an interaction process with the concessionaire to communicate and resolve nonconformities?
- (13) How does the concessionaire react when nonconformities arise?
- (14) What mechanisms are in place to ensure transparency in the concessionaire?
- (15) Are there specific challenges or concerns regarding the control systems?
- (16) Do you believe the concessionaire has the necessary skills to perform the required service?
- (17) Do you believe the concessionaire complies with contractual obligations?
- (18) In what way does the control system support the building and maintenance of a trusting relationship?

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